FINAL

ENVIRONMENTAL ASSESSMENT,

FINAL REGULATORY IMPACT REVIEW, AND

FINAL REGULATORY FLEXIBILITY ANALYSIS

FOR A

FINAL RULE

TO IMPLEMENT A COMMERCIAL RETENTION LIMIT FOR BLACKNOSE SHARKS IN THE ATLANTIC REGION

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

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ABSTRACT

Action:	Implement management measures for the commercial Atlantic small coastal shark fisheries that will allow for the utilization of available non-blacknose small coastal shark quota while also rebuilding and preventing overfishing of blacknose sharks.
Type of statement:	Environmental Assessment (EA), Regulatory Impact Review (RIR), and Final Regulatory Flexibility Analysis (FRFA)
Lead Agency:	National Marine Fisheries Service (NMFS): Office of Sustainable Fisheries
For further information:	Highly Migratory Species Management Division (F/SE1) 1315 East-West Highway Silver Spring, Maryland 20910 Phone: 301-427-8503; Fax: 301-713-1917

Abstract:

This Final Environmental Assessment (EA) analyzes the potential environmental impacts of establishing a commercial retention limit for small coastal sharks in the Atlantic region. NMFS manages four small coastal shark (SCS) species in the Atlantic: blacknose, Atlantic sharpnose, finetooth, and bonnethead. All of these species except blacknose sharks are managed in a management group called the "non-blacknose SCS." The most recent stock assessment, conducted in 2011, indicates that the Atlantic blacknose shark stock is overfished and experiencing overfishing. NMFS implemented management measures in 2011 to rebuild blacknose sharks and end overfishing; one measure relied in part on fishermen successfully avoiding blacknose sharks while fishing for other small coastal sharks. From 2010 to 2012, landings data support that fishermen avoided blacknose sharks. However, from 2013 to 2015, fishermen in the South Atlantic rapidly harvested Atlantic blacknose sharks, indicating that they may be targeting them, and landings exceeded quotas. Due to quota linkage between blacknose and non-blacknose small coastal sharks once the blacknose shark quota is reached the entire SCS fishery is closed, even if non-blacknose SCS quota is available. The early closure of the fishery leaves the non-blacknose small coastal shark quota underutilized. The purpose of this action is to maximize the utilization of the non-blacknose small coastal shark quota, while minimizing the mortality and discards of blacknose sharks consistent with the existing rebuilding plan and other small coastal sharks. On August 3, 2016, NMFS released the Draft EA and published a proposed rule (81 FR 51165) with a public comment period that was open until September 28, 2016. This Final EA analyzes the potential environmental impacts related to (1) establishing a bycatch limit

for non-blacknose small coastal sharks once the blacknose quota has been reached, and (2) establishing a trip retention limit for blacknose sharks to reduce the likelihood of early closure of the small coastal shark fishery.

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1.0 INTRODUCTION

Under the Magnuson-Stevens Act, the National Marine Fisheries Service (NMFS) must, consistent with ten National Standards, manage fisheries to maintain optimum yield by rebuilding overfished fisheries and ending overfishing. Since 1993, NMFS has implemented several fishery management plans (FMPs), FMP amendments, and numerous regulations relating to the Atlantic highly migratory species (HMS) fisheries under the authority of the Magnuson-Stevens Act. Currently, the Atlantic HMS fisheries are managed under the 2006 Consolidated HMS FMP, its amendments, and implementing regulations at 50 CFR part 635.

On August 3, 2016, NMFS released the Draft EA and published a proposed rule (81 FR 51165) examining the potential impacts of establishing trip retention limits in the SCS fishery. The management measures in this final rulemaking, which address Atlantic SCS and consider comments received on the Draft EA, are taken under the authority of the Magnuson-Stevens Act. In addition to the Magnuson-Stevens Act, 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 (CZMA). This document is prepared, in part, to comply with NMFS' responsibilities under NEPA, as implemented by the regulations published by the Council on Environmental Quality (CEQ), 50 C.F.R. Parts 1501-1508 (CEQ Regulations)

In accordance with the Magnuson-Stevens Act, this rulemaking focuses on statutory mandates including rebuilding overfished blacknose sharks and ending overfishing of the blacknose shark stock in the Atlantic region. NMFS is finalizing management measures that would amend the HMS fishery management regulations for Atlantic SCS. Specifically, this final measure establishes a commercial retention limit for blacknose sharks in the Atlantic region.

1.1 PURPOSE AND NEED

NMFS manages four SCS species: blacknose, Atlantic sharpnose, finetooth, and bonnethead. All of these species except blacknose sharks are managed in a management group called the "non-blacknose SCS." Blacknose sharks were assessed separately and declared overfished with overfishing occurring, and thus, are managed separately, subject to a rebuilding plan. Nevertheless, gillnet fishermen in the South Atlantic area typically fish for and land all four of the SCS species. Thus, any management measure changes to either the blacknose shark or non-blacknose SCS management groups could impact all of these fishermen. While NMFS analyzed the stock impacts separately, NMFS discussed the economic impacts cumulatively at times and refer to the "overall SCS fishery," which means the fishery for all four species in the South Atlantic management area.

This final action establishes a commercial retention limit for blacknose sharks in the Atlantic region. This action focuses only on the Atlantic region since NMFS prohibited the retention and landings of blacknose sharks in the Gulf of Mexico in 2015. The action is

necessary to reduce dead discards of non-blacknose SCS while increasing the utilization of the Atlantic non-blacknose SCS quota and aid in rebuilding and ending overfishing of Atlantic blacknose sharks.

Since the completion of the 2007 blacknose shark stock assessment, NMFS has conducted numerous rulemakings regarding all SCS, including blacknose sharks, in order to rebuild blacknose sharks and end overfishing, consistent with the 2006 Consolidated HMS FMP. The 2007 stock assessment of blacknose sharks assessed blacknose sharks as one stock and determined that the stock was overfished and overfishing was occurring.

On June 1, 2010 (75 FR 30484), NMFS published a final rule implementing Amendment 3 to the 2006 Consolidated HMS FMP (Amendment 3) that, among other things, implemented a rebuilding plan based on the 2007 blacknose shark stock assessment, which would lead to rebuilding by 2027, and established blacknose shark and non-blacknose SCS quotas. In the proposed rule, because of the blacknose shark stock status, NMFS had proposed prohibiting the use of gillnet gear in waters south of North Carolina, since gillnet gear was the primary gear type used to catch blacknose sharks. However, based on comments received during that rulemaking asserting that fishermen could catch non-blacknose SCS while avoiding blacknose sharks when using gillnet gear, the final rule continued to allow landings of SCS sharks with gillnet gear, but linked the quotas for the non-blacknose SCS and blacknose shark fisheries to create an incentive to avoid the incidental catch of blacknose sharks. After that rulemaking, in monthly landings updates and other documents, NMFS encouraged fishermen to avoid blacknose sharks in order to extend the non-blacknose SCS season while quota was available. For the first two years under this quota linkage, fishermen successfully avoided landing blacknose sharks. This avoidance meant that both the non-blacknose SCS fishery remained open most of the year and the blacknose shark quota was not exceeded.

In 2011, a new stock assessment for blacknose sharks was completed. This assessment concluded that there are two stocks of blacknose sharks -- one in the Atlantic and one in the Gulf of Mexico and assessed them separately. In the assessment for the Atlantic blacknose shark stock, accepted by peer reviewers, NMFS determined that Atlantic blacknose shark stock is overfished and overfishing is occurring (76 FR 62331, October 7, 2011). The assessment for the Gulf of Mexico stock was not accepted by peer reviewers. As such, NMFS declared the stock status to be unknown. On July 3, 2013 (78 FR 40318), NMFS published a final rule for Amendment 5a to the 2006 Consolidated HMS FMP (Amendment 5a) which, among other things, implemented the rebuilding plan from the 2011 blacknose shark stock assessment that would rebuild the stock with a 70 percent probability by 2043 and divided the blacknose and non-blacknose SCS quotas into separate regional quotas (Atlantic and Gulf of Mexico). NMFS continued to link the regional blacknose and non-blacknose SCS quotas and therefore divided the non-blacknose SCS quota into separate regional quotas as well, to parallel the division of the blacknose shark stocks. The SCS quotas were not further broken down into commercial retention limits because the quota linkage between the blacknose shark fishery and the non-blacknose SCS fishery alone was expected to create adequate incentive to avoid blacknose

sharks.

More recently, NMFS has seen signs that fishermen using gillnet gear in the Atlantic region are no longer avoiding blacknose sharks. In 2012, the overall blacknose shark quota for the Atlantic and Gulf of Mexico regions was exceeded, and the blacknose shark quota in the Atlantic region was exceeded again in 2015. Additionally, the blacknose and non-blacknose SCS fisheries have been closing earlier each year (September 30, 2013 (blacknose sharks and non-blacknose SCS in the Atlantic and Gulf of Mexico regions); July 28, 2014 (blacknose sharks and non-blacknose SCS in the Atlantic region); June 7, 2015 (blacknose sharks and non-blacknose SCS in the Atlantic region)). A review of the landings data indicate the early closures are a result of some fishermen who have been landing large numbers of blacknose sharks relative to other fishermen. These early closures mean that the non-blacknose SCS quota remains underutilized (less than 40 percent was harvested in 2013 and less than 60 percent harvested in both 2014 and 2015). These closures also mean that non-blacknose SCS must be discarded even if non-blacknose SCS quota remains available.

To reduce discards of non-blacknose SCS while not increasing landings of blacknose sharks, on August 18, 2015 (80 FR 50074), NMFS published a final rule for Amendment 6 to the 2006 Consolidated HMS FMP (Amendment 6). This final rule, among other things, prohibited the retention and landings of blacknose sharks in the Gulf of Mexico region. In the Atlantic region, NMFS established a management boundary along 34°00'N. latitude for the non-blacknose SCS fishery, removed the quota linkage between non-blacknose SCS and blacknose shark quotas north of that boundary, and prohibited the retention and landings of blacknose sharks north of that boundary since blacknose sharks are rarely caught in this area. South of the new management boundary, NMFS maintained the non-blacknose SCS and blacknose shark quota linkage and reduced the blacknose shark quota to account for the potential dead discards north of the boundary. In late 2015 after the implementation of Amendment 6, the non-blacknose SCS fishery re-opened north of 34°00'N. latitude upon publication of the final rule. From August through December, fishermen north of 34°00'N. latitude were able to land an additional 40.5 mt dw, or 15 percent of the non-blacknose SCS quota, after the fishery reopened. However, the non-blacknose SCS fishery remained closed south of 34°00'N. latitude and fishermen in that area were still required to discard all non-blacknose SCS caught after June 7, 2015.

NMFS recently took action to again close the commercial blacknose shark and non-blacknose SCS fisheries in the Atlantic region south of 34°N because the commercial landings of Atlantic blacknose sharks for the 2016 fishing season were projected to exceed 80 percent of the available commercial quota (81 FR 33604; May 27, 2016). This indicates that some fishermen south of 34°00'N. latitude are continuing to land large numbers of blacknose sharks relative to other fishermen even though this results in earlier closures and the potential loss of access to the available non-blacknose SCS quota because of the linkage.

Additionally, since publishing Amendment 6, NMFS has received comments from

fishermen and the South Atlantic Fishery Management Council stating that fishermen in the Spanish mackerel gillnet fishery who hold HMS permits are having to discard otherwise marketable non-blacknose SCS south of the 34°N management boundary due to the quota linkage, even though non-blacknose SCS quota remains available. This action considers alternatives to prevent the overharvest and discards of blacknose sharks, maximize the utilization of available non-blacknose SCS quota, extend the season for non-blacknose SCS fisheries, and improve economic opportunities. Specifically, NMFS is considering establishing commercial retention limits within the existing quotas for either blacknose sharks or non-blacknose SCS in the Atlantic region south of 34°00'N. latitude.

When considering the appropriate retention limit, NMFS has identified the following objectives, which are consistent with existing statutes including the Magnuson-Stevens Act and its objectives, with regard to this final action:

- Continuing to rebuild the Atlantic blacknose shark stock;
- Ending overfishing of the Atlantic blacknose shark stock;
- Achieving optimum yield in the blacknose and non-blacknose SCS fisheries; and
- Reducing dead discards of small coastal sharks.

The Magnuson-Stevens Act requires NMFS to "consult with and consider the comments and views of affected Councils, commissioners and advisory groups appointed under Acts implementing relevant international fishery agreements pertaining to highly migratory species, and the [HMS] advisory panel in preparing and implementing any fishery management plan or amendment." Thus, NMFS specifically solicited opinions and advice from the HMS Advisory Panel (AP) during the March 2016 meeting on a potential range of options for the proposed rulemaking and solicited input on whether there were additional options that should be addressed and considered in the rulemaking process. Based on the comments received from the HMS AP and other commenters, NMFS further developed the potential management measures, and on August 3, 2016, NMFS released the Draft EA and published a proposed rule (81 FR 51165) examining the potential impacts of establishing trip retention limits in the small coastal shark fishery. The comment period on the proposed rule closed on September 28, 2016.

1.2 SCOPE AND ORGANIZATION OF THIS DOCUMENT

In considering the management measures outlined in this document, NMFS is responsible for complying with a number of Federal statutes, including the National Environmental Policy Act (NEPA). Under NEPA, the purpose of an EA is to provide sufficient evidence and analysis for determining whether to prepare an EIS or a finding of no significant impact and to aid in the Agency's compliance with NEPA when no environmental impact statement is necessary.

This document, as an EA, assesses potential impacts on the biological and human environments associated with the establishment under Federal regulation of various management

measures for fisheries catching and interacting with Atlantic small coastal sharks. 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 fishery (Chapter 4), and any mitigating measures (Chapter 5).

In developing this document, NMFS adhered to the procedural requirements of NEPA, the CEQ regulations for implementing NEPA (40 C.F.R. 1500-1508) 28to meet the requirements of NEPA to:

- Fully integrate NEPA into the agency planning and decision making process;
- Fully consider the impacts of NOAA's 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 proposed action and occurs contemporaneously at or near the location of the action. An indirect impact is caused by a proposed 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 C.F.R. § 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 C.F.R. § 1508.7). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time within a geographic area.

In addition to NEPA, NMFS must comply with other Federal statutes and requirements such as the Magnuson-Stevens Act, Executive Order 12866, 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 Executive Order 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 proposed action. The evaluation of alternatives in an EA assists NMFS in ensuring that any unnecessary impacts are avoided through an assessment of alternative ways to achieve the underlying purpose of the project while resulting in less environmental harm.

To warrant detailed evaluation, an alternative must be reasonable[1] 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 proposed 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).*
- *An alternative must be consistent with the 2006 Consolidated Atlantic HMS FMP and its amendments.*
- *An alternative must be consistent with the Terms and Conditions of the 2012 Shark Biological Opinion (BiOp).*

This chapter includes a full range of reasonable alternatives designed to meet the purpose and need for action described in Chapter 1. These alternatives are listed below. The environmental, economic, and social impacts of these alternatives are discussed in later chapters.

[1] "Section 1502.14 (of NEPA) requires the EIS 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, "NEPA's Forty Most Asked Questions" (available at http://ceq.hss.doe.gov/nepa/regs/40/40P1.HTM) (emphasis added))

Alternative 1 No Action – Do not implement any new commercial retention limit for small coastal sharks in the Atlantic region south of 34°00'N. latitude. Do not adjust the blacknose shark baseline quota.

Under alternative 1, NMFS would maintain the status quo and would not implement any new commercial retention limits for blacknose sharks or non-blacknose SCS in the Atlantic region south of 34°00'N. latitude beyond those already in effect for Atlantic shark limited access permit holders. Currently, there is no retention limit for shark directed limited access permit holders but shark incidental limited access permit holders are limited to a combined total of 16 pelagic and SCS per trip. At this time, the baseline blacknose shark quota is 17.2 metric tons (mt) dressed weight (dw) (37,921 pounds (lb) dw), while the non-blacknose SCS quota is 264.1 mt dw (582,333 lb dw). In the Atlantic region, when landings have reached or are projected to reach 80 percent of either the blacknose or the non-blacknose SCS quota, both fisheries will close south of 34°00'N. latitude.

Alternative 2 Establish a commercial retention limit of non-blacknose SCS for shark directed limited access permit holders in the Atlantic region south of 34°00'N. latitude once the blacknose shark quota is reached and adjust accordingly the blacknose shark quota to account for dead discards.

This alternative would remove the quota linkage between non-blacknose SCS and blacknose sharks for shark directed limited access permit holders in the Atlantic region south of 34°00'N latitude and adjust the blacknose shark quota to account for any dead discards of blacknose sharks that would likely occur when catching non-blacknose SCS. This alternative would implement a commercial retention limit that would allow shark directed limited access permit holders to land a limited number of non-blacknose SCS per trip once the blacknose shark quota is reached. Under this alternative, shark incidental limited access permit holders would not be allowed to land non-blacknose SCS once the blacknose shark quota is reached. Within this alternative, NMFS considered three potential bycatch retention limits of non-blacknose SCS for shark directed limited access permit holders once the blacknose shark quota is reached and related adjustments to the blacknose shark quota. These three sub-alternatives are labeled 2a-2c and are described below.

The calculations for adjusting the blacknose shark quota are described here and illustrated in Table 2.1 below. To calculate the reduction of the blacknose shark quota as a result of potential changes in the non-blacknose SCS retention limit, NMFS calculated the catch composition ratio of blacknose sharks to non-blacknose SCS in gillnet observer reports of trips that targeted sharks in 2012. NMFS choose 2012 because, starting in 2012, some fishermen began to land relatively large numbers of blacknose sharks relative to other fishermen and catch rates changed from previous years. This catch composition is 1:3 (one blacknose shark per 3 non-blacknose SCS). NMFS divided the potential non-blacknose SCS retention limit (Column A in Table 2.1) by the catch composition of blacknose sharks to arrive at the average number of

blacknose sharks that could be expected to be discarded per gillnet trip (Column B in Table 2.1). NMFS then calculated the total number of blacknose sharks expected to be discarded in gillnet gear per year (Column C) by multiplying the average number of blacknose sharks discarded per trip (Column B) by the average number of trips that landed sharks with gillnet gear based on fisheries logbook data (118 trips). To calculate the average number of blacknose sharks expected to be discarded dead (Column D), NMFS multiplied the average number of blacknose sharks discarded with gillnet gear per year (Column C) by 50 percent, which is the dead discard rate for blacknose sharks based on gillnet fishery observer data. NMFS calculated the blacknose shark dead discards in weight (Column E) by multiplying the average number of blacknose shark dead discards (Column D) by the average weight of blacknose sharks landed with gillnet gear (5 lb dw). NMFS converted the weight of blacknose shark dead discards to metric tons (Column F) by dividing Column E of Table 2.1 by 2,204.6 mt dw. Lastly, NMFS calculated the adjusted blacknose shark quota (Column G) by subtracting the baseline blacknose shark quota, or 17.2 mt dw, from blacknose shark dead discards in Column F, then converting the adjustment to pounds dressed weight.

Table 2.1 **Calculations of potential blacknose shark quotas needed to account for dead discards of blacknose sharks for various non-blacknose SCS commercial retention limits once the blacknose shark quota is reached.** Note: Catch composition of non-blacknose SCS to blacknose sharks is 1:3; average number of trips that landed sharks with gillnet gear was 118; dead discard rate for blacknose sharks is 50 percent; average weight of blacknose sharks with gillnet gear = 5 lb dw; Atlantic blacknose shark baseline quota (17.2 mt dw; 37,921 lb dw). Conversion factor is 1 mt dw = 2,204.6 lb dw.

Alternatives	**(A)** Non-Blacknose SCS Retention Limit (Number of sharks)	**(B)** Blacknose Shark Discards per Trip (Number of sharks) = A/3 shark	**(C)** Blacknose Shark Discards (Number of sharks) = B*118 trips	**(D)** Blacknose Shark Dead Discards (Number of sharks) = C*50%	**(E)** Blacknose Shark Dead Discards (lb dw) = D*5	**(F)** Blacknose Shark Dead Discards (mt dw) = E/2,204.6	**(G)** Adjusted Blacknose Shark Quota = 17.2 mt dw – F
2a	50	16.7	1,971	986	4,930 lb dw	2.2 mt dw	15.0 mt dw (33,069 lb dw)
2b	150	50	5,900	2,950	14,750 lb dw	6.7 mt dw	10.5 mt dw (23,148 lb dw)
2c	250	83.3	9,829	4,915	24,575 lb dw	11.1 mt dw	6.1 mt dw (13,448 lb dw)

Alternative 2a: Establish a commercial retention limit of 50 non-blacknose SCS per trip and adjust the blacknose shark quota to 15.0 mt dw (33,069 lb dw).

This alternative would remove the quota linkage to blacknose sharks for shark directed limited access permit holders in the Atlantic region south of 34°00'N. latitude once the blacknose shark quota is reached and would implement a commercial retention limit of 50 non-blacknose SCS per trip at that point. As indicated in Table 2.1, NMFS estimates that this alternative could result in approximately 17 blacknose sharks being discarded each trip and approximately 985 blacknose sharks being discarded dead after the blacknose shark quota has been reached. To account for these dead discards, this alternative would reduce the annual base quota for blacknose sharks from 17.2 mt dw (37,921 lb dw) to 15.0 mt dw (33,069, lb dw). This quota reduction assumes an average dressed weight of 5 lb for blacknose sharks, which is the average weight that was derived for the 2011 stock assessment using a length-weight conversion function. However, public comment on the proposed rule and draft EA indicated the average weight should have been between 10 and 20 lb dw. Considering these comments, NMFS reviewed data from observed bottom longline and gillnet trips that landed blacknose sharks in the years 2013 through 2015. These data indicate that fishermen are landing blacknose sharks with an average weight of 12 lb dw. If NMFS were to use that average weight, the blacknose shark quota would have to be reduced to 11.8 mt dw (26,089 lb dw).

Alternative 2b: Establish a commercial retention limit of 150 non-blacknose SCS per trip and adjust the blacknose shark quota to 10.5 mt dw (23,148 lb dw).

This alternative would remove the quota linkage to blacknose sharks for shark directed limited access permit holders in the Atlantic region south of 34°00'N. latitude once the blacknose shark quota is reached and would implement a commercial retention limit of 150 non-blacknose SCS per trip at that point. As indicated in Table 2.1, NMFS estimates that this alternative could result in approximately 50 blacknose sharks being discarded each trip and approximately 2,956 blacknose sharks being discarded dead once the blacknose shark quota has been reached. To account for these dead discards, this alternative would reduce the annual base quota for blacknose sharks from 17.2 mt dw (37,921 lb dw) to 10.5 mt dw (23,148 lb dw). As described with Alternative 2a, this quota was derived assuming an average dressed weight of 5 lb for blacknose shark. If an average weight of 12 lb dw is used instead, the annual base quota for blacknose sharks would be 1.1 mt dw (2,521 lb dw).

Alternative 2c: Establish a commercial retention limit of 250 non-blacknose SCS per trip and adjust the blacknose shark quota to 6.1 mt dw (13,448 lb dw).

This alternative would remove the quota linkage to blacknose sharks for shark directed limited access permit holders in the Atlantic region south of 34°00'N. latitude once the blacknose shark quota is reached and would implement a commercial retention limit of 250 non-

blacknose SCS per trip at that point. As indicated in Table 2.1, NMFS estimates that this alternative could result in approximately 83 blacknose sharks being discarded each trip and approximately 4,927 blacknose sharks being discarded dead once the blacknose shark quota has been reached. To account for these dead discards, this alternative would reduce the annual base quota for blacknose sharks from 17.2 mt dw (37,921 lb dw) to 6.1 mt dw (13,448 lb dw). As described with Alternative 2a, this quota was derived assuming an average dressed weight of 5 lb for blacknose shark. If an average weight of 12 lb dw is used instead, the annual base quota for blacknose sharks would be less than zero (~-9.6 mt dw). In other words, using an average weight of 12 lb dw for blacknose sharks means that this retention limit would result in discards of blacknose sharks that would exceed the blacknose shark commercial sector annual catch limit (ACL).

Alternative 3 Establish a commercial retention limit for blacknose sharks for all Atlantic shark limited access permit holders in the Atlantic region south of 34°00'N. latitude.

Under Alternative 3, NMFS would maintain the quota linkage between blacknose sharks and non-blacknose SCS and establish a commercial retention limit for blacknose sharks for all Atlantic shark limited access permit holders in the Atlantic region south of 34°00'N. latitude when blacknose shark quota is available. Within this alternative, NMFS considered three sub-alternatives, which are described below.

Alternative 3a Establish a commercial retention limit of 50 blacknose sharks per trip for shark directed limited access permit holders.

Under Alternative 3a, NMFS would establish a commercial retention limit of 50 blacknose sharks per trip for shark directed limited access permit holders in the Atlantic region. Shark incidental limited access permit holders would continue to be limited to a combined total of 16 pelagic and SCS per trip.

Alternative 3b Establish a commercial retention limit of 16 blacknose sharks per trip for all Atlantic shark limited access permit holders.

Under Alternative 3b, NMFS would establish a commercial retention limit of 16 blacknose sharks per trip for all Atlantic shark limited access permit holders in the Atlantic region. This retention limit would be equal to the current retention limit for shark incidental limited access permit holders for all pelagic and small coastal sharks.

Alternative 3c *Establish a commercial retention limit of eight blacknose sharks per trip for all Atlantic shark limited access permit holders – Preferred Alternative*

Alternative 3c, the preferred alternative, would establish a commercial retention limit of eight blacknose sharks per trip for all Atlantic shark limited access permit holders (directed and incidental) in the Atlantic region. Because this retention limit would be less than the current retention limit for shark incidental limited access permit holders, the retention limit for shark incidental limited access permit holders would need to change slightly. The adjusted retention limit for incidental permit holders would still allow fishermen to land a total of 16 pelagic or small coastal sharks per trip but, of those sharks, no more than eight could be blacknose sharks.

3.0 Affected Environment

NMFS is incorporating by reference chapters from Amendment 6 to the 2006 Consolidated HMS FMP (80 FR 50073; August 18, 2015) and the 2015 Stock Assessment and Fisheries Evaluation (SAFE) Report, which are the most recently released HMS documents with updated information on Atlantic shark fisheries. Chapter 3 of Amendment 6 is incorporated by reference. In it, NMFS describes the affected environment and describes the current condition of the shark fishery, the biological status of shark stocks, the marine ecosystems in the fishery management unit, the social and economic condition of the fishing interests, and fishing communities. More specifically, Chapter 3 of Amendment 6 gives a brief history of shark management up through Amendment 6, which is the latest action to occur in the shark fisheries. This information remains current.

Chapters 4, 5, and 6 of the 2015 SAFE Report are also incorporated by reference. In the 2015 SAFE Report, NMFS provides the most up-to-date overview of state regulations for sharks, and includes the most recent status of the different shark stocks and description of the life histories and biology of the different species (Chapter 1.3). In Chapter 4, NMFS includes a brief overview of the distribution of sharks and provides a fishery data update from 2008, including an overview of the different shark fisheries and landings (bottom longline, gillnet, pelagic longline, and recreational fishing) through 2014. The fishery data update also includes an overview of bycatch in the different fisheries based on 2014 observer reports. In addition, Chapters 4 and 7 provides an overview of bycatch, incidental catch, and interactions with protected resources in the different shark fisheries and outlines the standardized bycatch reporting methodology (SBRM) for NMFS. This last section also provides a description of the effectiveness of the existing time/area closures on reduction of bycatch. In Chapters 5 of the 2015 SAFE Report, NMFS gives an overview of recent commercial shark prices and revenues in the commercial and recreational shark fisheries and an update on international trade and fishing processing. Chapter 6 provides a community and social update for all HMS fisheries. Chapter 8 gives an overview of HMS permits and tournaments. The number and distribution of permits reported in Chapter 6 of this final EA are based on the number of permits reported in 2015.

3.1 Biology and Life History of Small Coastal Sharks

As described in more detail in Chapter 3 of Amendment 6, sharks have a very 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. These biological factors leave many species of sharks vulnerable to overfishing. Currently, the SCS complex consists of four shark species including the Atlantic sharpnose, bonnethead, finetooth, and blacknose sharks (Table 3.1). Atlantic sharpnose, bonnethead, and blacknose sharks each have two stocks -- one in the Atlantic region and one in the Gulf of Mexico region. Finetooth sharks, however, have only one stock for both the Atlantic and Gulf of Mexico regions.

Table 3.1 Shark species within the small coastal shark complex.

Common Name	Scientific Name
Atlantic sharpnose	*Rhizoprionodon terraenovae*
Blacknose*	*Carcharhinus acronotus*
Finetooth	*Carcharhinus isodon*
Bonnethead	*Sphyrna tiburo*

*Prohibited from commercial retention in the Gulf of Mexico region and north of 34°00'N. latitude in the Atlantic region

3.2 Status of the Stock

The details on all stock statuses for Atlantic sharks can be found in Chapters 1 and 3 of Amendment 6 and Chapter 2 of the 2015 SAFE Report. The status of SCS can be found below in Table 3.2.

Table 3.2 SCS Stock Status Summaries for the Atlantic region: Overfished (and Years to Rebuild) and Not Overfished

Species	Current Relative Biomass Level	B_{MSY}	Domestic Minimum Stock Size Threshold	Domestic Stock Status	Years to Rebuild	Rebuilding Start Date (End Date)	Most Recent Assessment
Bonnethead sharks – Atlantic stock	*Unknown*	*Unknown*	*Unknown*	*Unknown*			2013
Atlantic sharpnose sharks – Atlantic stock	SSF_{2011} /SSF_{MSY} = 2.07	SSF_{MSY} = 4,860,000 (numbers of sharks)	(1-M)SSF_{MSY}	Not overfished			2013
Atlantic blacknose sharks – Atlantic stock	SSF_{2009}/SSF_{MSY} = 0.43 – 0.64	SSF_{MSY} = 77,577 - 288,360 (numbers of sharks)	62,294 - 231,553 (1-M)SSF_{MSY}	Overfished	30	7/3/2013 (2043)	2010
Finetooth sharks – one overall stock in the Atlantic and Gulf of Mexico regions	N_{2005}/N_{MSY} = 1.80	N_{MSY} = 3,200,000 (numbers of sharks)	2,400,000 (1 - M)N_{MSY}	Not overfished			2007

Table 3.3 SCS Stock Status Summaries for the Atlantic region: Overfishing Is Occurring and Overfishing Is Not Occurring

Species	Current Relative Fishing Mortality Rate	Maximum Fishing Mortality Threshold	Domestic Stock Status	Most Recent Assessment
Bonnethead shark – Atlantic stock	*Unknown*	*Unknown*	*Unknown*	2013
Atlantic sharpnose shark – Atlantic stock	$F_{2011}/F_{MSY} = 0.23$	0.184	Overfishing is not occurring	2013
Atlantic blacknose shark – Atlantic stock	$F_{2009}/F_{MSY} = 3.26 – 22.53$	0.01 - 0.15	Overfishing is occurring	2010
Finetooth shark – one overall stock in the Atlantic and Gulf of Mexico regions	$F_{2005}/F_{MSY} = 0.17$	0.03	Overfishing is not occurring	2007

3.3 Small Coastal Shark Habitat

The Magnuson-Stevens Act requires NMFS 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 C.F.R. § 600.815), and to evaluate the potential adverse effects of fishing activities on EFH, in, including the cumulative effects of multiple fisheries activities (50 C.F.R. § 600.815(a)(2)). Habitats that satisfy the criteria in the Magnuson-Stevens Act have been identified and described as EFH in the 1999 FMP and in Amendment 1 to the 1999 FMP. EFH designations for Atlantic shark fisheries are available at http://www.nmfs.noaa.gov/sfa/hms/documents/2015_final_efh_review.pdf. On June 29, 2015, NMFS announced the availability of the Final Atlantic HMS EFH 5-Year Review and intent to initiate an amendment to the 2006 Consolidated Atlantic HMS FMP to revise Atlantic HMS EFH descriptions and designations (80 FR 37598; July 1, 2015). The purpose of this review was to gather relevant information and determine whether modifications to existing EFH descriptions and designations are warranted, in compliance with the requirements of the Magnuson-Stevens Act and implementing regulations. During this review, NMFS determined that revisions to EFH descriptions and designations are warranted, and a draft amendment to the 2006 Consolidated Atlantic HMS FMP was initiated and released on September 7, 2016.

3.4 Management History of Small Coastal Sharks

Amendment 3 to the Consolidated HMS FMP

Based on the 2007 SCS Southeast Data, Assessment, and Review (SEDAR) 13 stock assessment, which was an update to the 2002 SCS stock assessment, NMFS determined blacknose sharks to be overfished with overfishing occurring in 2008 (73 FR 25665, May 7, 2008). To address the results of these stock assessments, NMFS released the Final Environmental Impact Statement (FEIS) for Amendment 3 to the 2006 Consolidated HMS FMP

(Amendment 3) to implement management measures to rebuild blacknose sharks and end overfishing of blacknose. The implementing regulations were published on June 1, 2010 (75 FR 30484). Management measures implemented in Amendment 3 included, but were not limited to, establishing a non-blacknose SCS quota of 221.6 mt dw and a blacknose shark quota of 19.9 mt dw. In the proposed rule, because of the blacknose shark stock status, NMFS proposed prohibiting the use of gillnet gear in waters south of North Carolina. However, based on comments received during that rulemaking that fishermen could catch non-blacknose SCS while avoiding blacknose sharks when using gillnet gear, the final rule continued to allow landings of SCS sharks with gillnet gear but linked the quotas for the non-blacknose SCS and blacknose shark fisheries to create an incentive to avoid the incidental catch of blacknose sharks. After this rulemaking, in monthly landings updates and other documents, NMFS continues to encourage fishermen to avoid blacknose sharks in order to extend the non-blacknose SCS season.

Amendment 5a to the Consolidated HMS FMP

On October 7, 2011, NMFS published a notice announcing its intent to prepare Amendment 5 to the 2006 Consolidated HMS FMP (Amendment 5) with an Environmental Impact Statement (EIS) in accordance with the requirements of the NEPA (76 FR 62331). NMFS made stock status determinations for sandbar, dusky, and blacknose sharks based on the results of SEDAR 21. The October 2011 notice acknowledged two separate stocks of blacknose sharks – the Atlantic blacknose shark stock and Gulf of Mexico blacknose shark stock. Results of SEDAR 21 determined that the Atlantic blacknose shark stock was overfished and experiencing overfishing and the Gulf of Mexico blacknose shark stock was unknown. On July 3, 2013 (78 FR 40318), NMFS published a final rule for Amendment 5a which, among other things, divided the blacknose and non-blacknose SCS quotas into separate regional quotas (Atlantic and Gulf of Mexico) consistent with the stock assessment determination. NMFS also divided the non-blacknose SCS quota into separate regional quotas because of the separate blacknose shark stocks and continued to link the regional blacknose and non-blacknose SCS quotas in each region. In the Atlantic region, NMFS established baseline quotas for non-blacknose SCS and blacknose sharks of 176.1 mt dw and 18.0 mt dw, respectively.

Amendment 6 to the Consolidated HMS FMP

NMFS published a notice (79 FR 30064; May 27, 2014) announcing its intent to prepare Amendment 6 to the 2006 Consolidated HMS FMP (Amendment 6) with an EA in accordance with the requirements of the NEPA. The rule established a management boundary in the Atlantic region along 34°00'N. latitude for the small coastal sharks, and adjusted the SCS quotas. The quota linkage between non-blacknose SCS and blacknose sharks south of 34°00'N. latitude was maintained and allowed fishermen operating north of 34°00'N to continue to fish for non-blacknose SCS once the blacknose shark quota was harvested, provided that non-blacknose SCS quota was available. In this rule, NMFS reduced the Atlantic blacknose shark quota from 18 mt dw to 17.2 mt dw, established a non-blacknose SCS TAC of 489.3 mt and increased the commercial non-blacknose SCS quota to 264.1 mt dw.

3.5 Protected Species under the Endangered Species (ESA) and Marine Mammal Protection Act (MMPA)

The ESA is the primary Federal legislation governing interactions between fisheries and species whose continued existence is threatened or endangered. Through a consultation process, the ESA requires Federal agencies to evaluate proposed actions in light of the impacts they could have on ESA-listed species. In the case of marine fisheries, the NMFS Office of Sustainable Fisheries consults with the Office of Protected Resources to determine what impacts major fishery management actions will have on endangered populations of marine species and what actions can be taken to reduce or eliminate negative impacts. Under the consultation process, if a federal action is expected to have effects on listed species or their critical habitat, NMFS issues a Biological Opinion (BiOp), which analyzes those effects and, as appropriate, specifies terms and conditions which must be met to mitigate those effects and to authorize any allowable "incidental take" of the species. On December 12, 2012, NMFS released a BiOp for shark fisheries which stated that the continued operation of the Atlantic shark fisheries is not likely to jeopardize the continued existence of Atlantic sturgeon, smalltooth sawfish, or any ESA-listed species of large whale or sea turtle. 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.

In July 2014, NMFS published a final rule that, among other things, listed the Central and Southwest Atlantic Distinct Population Segments (DPS) of scalloped hammerhead sharks as threatened species under the ESA (79 FR 38213, July 3, 2014). In September 2014, NMFS listed as threatened five new Caribbean species of corals and maintained the threatened listing for two other Caribbean coral species (79 FR 53851, September 10, 2014). On October 30, 2014, NMFS determined that ongoing operation of this fishery, consistent with the reasonable and prudent alternative and reasonable and prudent measures (RPMs) in the existing BiOp and consistent with conservation and management measures is not likely to jeopardize the continued existence of the hammerhead or coral species consistent with section 7(a)(2) of the ESA, or result in an irreversible or irretrievable commitment of resources consistent with section 7(d) of the ESA during this re-initiation of consultation. NMFS may implement requirements of the new BiOp to the shark gillnet or bottom longline fisheries in the future, if needed.

The MMPA is one of the principal Federal statutes that guide marine mammal species protection and conservation policy. Under MMPA requirements, NMFS produces an annual List of Fisheries that classifies domestic commercial fisheries by gear type and 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 (e.g., pelagic longline);

- Category II fisheries are those with occasional serious injury or mortality (e.g., shark gillnet); and

- Category III fisheries are those with remote likelihood of serious injury or mortality to marine mammals (e.g., shark bottom longline).

Fishermen participating in Category I or II fisheries are required to be registered under the 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 NMFS. While not authorized to have incidental takes, there are also currently no regulations requiring recreational fishermen to report takes. NMFS does require reporting and authorizes takes by charter/headboat fishermen (considered "commercial" by the MMPA) but no takes have been reported to NMFS to date.

Commercial landings of SCS are from fishermen using gillnet and bottom longline gear. The gillnet fishery is currently listed as a Category II fishery and the shark bottom longline fishery is currently listed as a Category III fishery under the 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.

Please refer to Sections 3.8 and 3.9.9 of the 2006 Consolidated HMS FMP for additional information on the protected species and marine mammals in the area of Atlantic HMS fisheries. Sections 3.9.9.1 and 3.9.9.2 specify the 22 cetacean species of concern that occur off the Atlantic and Gulf coasts, including six endangered whale species.

4.0 Environmental Consequences of the Alternatives

This chapter considers and describes potential impacts of each of the considered alternatives. The alternative preferred by NMFS at this time is identified, with justification provided.

4.1 Ecological Impacts

Alternative 1, the No Action alternative, would not implement a commercial retention limit for SCS in the Atlantic region south of 34°00'N. latitude for current shark directed limited access permit holders. Currently, there is no individual retention limit for non-blacknose SCS and blacknose sharks for fishermen with directed limited access permits. Fishermen who have incidental limited access permits are limited to 16 combined SCS and pelagic sharks per trip. Once the blacknose shark quota has been reached or is projected to reach 80 percent of the quota, both the blacknose and non-blacknose SCS fisheries will close because the quotas are linked, preventing further harvest of SCS.

As described in Chapter 1, blacknose sharks are overfished with overfishing occurring. In recent years, the blacknose shark quota has been exceeded twice in 6 years and the fishing season has been closing earlier and earlier each year (September 30, 2013; July 28, 2014; June 7, 2015; May 29, 2016). By taking no action, the overall quota would remain in effect, but the current measures have not been sufficient to consistently ensure that those quotas are not exceeded. Thus, overfishing of Atlantic blacknose sharks and potentially overharvesting the quotas could possibly continue if additional controls are not put in place. Logbook data from 2010 through 2015 indicates that on average commercial fishermen take 207 trips per year (Column B in Table 4.1) to land the blacknose shark quota and land approximately 212 lb dw of blacknose sharks per trip (Column A in Table 4.1). However, the average landings of blacknose sharks per trip are increasing. From 2010 through 2013, the average blacknose shark landings per trip were similar, with the highest rate being 189 lb dw per trip in 2011 (the first full season with a separate blacknose shark quota). Most recently, the average blacknose shark landings per trip were 243 lb dw in 2014 and 402 lb dw in 2015. Correspondingly, the number of trips needed to land the quota has decreased over time. Specifically, in 2015, logbook data indicated that commercial fishermen took 94 trips (Column B in Table 4.1) to harvest the baseline blacknose shark quota. Given that the fishing season has been closing earlier each year for the last several years, NMFS expects the trend of decreasing number of trips and increasing weight per trip to continue if no further action is taken.

Under the Alterative 1, (status quo), the non-blacknose SCS would largely be unharvested due to early closure of the fishery. Thus, NMFS expects that Alternative 1 would have minor direct adverse ecological impacts on blacknose sharks in the short-term, and moderate adverse impacts in the long-term, since this species is under a rebuilding plan with a set quota that has been exceeded under the status quo. However, in the long-term, this alternative would have moderate beneficial indirect ecological impacts on the species in the non-blacknose SCS management group since the quota would be underutilized (e.g. less than 53

percent of the quota was taken in 2015). Overall, maintaining the status quo for the SCS fishery, which would include the blacknose and non-blacknose SCS complex, would have neutral ecological impacts. In order to ensure that NMFS accomplishes the objectives set forth by this action (e.g., aid in ending overfishing and overharvesting of blacknose sharks and utilizing the non-blacknose SCS fishery quota), Alternative 1 is not a preferred alternative at this time.

Table 4.1 **Number of trips per year for Atlantic blacknose sharks based on the average landings per trip.** Source: Fisheries Logbook System (2010-2015). Atlantic blacknose shark baseline quota is 17.2 mt dw or 37,921 lb dw.

Year	**(A)** Average Landings of Blacknose Shark per Trip in lb dw	**(B)** Number of Trips per Year That Could Land the Blacknose Shark Quota (number) = 37,921/A
2010	140	271
2011	189	201
2012	161	236
2013	135	281
2014	243	156
2015	402	94
Average	212	207

Under Alternative 2a, NMFS would remove the quota linkage to blacknose sharks for shark directed limited access permit holders in the Atlantic region south of 34°00'N. latitude once the blacknose shark quota is reached and would implement a commercial retention limit of 50 non-blacknose SCS per trip at that point. Under this alternative, the annual blacknose shark quota would also be adjusted to 15.0 mt dw (33,069 lb dw) due to the estimated number of blacknose sharks that would be discarded dead while harvesting non-blacknose SCS. As described in Chapter 2, how much the blacknose quota would be reduced depends on the average weight used to calculate the reduction. In the draft EA, NMFS used an average blacknose shark weight of 5 lb dw that was derived from the 2011 stock assessment using a length-weight conversion function. This produced an adjusted blacknose shark quota of 15.0 mt dw (33,069 lb dw). However, public comment on the proposed rule and draft EA indicated the average weight should have been between 10 and 20 lb dw. Based on this public comment, NMFS reviewed the available data from observed bottom longline and gillnet trips that landed blacknose sharks from 2013 to 2015. These data indicate that fishermen are landing blacknose sharks with an average weight of 12 lb dw. Using this average weight, the adjusted blacknose shark quota would be 11.8 mt dw (26,089 lb dw). Under either adjusted quota, shark directed limited access permit holders would continue to be allowed to retain a limited number of blacknose sharks while retaining other non-blacknose SCS until the blacknose shark quota was landed and could then land 50 non-blacknose SCS per trip until the non-blacknose SCS quota is landed. Shark incidental limited access permit holders would not be allowed to land non-blacknose SCS after the blacknose shark quota is landed. While this alternative adjusts the commercial quota, it does not change the total allowable catch (TAC), which was established based on the 2011 stock

assessment. In other words, this alternative converts potential landings of blacknose sharks into dead discards of blacknose sharks, contrary to National Standard 9, which requires NMFS to minimize bycatch to the extent practicable.

Under this alternative, NMFS expects directed limited access permit holders to continue to target blacknose sharks, similar to current fishing trends, until the blacknose shark quota is landed. As such, NMFS expects that this alternative would have minor adverse direct ecological impacts on the blacknose sharks in the Atlantic region in the short-term, and moderate adverse effects in the long-term as this alternative would likely not change the current fishing practices and the commercial quota for blacknose sharks would still likely be landed quickly, potentially resulting in overharvest due to data reporting lags. However, this alternative would change dead discards of non-blacknose SCS to landings. As such, this alternative would have neutral ecological impacts on the non-blacknose sharks in the region as fishermen would be more inclined to land 50 non-blacknose SCS per trip until reaching the quota, thus utilizing the non-blacknose SCS quota, without exceeding it. Overall, the commercial retention limit for non-blacknose SCS would have minor direct adverse ecological impacts in the short-term and moderate direct adverse impacts in the long-term for the overall SCS fishery, which includes the blacknose shark and non-blacknose SCS management group.

Under Alternative 2b, NMFS would remove the quota linkage to blacknose sharks for shark directed limited access permit holders in the Atlantic region south of 34°00'N. latitude once the blacknose shark quota is reached and would implement a commercial retention limit of 150 non-blacknose SCS per trip at that point. Similar to Alternative 2a, this alternative would adjust the annual blacknose shark quota to 10.5 mt dw (23,148 lb dw), assuming an average weight of 5 lb dw per blacknose shark, or 1.1 mt dw (2,521 lb dw), assuming an average weight of 12 lb dw, due to the estimated number of dead discard blacknose sharks which would occur in the non-blacknose SCS fishery. Shark directed limited access permit holders would be allowed to retain a limited number of blacknose sharks while retaining other non-blacknose SCS. Similar to Alternative 2a, NMFS expects that this alternative would have minor adverse impacts on the blacknose sharks in the Atlantic region as, without the quota linkage, some directed permit holders could continue to land large numbers of blacknose sharks relative to other fishermen until the blacknose shark quota is landed, increasing the amount of blacknose shark dead discards after the fishing season is closed. However, if the average weight is 12 lb dw, then this alternative could have moderate adverse impacts on blacknose sharks as even small amount of landings could exceed the quota. Similar to Alternative 2a, this alternative would have neutral ecological impacts on the non-blacknose sharks in the region as directed permit holders could land 150 non-blacknose SCS per trip until reaching the non-blacknose SCS quota, thus utilizing the non-blacknose SCS quota without exceeding it. However, this alternative would have minor or moderate direct adverse ecological impacts in the short-term and moderate direct adverse impacts in the long-term for the overall SCS fishery because dead discards would continue after the blacknose shark quota is reached.

Under Alternative 2c, would remove the quota linkage to blacknose sharks for shark directed limited access permit holders in the Atlantic region south of 34°00'N. latitude once the blacknose shark quota is reached and would implement a commercial retention limit of 250 non-blacknose SCS per trip at that point. Under this alternative, NMFS would adjust the blacknose shark quota to 6.1 mt dw (13,448 lb dw), assuming an average weight of 5 lb dw per blacknose shark, similar to Alternative 2a. However, if NMFS used the average blacknose shark weight of 12 lb dw, the blacknose quota would have to be adjusted to 0 mt and it is possible that discards alone could exceed the commercial sub-ACL for blacknose sharks. Similar to Alternative 2b, NMFS expects that this alternative would have minor to moderate adverse ecological impacts on the blacknose sharks in the Atlantic region as some directed permit holders would continue to land large numbers of blacknose sharks relative to other fishermen until the blacknose shark quota is landed (assuming the quota is based off an average weight of 5 lb dw per blacknose sharks). These landings may result in a significant overharvest of the blacknose shark quota thus increasing the amount of blacknose shark dead discards after the blacknose shark fishing season is closed due to the elimination of the quota linkage. If the average weight of blacknose sharks is 12 lb dw, then this alternative could lead to an increase in blacknose shark mortality, contrary to the rebuilding plan. This alternative would have neutral ecological impacts on the non-blacknose SCS in the region as directed permit holders could land 250 non-blacknose SCS per trip until reaching the quota, thus utilizing the non-blacknose SCS quota without exceeding it. Similar to Alternative 2b, the commercial retention limit for non-blacknose SCS would have minor to moderate direct adverse ecological impacts in the short-term and moderate adverse impacts in the long-term for the overall SCS fishery because dead discards would continue after the blacknose shark quota is reached.

Under Alternative 3a, NMFS would establish a commercial retention limit of 50 blacknose sharks per trip for shark directed limited access permit holders (shark incidental limited access permit holders would continue to be limited to a total of 16 pelagic and SCS sharks per trip). Currently, the linkage between the blacknose shark quota and the non-blacknose SCS quota causes the closure of both fisheries once the lower blacknose shark quota is attained. Under Alternative 3a, fishermen would not be allowed to land large number of blacknose sharks per trip. Since most fishermen do not prefer to discard any fish, Alternative 3a has the potential to influence fishermen to revert to the fishing practices observed in 2010 and 2011 where blacknose sharks were actively avoided when fishing for non-blacknose SCS. Under this alternative, NMFS estimated in the draft EA that fishermen could land approximately 250 lb dw of blacknose sharks per trip (Column B in Table 4.2), assuming each blacknose shark is approximately 5 lb dw, an estimate derived from a length-weight function used in the 2011 stock assessment, and that it would take an estimated 152 trips to fill the blacknose shark quota (Column C in Table 4.2). This number of trips is a reduction of 55 trips when compared to the average number of trips from 2010-2015 under Alternative 1 (Table 4.1). However, public comment on the proposed rule and draft EA indicated the average weight should have been between 10 and 20 lb dw. As described above, based on this public comment, NMFS reviewed the available data from observed bottom longline and gillnet trips that landed blacknose sharks from 2013 to 2015. These data indicate that fishermen are landing blacknose sharks with an

average weight of 12 lb dw. Assuming a 12 lb dw average, under this alternative, fishermen could land approximately 600 lb dw of blacknose sharks per trip (Column D in Table 4.2), and it would take an estimated 63 trips to fill the blacknose shark quota (Column E in Table 4.2). This number of trips is a reduction of 144 trips when compared to the average number of trips from 2010-2015 under Alternative 1 (Table 4.1). Using either estimate, this alternative would still result in early closures of the fishery when compared to the average number of trips needed to catch the blacknose shark quota. The retention limit of 50 blacknose sharks could potentially cause the SCS fisheries to close as early as June or July if every trip landing blacknose sharks lands the full retention limit but because most trips do not land that many blacknose sharks now, NMFS believes this change in behavior would be unlikely under this alternative. NMFS expects that this alternative would have minor beneficial ecological impacts in the short and long-term on the blacknose sharks in the Atlantic region as directed permit holders may revert to fishing strategies similar to 2010 and 2011 and refrain from targeting blacknose sharks. For non-blacknose SCS, this alternative would have neutral impacts as the quota would be fished to the level established in Amendment 6 to the 2006 Consolidated HMS FMP, resulting in a fishery that would be underutilized. Overall, establishing a commercial retention limit for blacknose sharks would have minor direct beneficial ecological impacts in the short and long-term for the overall SCS fishery, which includes the blacknose and non-blacknose SCS management groups.

Table 4.2 **Retention limits and number of trips per year for Atlantic blacknose sharks under the different potential alternatives**. Source: Fisheries Logbook System (2010-2015). Average weight of blacknose sharks = 5 lb dw (2011 stock assessment) or 12 lb dw (2013-2015 observer data); Atlantic blacknose shark baseline quota is17.2 mt dw or 37,921 lb dw.

Alternative	**(A)** Retention Limit (number)	**(B)** Average Weight of Blacknose Shark Landings per Trip (lb dw) (A*5)	**(C)** Number of Trips per Year That Could Land the Blacknose Shark Quota (number) (37,921/B)	**(E)** Average Weight of Blacknose Shark Landings per Trip (lb dw) (A*12)	**(F)** Number of Trips per Year That Could Land the Blacknose Shark Quota (number) (37,921/E)
3a	50	250	152	600	63
3b	16	80	474	192	197
3c	8	40	948	96	395
Average (2010-2015)	-	212	207	212	207

Alternative 3b is similar to Alternative 3a, but would establish a commercial retention limit of 16 blacknose sharks per trip for all Atlantic shark limited access permit holders. Under this alternative, NMFS estimated in the draft EA that this retention limit would allow approximately 80 lb dw blacknose sharks to be landed per trip, and that it would take an estimated 474 trips to land the blacknose shark baseline quota (Column C in Table 4.2). Assuming an average weight of 5 lb dw per blacknose shark, the commercial retention limit would result in more than double the number of trips needed to fill the blacknose shark quota when compared to the overall average number of trips from 2010-2015 under Alternative 1 (474 trips compared to 207 trips) and would likely extend the SCS fishing season to year around. However, using the 12 lb dw average taken from the 2013-2015 observer data, NMFS estimates

that a retention limit of 16 blacknose sharks per trip would allow fishermen to land approximately 192 lb dw of blacknose shark per trip. Under that per trip average, it would take 192 trips to fill the blacknose shark quota if every trip caught the full limit, 15 fewer trips than the 2010-2015 average. However, NMFS still expects that Alternative 3b would have moderate direct beneficial ecological impacts on Atlantic blacknose sharks in the short and long-term as all Atlantic shark limited access permit holders would likely revert to how they had been fishing in 2010 and 2011 and actively avoid blacknose sharks when fishing for non-blacknose SCS as a 16 fish retention limit would not provide enough economic incentive to target them. For non-blacknose SCS, this alternative would have neutral impacts as the non- blacknose SCS quota could be fully utilized without being exceeded. However, this alternative would have moderate direct beneficial ecological impacts in the long-term for the overall SCS fishery.

Alternative 3c, the preferred alternative, is similar to Alternatives 3a and 3b except the commercial retention limit would be of eight blacknose sharks per trip for all Atlantic shark limited access permit holders. Under this alternative, NMFS estimated in the draft EA that this retention limit would allow approximately 40 lb dw blacknose sharks to be landed per trip, and that it would take an estimated 948 trips to land the full blacknose shark quota (Column C in Table 4.2). Assuming an average weight of 5 lb dw per blacknose shark, this retention limit would be more than ten times the number of trips needed to fill the blacknose shark quota in 2015 under Alternative 1 (948 trips compared to 94 trips) and more than four times larger than the overall average under Alternative 1 (948 trips compared to 207 trips). However, using the 12 lb dw average taken from the 2013-2015 observer data, NMFS estimates that a retention limit of 8 blacknose sharks per trip would allow fishermen to land approximately 96 lb dw of blacknose shark per trip. Under that per trip average, it would take 395 trips to fill the blacknose shark quota if every trip caught the full limit, approximately four times the number of trips needed to fill the blacknose shark quota compared to 2015, nearly double the trips from the 2010-2015 average. Using either estimate of average blacknose shark weight, Alternative 3c would ensure that the blacknose shark quota would not be exceeded and would allow opportunities for both the blacknose shark and non-blacknose SCS quotas to be fully utilized. As in Alternative 3b, this alternative would have moderate direct beneficial ecological impacts on the blacknose sharks in the Atlantic region in the short and long-term since the lower blacknose shark landings per trip would reduce the rate of landings and might result in underharvests. Thus, this alternative could help put rebuilding back on track and prevent overfishing of blacknose sharks. This alternative would also have neutral ecological impacts for non-blacknose SCS as the quota would be fully utilized without being exceeded. Similar to Alternative 3b, the commercial retention limit for blacknose sharks would have moderate direct beneficial ecological impacts in the long-term for the overall SCS fishery. Based on the beneficial ecological impacts for both blacknose sharks and non-blacknose SCS, NMFS prefers this alternative at this time.

4.2 Social and Economic Impacts

Alternative 1, the No Action alternative, would not implement any new retention limits for SCS in the Atlantic region south of 34°00'N. latitude for current shark limited access permit holders. Blacknose sharks and non-blacknose SCS quotas are currently linked south of 34°00'N.

latitude and the SCS fishery is closed when either quota is reached. This linkage has resulted in the early closure of both blacknose and non-blacknose SCS fisheries due to relatively large numbers of blacknose shark landings. Closure of these fisheries is a result of the increasingly rapid harvest of Atlantic blacknose sharks, which leaves the non-blacknose SCS quota underutilized. Under the baseline blacknose shark quota, NMFS expects ex-vessel revenue to be $40,575 ($32,991 for meat + $7,584 for fins), assuming an average value of $0.87 per lb dw for blacknose meat and $4.00 per lb dw for fins from eDealer landing reports. However, between 2014 and 2015, the Atlantic non-blacknose SCS quota has been underutilized by an average of 314,625 lb dw or 54 percent of the quota (Column D in Table 4.3). Currently, fishermen make approximately $254,053 per year in ex-vessel revenues from non-blacknose SCS ($198,104 for meat and $55,949 for fins) and are unable to land available quota valued at approximately $298,583 ($232,823 for meat + $65,760 for fins) in ex-vessel revenues, assuming an average value of $0.74 per lb dw for non-blacknose SCS meat and $4.18 per lb dw for fins (Table 4.3). NMFS expects that Alternative 1, the No Action alternative, would have minor indirect adverse socioeconomic impacts on the SCS fishery in the short and long-term as it would continue to allow for underutilization of the Atlantic non-blacknose SCS quota. For this reason, NMFS does not prefer this alternative at this time.

Table 4.3 **Average ex-vessel revenue loss of Atlantic non-blacknose SCS due to the quota linkage to blacknose sharks, 2014-2015.** Shark fins are assumed to be 5 percent of the carcass weight. Note: The ex-vessel prices for meat and fins are Atlantic regional prices for non-blacknose SCS.

Year	Product	**(A)** Average Ex-Vessel Price	**(B)** Annual Adjusted Quota (lb dw)	**(C)** Estimated Landings (lb dw)	**(D)** Average Ex-Vessel Profit (A*C)	**(E)** Underharvest (lb dw) (B – C = D)	**(F)** Average Ex-Vessel Revenue Loss (A*D = E)
2014	Meat	$0.74	582,333	228,045	$163,753	354,288	$262,173
	Fins	$4.00	29,117	11,402	$45,608	17,715	$70,860
	Total				$209,361		$333,033
2015	Meat	$0.73	582,333	307,371	$224,381	274,962	$200,722
	Fins	$4.36	29,117	15,369	$67,009	13,748	$59,941
	Total				$291,390		$260,663
Average	Meat	$0.74	582,333	267,708	$198,104	314,625	$232,823
	Fins	$4.18	29,117	13,385	$55,949	15,732	$65,760
	Total				$254,053		$298,583

Under Alternative 2a, NMFS would remove the quota linkage to blacknose sharks for shark directed limited access permit holders in the Atlantic region south of 34°00'N. latitude once the blacknose shark quota is reached and would implement a commercial retention limit of 50 non-blacknose SCS per trip at that point. Additionally, this alternative would adjust the blacknose shark quota to 15.0 mt dw (33,069 lb dw), assuming a 5 lb dw carcass, or 11.8 mt dw (26,089 lb dw), assuming a 12 lb dw carcass. Due to adjustment of the blacknose shark quota to account for potential dead discards, Alternative 2a would result in an average ex-vessel revenue loss of $5,275, assuming a 5 lb dw carcass, to $12,660, assuming a 12 lb dw carcass, compared

to the current base quota under Alternative 1, assuming an average value of $0.87 lb dw for blacknose shark meat and $4.00 lb dw for blacknose shark fins (Table 4.4).

Table 4.4 **Average ex-vessel revenue loss of blacknose sharks due to the adjusted quota under alternatives 2a through 2c. Shark fins are assumed to be 5 percent of the carcass weight.** Note: The ex-vessel prices for meat and fins are average Atlantic regional prices for blacknose sharks from 2014-2015. The Atlantic blacknose shark quota adjustments are the potential dead discards of blacknose sharks minus the baseline blacknose shark quota.

Alternatives	Product	**(A)** Average Ex-Vessel Price	**(B)** Baseline Blacknose Shark Quota (lb dw)	**(C)** Baseline ex-vessel revenue (A*B)	**(D)** Adjusted Blacknose Shark Quota (lb dw)	**(E)** Adjusted Ex-Vessel revenue (A*D)	**(F)** Average Ex-Vessel Revenue Loss (C-E)
Calculations assuming a 5 lb dw average for landed blacknose sharks							
2a	Meat	$0.87	37,921	$32,991	32,991	$28,702	$4,289
	Fins	$4.00	1,896	$7,584	1,650	$6,598	$986
	Total			$40,575		$35,300	$5,275
2b	Meat	$0.87	37,921	$32,991	23,171	$20,159	$12,833
	Fins	$4.00	1,896	$7,584	1,159	$4,634	$2,950
	Total			$40,575		$24,793	$15,783
2c	Meat	$0.87	37,921	$32,991	13,346	$11,611	$21,380
	Fins	$4.00	1,896	$7,584	667	$2,669	$4,915
	Total			$40,575		$14,280	$26,295
Calculations assuming a 12 lb dw average for landed blacknose sharks							
2a	Meat	$0.87	37,921	$32,991	26,089	$22,697	$10,294
	Fins	$4.00	1,896	$7,584	1,304	$5,218	$2,366
	Total			$40,575		$27,915	$12,660
2b	Meat	$0.87	37,921	$32,991	2,521	$2,193	$30,798
	Fins	$4.00	1,896	$7,584	126	$504	$7,080
	Total			$40,575		$2,697	$37,878
2c	Meat	$0.87	37,921	$32,991	0	$0	$32,991
	Fins	$4.00	1,896	$7,584	0	$0	$7,584
	Total			$40,575		$0	$40,575

To determine the potential ex-vessel revenue gained by fishermen south of 34°00'N. latitude under the three non-blacknose SCS retention limits considered in Alternative 2, NMFS estimated average landings per trip and potential additional trips per year under each sub-alternative based on landings and trip rates observed in 2015. First, the maximum per trip landings of non-blacknose SCS under each alternative was estimated by converting the retention limit (Row A) to weight by multiplying the retention limit by the average weight of non-blacknose SCS (6 lb dw) based on observer data (Row B in Table 4.5). Next, NMFS estimated

the average non-blacknose SCS landings pre trip (Row C) for each retention limit alternative considered by using 2015 per trip landings data reported by dealers in the HMS electronic reporting system (eDealer). In 2015, 838 trips reported landing non-blacknose SCS in the Atlantic region. Landings ranged from 1.4 to 6,180 lb dw per trip and averaged 367 lb dw (median = 67 lb dw) per trip. These low per trip landings are indicative of a fishery that is primarily incidental in nature. To estimate likely average landings per trip under Alternatives 2a-c, NMFS assumed that the range of landings of non-blacknose SCS per trip would continue after the closure of the blacknose shark quota in a similar fashion as the range before the closure. The only difference would be that the landings of the larger trips would now be capped at a retention limit. Thus, to estimate the average landings per trip, NMFS used the 2015 landings data and ensured that each trip was capped at the estimated maximum non-blacknose SCS landings per trip under each proposed retention limit. NMFS then recalculated what the average landings per trip would have been if each of the considered retention limits had been in place in 2015 following the closure of the South Atlantic blacknose shark quota. For example, under Alternative 2a, NMFS capped the landings per trip at 300 lb dw, the estimated maximum landings per trip under the proposed retention limit of 50 non-blacknose SCS. In other words, any trip that landed more than 300 lb dw per trip was limited to 300 lb dw for the purposes of this analysis (e.g., the trip that landed more than 6,000 lb dw would only land 300 lb dw for this analysis, and was limited to 900 and 1,500 lb dw for the analyses for Alternatives 2b and 2c, respectively). For reference, only 28 percent of trips reporting landings of non-blacknose SCS in 2015 landed more than 300 lb dw. Trips that had landed less than 300 lb dw per trip were kept the same (e.g., the trip that landed 1.4 lb dw was kept at 1.4 lb dw). NMFS then recalculated the average landings across all trips.

Under Alternative 2a, the recalculated average non-blacknose SCS landing per trip after the blacknose closure is 127 lb dw (Row C in Table 4.5). Under average ex-vessel prices for non-blacknose SCS (Row D in Table 4.5), these average landings would be worth $121 per trip (Row E in Table 4.5). In 2015, fishermen south of 34°00'N. latitude conducted 204 trips that landed non-blacknose SCS between when the fishery opened on January 1 to when the fishery closed on June 7. NMFS determined the additional trips by fishermen south of 34°00'N. latitude under each alternative by calculating the average number of trips landing non-blacknose SCS per month in 2015 while the fishery was open as approximately 41 trips per month (204 trips / 5 months for January 1 to June 7 = 40.8 trips per month). NMFS extrapolated the average number of trips per month across the rest of the year to get an additional 286 trips (40.8 trips per month * 7 months for June to December = 285.6 trips) (Row F in Table 4.5). The additional non-blacknose SCS landings under each alternative were calculated by multiplying the estimated average landings per trip by the additional trips that fishermen south of 34°00'N. latitude can land non-blacknose SCS (Row G in Table 4.5).

In Row H in Table 4.5, NMFS calculated the average ex-vessel revenue gained by each alternative above the status quo in Alternative 1. Under Alternative 2a, the revenue losses due to the adjusted blacknose shark quota ($5,275 assuming a 5 lb dw carcass or $12,660 assuming a 12 lb dw carcass, Column F in Table 4.4) would easily be offset by the revenue gained ($34,470)

from the additional landings of non-blacknose SCS under this alternative for fishermen in the Atlantic region south of 34°00'N. latitude (row H in Table 4.5). Therefore, the net change under this alternative is estimated to be an increase in revenue of $21,810 to $29,195 per year depending on the average carcass weight of blacknose sharks. Conversely, trips harvesting the full retention limit (300 lb dw) under Alternative 2a could expect ex-vessel revenues of $285 per trip (Row D in Table 4.6), and it would require 1,048 full trips (314,625 average non-blacknose SCS underharvest from Column D in Table 4.3 / 300 lb dw = 1,048.8 trips) landing the full retention limit to fully utilize the underharvest of the non-blacknose SCS quota (Column E in Table 4.6). Given the low per trip revenue under this alternative, NMFS anticipates the non-blacknose SCS fishery would become an exclusively incidental fishery, making full utilization of the quota unlikely. The alternative would have minor direct economic costs for shark permit holders as it would reduce the blacknose shark quota by 2.2 mt dw, but should have minor beneficial economic impacts for and the non-blacknose SCS management group as it would allow for continued utilization of the non-blacknose SCS quota for the full season. Overall, the economic benefits of the latter should outweigh the economic costs of the former to provide net minor direct economic benefits for the SCS fishery.

Table 4.5 **Average ex-vessel revenue for the non-blacknose SCS fishery south of 34°00'N. latitude under Alternatives 2a through 2c given trip and landing rates observed in 2015. Shark fins are assumed to be 5 percent of the carcass weight.** Note: NMFS used an average weight of 6 lb dw for non-blacknose SCS. The 2015 average number of trips was 204. The ex-vessel prices for meat and fins are average Atlantic regional prices for non-blacknose SCS from 2014-2015.

Row	Variable	Alternative 2a	Alternative 2b	Alternative 2c
A	Non-Blacknose SCS Retention Limit	50	150	250
B	Estimated Maximum Landings per Trip Under the Proposed Retention Limits (Meat / Fins lb dw)	300 / 15	900 / 45	1,500 / 75
C	Estimated Average Landings per Trip Under the Proposed Retention Limits (Meat / Fins lb dw)	127 / 6	240 / 12	296 / 15
D	Average Ex-Vessel Price ($ per lb dw)			
	Meat	$0.74	$0.74	$0.74
	Fins	$4.18	$4.18	$4.18
E	Revenue per Additional Trip (C*D = E)			
	Meat	$94	$178	$219
	Fins	$27	$50	$62
	Total	$121	$228	$281
F	Estimated Additional Trips Landing Non-Blacknose SCS per Year	286	286	286
G	Additional Annual Landings of Non-Blacknose SCS (lb dw) (C*F = G)			
	Meat	36,322	68,640	84,656
	Fins	1,816	3,432	4,233

H	Additional Ex-Vessel Non-Blacknose SCS Revenue (D*G = H)			
	Meat	$26,878	$50,794	$62,645
	Fins	$7,591	$14,346	$17,693
	Total	$34,470	$65,139	$80,339

Table 4.6 **Average ex-vessel revenue for the non-blacknose SCS fishery south of 34°00'N. latitude under Alternatives 2a through 2c given trip and landing rates required to fully utilize the non-blacknose SCS quota without exceeding it. Shark fins are assumed to be 5 percent of the carcass weight.** Note: NMFS used an average weight of 6 lb dw for non-blacknose SCS. The average non-blacknose SCS underharvest was 314,625 lb dw. The ex-vessel prices for meat and fins are average Atlantic regional prices for non-blacknose SCS from 2014-2015.

Row	Variable	Alternative 2a	Alternative 2b	Alternative 2c
A	Non-Blacknose SCS Retention Limit	50	150	250
B	Estimated Maximum Landings per Trip Under the Proposed Retention Limits (Meat / Fins lb dw)	300 / 15	900 / 45	1,500 / 75
C	Average Ex-Vessel Price ($ per lb dw)			
	Meat	$0.74	$0.74	$0.74
	Fins	$4.18	$4.18	$4.18
D	Revenue per Additional Trip (B*C = D)			
	Meat	$222	$666	$1,110
	Fins	$63	$188	$314
	Total	$285	$854	$1,424
E	Estimated Additional Trips Landing Non-Blacknose SCS per Year to Achieve Full Quota Utilization	1,048	349	209
F	Additional Annual Landings of Non-Blacknose SCS (lb dw) (B*E = F)			
	Meat	314,400	314,100	313,500
	Fins	15,720	15,705	15,675
G	Additional Ex-Vessel Non-Blacknose SCS Revenue (C*F = G)			
	Meat	$232,656	$232,434	$231,990
	Fins	$65,710	$65,647	$65,522
	Total	$298,366	$298,081	$297,512

Under Alternative 2bwould remove the quota linkage to blacknose sharks for shark directed limited access permit holders in the Atlantic region south of 34°00'N. latitude once the blacknose shark quota is reached and would implement a commercial retention limit of 150 non-blacknose SCS per trip at that point. Additionally, Alternative 2b would adjust the annual blacknose shark quota to 10.5 mt dw (23,171 lb dw), assuming a 5 lb dw carcass, or 1.1 mt dw

(2,521 lb dw), assuming a 12 lb dw carcass. NMFS followed the same calculations as described in Alternative 2a. Under a 150 non-blacknose shark retention limit and assuming 2015 catch rates, estimated average landings per trip were 240 lb dw (Table 4.5) with maximum landings of 900 lb dw (Table 4.6). These landings would result in per trip ex-vessel revenues of $228 and $854, respectively. Under a 150 fish retention limit, it would take 349 trips landing the full retention limit to fully utilize the non-blacknose SCS quota (Row E in Table 4.6). However, only 12 percent of trips in 2015 landed 900 lb dw or more of non-blacknose SCS. Reductions in the blacknose shark quota under Alternative 2b would result in total ex-vessel revenue losses of $15,783, assuming a 5 lb dw carcass, to $37,878, assuming a 12 lb dw carcass, per year compared to the current base quota in Alternative 1, assuming an average value of $0.87 lb dw for meat and $4.00 lb dw for fins of blacknose sharks (Column F in Table 4.4). However, these revenue losses would be compensated by an estimated $65,139 in total ex-vessel revenue gained from the increased landings of non-blacknose SCS under this alternative for fishermen in the Atlantic region south of 34°00'N. latitude (Row H in Table 4.5). Therefore, the net change under this alternative is estimated to be an increase in revenue of $27,261 to $49,357 per year depending on the average carcass weight of blacknose sharks. As such, this alternative should have minor direct beneficial economic impacts on the overall SCS fishery in the short and long-term while having minor direct economic costs for those fishermen that target blacknose sharks due to the reduced quota.

Under Alternative 2c, NMFS would remove the quota linkage to blacknose sharks for shark directed limited access permit holders in the Atlantic region south of 34°00'N. latitude once the blacknose shark quota is reached and would implement a commercial retention limit of 250 non-blacknose SCS per trip at that point. Additionally, Alternative 2c would adjust the annual blacknose shark quota to 6.1 mt dw (13,448 lb dw), assuming a 5 lb dw carcass, or no quota, assuming a 12 lb dw carcass. NMFS followed the same calculations as described in Alternative 2a. Under a 250 non-blacknose shark retention limit and assuming 2015 catch rates, estimated average landings per trip were 296 lb dw (Table 4.5) with maximum landings of 1,500 lb dw (Table 4.6). These landings would result in per trip ex-vessel revenues of $281 and $1,424, respectively. Under a 250 fish retention limit, it would take 209 trips landing the full retention limit to fully utilize the non-blacknose SCS quota (Row E in Table 4.6). However, less than 7 percent of trips in 2015 landed 1,500 lb dw or more of non-blacknose SCS. Reductions in the blacknose shark quota under Alternative 2c would result in an average ex-vessel revenue loss of $26,295, with a 5 lb dw carcass, and $40,575, with a 12 lb dw carcass, assuming an average value of $0.87 lb dw for meat and $4.00 lb dw for fins of blacknose sharks (Column F in Table 4.4). However, the increased landings of non-blacknose SCS under this alternative for fishermen in the Atlantic region south of 34°00'N. latitude would result in an estimated total ex-vessel revenue gain of $80,339 (Row H in Table 4.5). Therefore, the net change under this alternative is estimated to be an increase in revenue of $39,764 to $54,044 per year, depending on the average carcass weight of blacknose sharks. Thus, this alternative should have minor direct beneficial economic impacts on the overall SCS fishery in the short and long-term while having minor direct economic costs for those fishermen that target blacknose sharks due to the reduced quota.

Under Alternative 3a, NMFS would establish a commercial retention limit of 50 blacknose sharks per trip for shark directed limited access permit holders. Currently, the linkage between the blacknose shark quota and the non-blacknose SCS quota causes the closure of both fisheries once the lower blacknose shark quota is attained. This alternative could potentially decrease the number of trips needed to fill the blacknose shark quota when compared to the average number of trips from 2010-2015 under Alternative 1, assuming the 50 blacknose shark limit is landed each trip. Using the 5 lb dw estimate of average blacknose shark weight from the 2011 stock assessment, landing the full 50 blacknose shark retention limit would result in total landings of 250 lb dw per trip, while the 12 lb dw average from recent observer program data would result in total landings of 600 lb dw per trip. The lower estimate would make targeted trips largely unprofitable as they would only generate $270 of revenue per trip ($0.87/lb dw for meat and $4.00/lb dw for fins); however, the higher estimate of average weight (12 lb dw) would still allow for somewhat profitable day trips targeting blacknose sharks as a full limit of 50 sharks would generate $642 of revenue per trip (Table 4.7). Thus, a targeted blacknose shark fishery might continue to exist, possibly resulting in continued early closures of the larger non-blacknose SCS fishery although it would likely take more trips for that to happen than in recent years. However, because most trips do not land that many blacknose sharks per trip now, NMFS believes a change in behavior would be unlikely under this alternative. Nevertheless, because early closures resulting in underutilization of the non-blacknose SCS quota are possible under this alternative, this alternative is not preferred.

Table 4.7 **Average ex-vessel revenue of blacknose sharks per trip under Alternatives 3a through 3c. Shark fins are assumed to be 5 percent of the carcass weight.** Note: The ex-vessel prices for meat and fins are average Atlantic regional prices for blacknose sharks from 2014-2015.

Alternative	Product	**(A)** Average Ex-Vessel Price	**(B)** Blacknose Shark Retention Limit	**(C)** Blacknose Shark Retention Limit in Weight (lb dw) (B * 5)	**(D)** Average Ex-Vessel (A * C)	**(E)** Blacknose Shark Retention Limit in Weight (lb dw) (B * 12)	**(F)** Average Ex-Vessel (A * E)
3a	Meat	$0.87	50	250	$218	600	$522
	Fins	$4.00		13	$52	30	$120
	Total				$270		$642
3b	Meat	$0.87	16	80	$70	192	$167
	Fins	$4.00		4	$16	10	$38
	Total				$86		$205
3c	Meat	$0.87	8	40	$35	96	$84
	Fins	$4.00		2	$8	5	$19
	Total				$43		$103

Table 4.8 **Average ex-vessel revenue for the non-blacknose SCS fishery south of 34°00'N. latitude under Alternatives 3a through 3c based on observed trip and landings rates from 2015. Shark fins are assumed to be 5 percent of the carcass weight.** Note: NMFS used an average weight of 6 lb dw for non-blacknose SCS. The average non-blacknose SCS per trip landings were from 2015 eDealer reports. The estimated additional trips landings non-blacknose SCS are the extrapolated number of trips for the rest of the year based on 2015 eDealer reports. The ex-vessel prices for meat and fins are average Atlantic regional prices for non-blacknose SCS from 2014-2015.

Product	**(A)** Average Ex-Vessel Price	**(B)** Average Landings per Trip (lb dw)	**(C)** Estimated Additional Trips Landing Non-Blacknose SCS	**(D)** Additional Landings of Non-Blacknose SCS (lb dw) (B *C)	**(E)** Average Ex-Vessel Non-Blacknose SCS Revenue (A * D)
Meat	$0.74	367	286	104,962	$77,672
Fins	$4.18			5,248	$20,992
Total					$98,664

Under Alternative 3b, NMFS would establish a commercial retention limit of 16 blacknose sharks per trip for all Atlantic shark limited access permit holders. Currently, the linkage between the blacknose shark quota and the non-blacknose SCS quota causes the closure of both fisheries once the lower blacknose shark quota is attained. This alternative would significantly increase the number of trips needed to fill the blacknose shark quota when compared to the average from 2010 through 2015 under Alternative 1. Using the 5 lb dw estimate of average blacknose shark weight, landing the full 16 blacknose shark retention limit would result in total landings of 80 lb dw per trip, while the 12 lb dw average weight would result in total landings of 192 lb dw per trip. Either estimate would make targeted trips largely unprofitable as they would only generate $86 to $205 of revenue per trip ($0.87/lb dw for meat and $4.00/lb dw for fins) (Table 4.7). Thus, the blacknose shark fishery would again become an incidental fishery and the SCS management group would in all likelihood remain open year round in the Atlantic region south of 34°00'N. latitude. This alternative would have minor direct beneficial impacts on the Atlantic SCS fishery in the short and long-term as the non-blacknose SCS fishery would likely remain open year round allowing for additional landings and revenues of $98,664 based on observed landings and revenues from 2015 (Table 4.8).

Under Alternative 3c, the preferred alternative, NMFS would establish a commercial retention limit of eight blacknose sharks per trip for all Atlantic shark limited access permit holders. When compared to the average number of trips under Alternative 1, this alternative would significantly increase the number of trips needed to fill the blacknose shark quota. Using the 5 lb dw estimate of average blacknose shark weight, landing the 8 blacknose shark retention limit would result in total landings of 40 lb dw per trip, while the 12 lb dw average from the observer program would result in total landings of 96 lb dw per trip. The eight blacknose shark retention limit would not allow for profitable trips as they would only generate $43 to $103 of revenue per trip (Table 4.7). Thus, the blacknose shark fishery would again become an

incidental fishery. Both the blacknose and the non-blacknose SCS management groups would remain open year round in the Atlantic region south of 34°00'N. latitude. This alternative would have minor direct beneficial impacts on the Atlantic SCS fishery in the short and long-term as the non-blacknose SCS fishery would likely remain open year round, allowing for additional landings and revenues of $98,664 based on observed landings and revenues from 2015 (Table 4.8).

Conclusion

NMFS prefers to establish a commercial retention limit of eight blacknose sharks per trip (Alternative 3c) since the retention limit would have moderate beneficial ecological impacts on blacknose sharks, neutral ecological impacts on non-blacknose SCS, and minor beneficial socioeconomic impacts for SCS fishermen because they would be able to continue utilizing the non-blacknose SCS quota. NMFS does not prefer Alternative 1 (No Action alternative) since this alternative does not meet the objectives of the rule, could result in continued overharvest of the blacknose shark quota, and would continue to leave the non-blacknose shark SCS quota underutilized. NMFS does not prefer Alternatives 2a, 2b, and 2c establishing a commercial retention limit for non-blacknose SCS because each could lead to an increase in dead discards of blacknose sharks (particularly Alternative 2c) while targeting non-HMS species and non-blacknose SCS depending on the commercial retention limit. In addition, the reduced blacknose shark quotas, due to the estimated dead discards of blacknose sharks, would result in a commercial bycatch retention limit for non-blacknose SCS south of 34°00'N. latitude being implemented earlier in the fishing season than the preferred alternative. Thus, the non-blacknose SCS quota may not be fully utilized under these alternatives. Furthermore, NMFS does not expect the economic benefits of these alternatives to be as high as the benefits expected under any of the sub-alternatives under Alternative 3. NMFS does not prefer Alternative 3a, which would set a retention limit of 50 blacknose sharks per trip, because the blacknose shark quota could be filled relatively quickly and result in the closure of the non-blacknose SCS fishery before the end of the fishing season. Alternative 3b, which would set a retention limit of 16 blacknose sharks per trip, is not preferred because at the HMS Advisory Panel meeting in March 2016 and in public comments on the proposed rule, NMFS received comments that indicated the preferred alternative was Alternative 3c which would maximize the number of trips per year to land blacknose sharks. Commenters were concerned that Alternative 3b would not guarantee a year-round opening for SCS because some fishermen would land the maximum number per trip (16 blacknose sharks per trip) and close the fishery.

4.3 Impacts on Essential Fish Habitat (EFH)

Pursuant to 16 U.S.C. 1855(b)(1), and as implemented by 50 C.F.R. §600.815, the Magnuson-Stevens Act requires NMFS 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 NMFS determines that fishing gears are having an adverse effect on HMS EFH, or other species' EFH, then NMFS must

include management measures that minimize adverse effects to the extent practicable. Ecological impacts to EFH due to implementing the preferred alternative in this final action – establishing commercial retention limits for blacknose sharks – would likely be neutral and have no adverse effects.

The current Atlantic blacknose and non-blacknose SCS quotas would not affect EFH beyond effects already analyzed when those quotas were established. In the 2006 Consolidated HMS FMP and Amendment 1 to the 2006 Consolidated HMS FMP, NMFS reviewed the various gear types with the potential to affect EFH and, based on the best information available at that time, NMFS determined that fishing for sharks is not likely to adversely affect EFH. Gears commonly used in the Atlantic shark fisheries and impacted by this action include bottom longline, gillnet, and rod and reel gear. Amendment 1 to the 2006 Consolidated HMS FMP (Amendment 1) analyzed EFH impacts resulting from these gear types. Amendment 1 found that bottom longline and gillnet interact with the sea floor in areas deemed EFH by the regional councils or NMFS, but that the impact did not warrant additional conservation measures. Amendment 1 also found that rod and reel gear does not typically interact with the sea floor; therefore, this gear type is unlikely to impact EFH. There is no new information on the effects shark fishing gear would have on EFH. Certain fishing gears can have negative effects on EFH, but the proposed rule measures are not expected to change the fishing gears authorized relative to the status quo. Therefore, implementing the final action in the context of the fishery as a whole will not have an adverse impact on EFH and an EFH consultation is not required. On July 1, 2015 (80 FR 37598), NMFS announced the availability of the final EFH 5-Year Review and the Agency's intent to initiate an amendment to the 2006 Consolidated Atlantic HMS FMP to revise Atlantic HMS EFH descriptions and designations. NMFS is currently in the process of updating the EFH areas for HMS species including blacknose, Atlantic sharpnose, bonnethead, and finetooth sharks based on reviewing new literature and data that have become available since 2009 and released Draft Amendment 10 to the 2006 Consolidated HMS FMP on September 8, 2016 (81 FR 62100). The comment period on Draft Amendment 10 ends on December 22, 2016.

4.4 EFFECTS ON PROTECTED RESOURCES

On December 12, 2012, consistent with Section 7(b)(4) of the ESA, the NMFS Southeast Regional Office (SERO) Protected Resources Division (PRD) determined that the continued operation of the Atlantic shark fisheries is not likely to jeopardize the continued existence of Atlantic sturgeon, smalltooth sawfish, or any species of ESA-listed large whale or sea turtles. In order to be exempt from take prohibitions established by Section 9 of the ESA, NMFS must comply with the RPMs and Terms and Conditions (TCs) listed in the 2012 Shark BiOp. The following sub-sections contain a discussion of effects on protected resources that may result from the preferred alternative in this proposed action.

Protected resources impacts resulting from the adoption of any of the alternatives for blacknose shark management are expected to be neutral. Under Alternative 1, not implementing a commercial retention limit would have no impact on blacknose sharks in the Atlantic region

and the fishery would continue to operate under the same conditions. Under Alternatives 2a, 2b, 2c, which consider establishing commercial retention limits for non-blacknose SCS and reduce the blacknose shark quota to varying degrees, there would be no expected impacts on protected resources because blacknose sharks would continue to be quota limited. Under Alternatives 3a, 3b, and 3c, which would consider establishing commercial retention limits for blacknose sharks to varying degrees, there are no expected impacts on protected resources because the blacknose shark fishery would continue to be quota limited and the overall quota would not change. This alternative would cap the number of blacknose sharks per trip that fishermen could land, potentially increasing the number of trips that fishermen could make to land blacknose sharks, thus extending the fishery. The final management measure is expected to alter certain fishing practices and techniques and individual vessel effort, but not in a way that would change the effect on protected resources other than what was previously analyzed in Amendment 3 and Amendment 5a, which analyzed a year round SCS fishery, and capped catch quotas. Therefore, these management measures should not have any further impacts on protected resources.

Specifically, NMFS consulted over the effects of the use of commercial shark fishing gear, including bottom longline and gillnet gear, on listed species and critical habitat as required by Section 7 of the ESA. On December 12, 2012, NMFS released a Biological Opinion (BiOp) for shark fisheries, which stated that the continued operation of the Atlantic shark fisheries is not likely to jeopardize the continued existence of Atlantic sturgeon, smalltooth sawfish, or any ESA-listed species of large whale or sea turtle. NMFS has implemented the RPMs and TCs of the 2012 BiOp. ESA-listed species taken in the Atlantic shark fisheries would be considered against the Incidental Take Statement in the 2012 BiOp for the Atlantic shark fisheries.

As the result of the July 2014 final rule that, among other things, listed the Central and Southwest Atlantic Distinct Population Segments (DPS) of scalloped hammerhead sharks as threatened species under the ESA (79 FR 38213, July 3, 2014) and the September 2014 final rule listing as threatened five new Caribbean species of corals and maintaining the threatened listing for two other Caribbean coral species (79 FR 53851, September 10, 2014), on October 30, 2014, the HMS Management Division requested re-initiation of ESA section 7 consultation for the 2006 Consolidated Atlantic HMS Fishery Management Plan activities, as amended and as previously consulted on in the 2012 Shark BiOp.

In that October 30, 2014, request, NMFS determined that ongoing operation of the commercial shark fishery consistent with the reasonable and prudent alternative and RPMs in the existing biological opinion and consistent with conservation and management measures is not likely to jeopardize the continued existence of any listed species including the hammerhead or coral species consistent with section 7(a)(2) of the ESA, or result in an irreversible or irretrievable commitment of resources consistent with section 7(d) of the ESA during this re-initiation of consultation. NMFS may implement requirements of the new BiOp for the shark fishery in the future. This action is not anticipated to affect the above-referenced ESA-listed species in any way not previously analyzed and there is no new information that would alter this conclusion.

Regarding marine mammals, bottom longline and rod and reel gear are considered Category III fisheries, which are those with a remote likelihood of serious injury or mortality to marine mammals. While gillnet gear is a Category II fishery, meaning there is occasional serious injury or mortality to marine mammals, the proposed management measures are not expected to alter fishing practices, techniques, or effort significantly and therefore should not have any further impacts on marine mammals.

4.5 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 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 HMS FMP (Chapter 9), a recent report by MRAG Americas, Inc., and Jepson (2008) titled "Updated Profiles for HMS Dependent Fishing Communities" (Appendix E of Amendment 2 to the 2006 Consolidated HMS FMP), and in the 2011 and 2012 HMS SAFE Reports. The MRAG report updated community profiles presented in the 2006 Consolidated 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 include updated census data for all coastal Atlantic states, as well as those in the Gulf of Mexico, 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 alternative was selected to minimize ecological and economic impacts and provide for the sustained participation of fishing communities. The preferred alternative 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.

4.6 Coastal Zone Management Act (CZMA) Effects

The CZMA requires that federal agency activities that have reasonably foreseeable coastal effects be consistent to the maximum extent practicable with the enforceable policies of the affected federally-approved state coastal management programs. This action would implement a commercial retention limit for blacknose sharks per trip for all Atlantic shark limited access permit holders in the Atlantic region south of 34°00'N. latitude. The action is

necessary because it reduces discards of non-blacknose SCS while increasing the utilization of the Atlantic non-blacknose SCS quota and rebuilding and ending quota overharvests of Atlantic blacknose sharks. Overall, this action would allow flexibility to adapt to the changing needs of the Atlantic blacknose and non-blacknose shark fisheries. Thus, NMFS has determined that the preferred alternative is consistent to the maximum extent practicable with the enforceable policies of North Carolina, South Carolina, Georgia, and Florida which have approved coastal zone management programs. On August 2, 2016, NMFS provided the four states each with 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, NMFS can presume concurrence (15 C.F.R. § 930.41 (a)). The States of North Carolina, South Carolina, and Georgia 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 State of Florida did not respond within the response time period, nor did they request an extension in comment period; therefore, NMFS presumes their concurrence.

4.7 Cumulative Impacts

Under NEPA, a cumulative impact is the 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). A cumulative impact includes the total effect on a natural resource, ecosystem, or human community due to past, present, and reasonably foreseeable future activities or actions of Federal, non–federal, public, and private entities. 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 shark fishermen and the environment, with regard to the management measures presented in this document. For an overview of other non-HMS fisheries for which shark fishermen currently have permits and the shark fishermen's ability to enter other fisheries, please refer to the 2015 SAFE Report.

As discussed above, the management measures considered above would provide more proactive management and establish more flexible regulations to consider the changing needs of the Atlantic shark fisheries. Since sharks have been federally managed, there have been many changes to the regulations and major rules related to sharks, either through FMP amendments or regulatory amendments. Despite modifications to the regulations or amendments to the FMP, the Atlantic blacknose and non-blacknose SCS fisheries continue to be faced with problems such as commercial landings that exceed the quotas, the quota linkage causing short seasons, and

increasing numbers of dead discards. The preferred action would reduce dead discards of non-blacknose SCS while increasing the utilization of the Atlantic non-blacknose SCS quota and rebuilding and ending quota overharvests of Atlantic blacknose sharks. Additionally, as discussed above, the preferred actions would simultaneously have largely neutral short and long-term cumulative ecological impacts, with minimal impacts on protected species and marine mammals.

Overall, the preferred alternative in this EA would have moderate beneficial cumulative ecological impacts for blacknose and non-blacknose SCS fisheries, based on the detailed discussions of the ecological impacts of each of the preferred actions above. The neutral ecological impacts associated with the preferred action make these actions favorable, particularly given their associated economic benefits to shark fishermen (discussed below). The preferred alternative 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 Amendment 3 and Amendment 5a. Additionally, there would be no major impacts on EFH, and the preferred action would both maintain sustainable shark fisheries and maintain the status quo for species currently under a rebuilding timeframe.

4.8 COMPARISON OF ALTERNATIVES

Table 4.9 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 Sections 4.1 - 4.5.

Table 4.9 Comparison of alternatives considered

Alternative	Ecological	Protected Resources	Socioeconomic
Alternative 1: No Action: Do not establish any new commercial retention limit for small coastal sharks in the Atlantic region south of 34°00'N. latitude. Do not adjust the blacknose shark baseline quota	Short-term: Minor direct adverse Long-term: Moderate direct adverse (blacknose shark); moderate indirect beneficial (non-blacknose SCS)	Neutral	Short-term: Minor indirect adverse Long-term: Minor indirect adverse
Alternative 2a: Establish a commercial retention limit of 50 non-blacknose SCS per trip and adjust the blacknose shark quota to 15.0 mt dw (33,069 lb dw)	Short-term: Minor direct adverse Long-term: Moderate direct adverse	Neutral	Short-term: Minor direct beneficial Long-term: Minor direct beneficial
Alternative 2b: Establish a commercial retention limit of 150 non-blacknose SCS per trip and adjust the blacknose shark quota to 10.5 mt dw (23,148 lb dw)	Short-term: Minor direct adverse Long-term: Moderate direct adverse	Neutral	Short-term: Minor direct beneficial Long-term: Minor direct beneficial
Alternative 2c: Establish a commercial retention limit of 250 non-blacknose SCS per trip and adjust the blacknose shark quota to 6.1 mt dw (13,448 lb dw)	Short-term: Minor direct adverse Long-term: Moderate direct adverse	Neutral	Short-term: Minor direct beneficial Long-term: Minor direct beneficial
Alternative 3a: Establish a commercial retention limit of 50 blacknose sharks per trip for shark directed limited access permit holders	Short-term: Minor direct beneficial Long-term: Minor direct beneficial	Neutral	Short-term: Minor direct adverse Long-term: Minor direct adverse
Alternative 3b: Establish a commercial retention limit of 16 blacknose sharks per trip for all Atlantic shark limited access permit holders	Short-term: Moderate direct beneficial Long-term: Moderate direct beneficial	Neutral	Short-term: Minor direct beneficial Long-term: Minor direct beneficial
Alternative 3c: *Establish a commercial retention limit of eight blacknose sharks per trip for all Atlantic shark limited access permit holders – Preferred Alternative*	Short-term: Moderate direct beneficial Long-term: Moderate direct beneficial	Neutral	Short-term: Minor direct beneficial Long-term: Minor direct beneficial

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. NMFS 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.

More information on the ecological, social, and economic impacts of the preferred alternatives are found in Chapter 4 and not repeated here.

5.1 Mitigating Measures

Preferred Alternative 3c, establishing a commercial retention limit of eight blacknose sharks per trip for all shark limited access permit holders in the Atlantic region south of 34°00'N. latitude would likely have moderate beneficial ecological impacts, since establishing a retention limit for blacknose sharks is not likely to increase overall fishing effort or fishing mortality.. Therefore, no effects on the environment as a result of this action would need to be mitigated.

5.2 Unavoidable Adverse Impacts

In general, there are no unavoidable adverse ecological impacts expected as a result of the preferred alternative and corresponding management measures for blacknose and non-blacknose SCS, as discussed in Chapter 4. Thus, the action would not be expected to change previously analyzed endangered species or marine mammal interaction rates or magnitudes nor substantially alter current fishing practices or bycatch mortality rates. In addition, NMFS does not expect this action to have any significant adverse socioeconomic impacts, as its focus is on increasing opportunities and flexibility for U.S. shark fishermen.

5.3 Irreversible and Irretrievable Commitment of Resources

No irreversible or irretrievable commitments of resources are expected from the management measures preferred in this EA.

6.0 Regulatory Impact Review (RIR)

The National Marine Fisheries Service (NMFS) requires a Regulatory Impact Review (RIR) for all regulatory actions that are of public interest to comply with Executive Order 12866 (E.O. 12866). The RIR provides analyses of the economic benefits and costs of each alternative to the nation and the fishery as a whole. The information contained in this chapter, taken together with the data and analysis incorporated by reference, comprise the complete RIR.

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

> *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

6.2.1 Number of Vessel and Dealer Permit Holders

In order to examine the baseline universe of entities potentially affected by the preferred alternatives, NMFS analyzed the number of permits that were issued in conjunction with Atlantic shark fishing activities. As of November 2015, there were a total of 499 commercial permit holders in the Atlantic shark fishery (224 directed and 275 incidental permits). Of those 499 permit holders, only 27 permit holders landed SCS in the Atlantic and of those only 13 landed blacknose sharks. The 2015 SAFE Report provides a summary of these permit holders since 2010. Further detail regarding commercial permit holders is provided in Chapter 3.

Table 6.1 Number of Shark Limited Access Permit holders between 2010 and 2015.

Year	# Directed Shark	# Incidental Shark
2010	215	265
2011	217	262
2012	215	271
2013	220	265
2014	206	258
2015	224	275

As of November 2015, there were a total of 102 Atlantic shark dealer permit holders. Table 6.2 provides a summary of shark dealer permit holders by year. Further detail regarding shark dealer permit holders is provided in the 2006 Consolidated HMS FMP and its amendments. All dealer permit holders are required to submit reports detailing the nature of their business. Since 2013, shark dealers must submit weekly electronic dealer reports on all HMS, other than BFT, that they purchase. To facilitate quota monitoring, "negative reports" are also required from shark dealers when no purchases are made (*i.e.*, NMFS can determine who has not purchased fish versus who has neglected to report).

Table 6.2 Number of shark dealer permits issued from 2010-2015. The actual number of permits per region may change as permit holders move or sell their businesses.

Year	Atlantic shark dealers
2010	108
2011	117
2012	92
2013	97
2014	96
2015	102

6.2.2 **Gross Revenue of the Commercial Shark Fishermen**

Table 6.3 provides data on the prices shark fishermen received at the dock. The average values for ex-vessel prices and the estimated landings of shark meat are from the HMS eDealer database.

Table 6.3 **Estimates of the average ex-vessel revenues of Atlantic blacknose shark and non-blacknose SCS fisheries, 2014-2015.** Source: eDealer database. Shark fins are assumed to be 5 percent of the carcass weight. Average ex-vessel prices may have some weighting errors.

Year	Species	Species	**(A)** Average Ex-Vessel Price	**(B)** Estimated Landings (lb dw)	**(C)** Average Ex-Vessel Revenue (A * B)
2014	Blacknose	Meat	$0.78	38,437	$29,981
		Fins	$4.00	1,922	$7,688
	Non-Blacknose SCS	Meat	$0.74	228,045	$168,753
		Fins	$4.00	11,402	$45,608
	Total	Meat			$198,734
		Fins			$53,296
		Total			$252,030
2015	Blacknose	Meat	$0.97	45,405	$39,502
		Fins	$4.00	2,270	$9,080
	Non-Blacknose SCS	Meat	$0.73	307,371	$227,455
		Fins	$4.36	15,369	$61,476
	Total	Meat			$266,957
		Fins			$70,556
		Total			$337,513
Average	Blacknose	Meat	$0.87	41,921	$36,471
		Fins	$4.00	2,096	$8,384
	Non-Blacknose SCS	Meat	$0.74	267,708	$198,104
		Fins	$4.18	13,385	$55,951
	Total	Meat			$234,575
		Fins			$64,335
		Total			$298,910

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 for a summary of each alternative suite and Chapter 4 for a complete description of each alternative and its expected ecological, social, and economic impacts.

Chapters 3 and 6 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.

Table 6.4 Net Economic Benefits and Costs of Alternatives.

Alternatives	Economic Benefits	Economic Costs
Alternative 1: No Action – Do not implement any new commercial retention limit for small coastal sharks in the Atlantic region south of 34°00'N. latitude. Do not adjust the blacknose shark baseline quota	This alternative would have neutral economic benefits as average ex-vessel revenues would remain the same.	This alternative would have minor economic costs as it would continue to allow for the rapid harvest of blacknose sharks resulting in the continued underutilization of the SCS quota due to the quota linkage. Over the last two years this has resulted in an average loss of potential revenue for the fishery upwards of approximately $298,000 per year. Continued overfishing of blacknose sharks could also result in lower blacknose shark quotas and additional revenue loses.
Alternative 2a: Establish a commercial retention limit of 50 non-blacknose SCS per trip and adjust the blacknose shark quota to 15.0 mt dw (33,069 lb dw)	This alternative would have minor beneficial impacts as it would allow directed shark limited access permit holders to continue to land 50 non-blacknose SCS per trip after the blacknose shark quota has been reached, allowing for greater utilization of the non-blacknose SCS quota.	The alternative would have minor economic costs for shark permit holders as it would reduce the blacknose shark quota by 2.2 to 5.4 mt dw, depending on the estimated average size of blacknose sharks caught.
Alternative 2b: Establish a commercial retention limit of 150 non-blacknose SCS per trip and adjust the blacknose shark quota to 10.5 mt dw (23,148 lb dw)	This alternative would have minor beneficial impacts as it would allow shark permit holders to continue to land 150 non-blacknose SCS per trip after the blacknose shark quota has been reached, allowing for greater utilization of the non-blacknose SCS quota.	The alternative would have minor economic costs for shark permit holders as it would reduce the blacknose shark quota by 6.7 to 16.1 mt dw, depending on the estimated average size of blacknose sharks caught.
Alternative 2c: Establish a commercial retention limit of 250 non-blacknose SCS per trip and adjust the blacknose shark quota to 6.1 mt dw (13,448 lb dw)	This alternative would have moderate beneficial impacts as it would allow shark permit holders to continue to land 250 non-blacknose SCS per trip after the	The alternative would have minor economic costs for shark permit holders as it would reduce the blacknose shark quota by 11.1 to 26.8 mt dw, depending on the

	blacknose shark quota has been reached, allowing for greater utilization of the non-blacknose SCS quota.	estimated average size of blacknose sharks caught.
Alternative 3a: Establish a commercial retention limit of 50 blacknose sharks per trip for shark directed limited access permit holders	This alternative would have minor economic benefits as it would increase the number of trips needed to fill the blacknose shark quota, and would slow the rapid harvest of blacknose sharks. However, it may not slow harvest of blacknose sharks enough to prevent the early closure of the non-blacknose SCS quota due to the quota linkage.	This alternative would likely have minor economic benefits. While it would continue to allow for the full harvest of blacknose shark quota, it may transform the fishery into an incidental fishery only as it may limit per trip revenue to unprofitable levels depending on the average size of blacknose sharks caught.
Alternative 3b: Establish a commercial retention limit of 16 blacknose sharks per trip for all Atlantic shark limited access permit holders	This alternative would have moderate economic benefits as it would increase the number of trips needed to fill the blacknose shark quota, and would end the rapid harvest of blacknose sharks, thus preventing the early closure of the non-blacknose SCS quota due to the quota linkage.	This alternative would likely have economic costs to the few fishermen who use to prefer to target blacknose sharks.
Alternative 3c: Establish a commercial retention limit of 8 blacknose sharks per trip for all Atlantic shark limited access permit holders – Preferred Alternative	Same as Alternative 3b	Same as Alternative 3b

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 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.

7.0 Final Regulatory Flexibility Analysis (FRFA)

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

Please see Chapter 1 for a full description of the reasons of this action. In compliance with section 604(a)(1) of the RFA, the management goals and objectives of the preferred alternative are to provide for the sustainable management of SCS species under authority of the Secretary consistent with the requirements of the Magnuson-Stevens Act and other statutes which may apply to such management, including the ESA, MMPA, and the Atlantic Tunas Convention Act. The Magnuson-Stevens Act mandates that the Secretary provide for the conservation and management of HMS through development of an FMP for species identified for management and to implement the FMP with necessary regulations. In addition, the Magnuson-Stevens Act directs the Secretary, in managing HMS, to prevent overfishing of species while providing for their optimum yield on a continuing basis and to rebuild fish stocks that are considered overfished. The management objective of the preferred alternative is to implement measures for the Atlantic SCS fishery that will achieve the objective of preventing overfishing while achieving on a continuing basis optimum yield and rebuilding overfished shark stocks.

7.2 A Summary of the Significant Issues Raised By the Public Comments in Response to the Initial Regulatory Analysis, 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

Section 604(a)(2) of the RFA requires a summary of the significant issues raised by the public comments in response to the IRFA, a summary of the assessment of the Agency of such issues, and a statement of any changes made in the rule as a result of such comments. NMFS received several comments on the proposed rule and Draft EA during the public comment period. Summarized public comments and NMFS' responses to them are included in Appendix A of this document. Section 604(a)(3) of the RFA requires the Agency to respond to any comments filed by the Chief Counsel for Advocacy of the Small Business Administration (SBA) in response to the proposed rule, and a detailed statement of any change made in the rule as a result of such comments. NMFS did not receive any comments from the Chief Counsel for Advocacy of the SBA nor the public in response to this document.

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

Section 604(a)(3) 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, NMFS may establish size standards that differ from those established by the SBA Office of Size Standards, but only for use by NMFS and only for the purpose of conducting an analysis of economic effects in fulfillment of the agency's obligations under the RFA. To utilize this provision, NMFS must publish such size standards in the Federal Register (FR), which NMFS did on December 29, 2015 (80 FR 81194, December 29, 2015). In this final rule effective on July 1, 2016, NMFS established a small business size standard of $11 million in annual gross receipts for all businesses in the commercial fishing industry (NAICS 11411) for RFA compliance purposes. NMFS considers all HMS permit holders to be small entities because they had average annual receipts of less than $11 million for commercial fishing.

As discussed in Section 6.2.1, the final rule would apply to the 499 commercial shark permit holders in the Atlantic shark fishery, based on an analysis of permit holders as of November 2015. Of these permit holders, 224 have directed shark permits and 275 hold incidental shark permits. A further breakdown of these permit holders is provided in Table 6.1. Not all permit holders are active in the fishery in any given year. Active directed permit holders are defined as those with valid permits that landed one shark based on HMS electronic dealer reports. Of the 499 permit holders, only 27 permit holders landed SCS in the Atlantic region and of those only 13 landed blacknose sharks. NMFS 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, Recordkeeping, 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)(4) 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. The alternatives considered would adjust the commercial retention limits for the SCS fisheries, creating new, but similar to existing, compliance requirements for the shark fishery participants in the Atlantic region south of 34°00'N. latitude.

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 Statues, Including a Statement of the Factual, Policy, and Legal Reasons for Selecting the Alternative Adopted in the Final Rule and the Reason That Each One of the Other Significant Alternatives to the Rule Considered by the Agency Which Affect Small Entities Was Rejected

One of the requirements of an FRFA (§604(a)(5)) is to describe any alternatives to the proposed rule which accomplish the stated objectives and which minimize any significant economic impacts. These impacts are discussed below and in Chapters 4 and 6 of this document. Additionally, the RFA lists four general categories of "significant" alternatives that would assist an agency in the development of significant alternatives. These categories of alternatives are:

1. Establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities;
2. Clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities;
3. Use of performance rather than design standards; and
4. Exemptions from coverage of the rule, or any part thereof, for small entities.

In order to meet the objectives of this final rule, consistent with the Magnuson-Stevens Act and the ESA, NMFS cannot establish differing compliance requirements for small entities or exempt small entities from compliance requirements. Thus, there are no alternatives discussed that fall under the first and fourth categories described above. NMFS does not know of any performance or design standards that would satisfy the aforementioned objectives of this rulemaking while, concurrently, complying with the Magnuson-Stevens Act. As described below, NMFS analyzed several different alternatives in this final rulemaking and provides rationales for identifying the preferred alternative to achieve the desired objectives. 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 proposed action on vessels.

Alternative 1, the No Action alternative, would not implement any new retention limits for blacknose sharks or non-blacknose SCS in the Atlantic region south of 34°00'N. latitude beyond those already in effect for current Atlantic shark limited access permit holders. NMFS would continue to allow fishermen with a direct limited access permit to land unlimited sharks per trip and allow fishermen with an incidental permit to land 16 combined SCS and pelagic sharks per vessel per trip. In 2010, Amendment 3 to the 2006 Consolidated HMS FMP established, among other things, a quota for blacknose shark separate from the SCS quota. The 2011 blacknose shark stock assessment determined that separate stocks of blacknose sharks existed in the Gulf of Mexico and the Atlantic. Amendment 5a to the 2006 Consolidated HMS FMP established, among other things, regional quotas for non-blacknose SCS and blacknose sharks in the Gulf of Mexico and the Atlantic in 2013. These blacknose shark and non-blacknose SCS quotas are linked by region and the regional SCS fishery closes when the blacknose quota is reached. This linkage has resulted in the early closure of the entire SCS fishery due to high abundance of blacknose shark landings. Closure of the fishery as a result of Atlantic blacknose rapid harvest leaves the non-blacknose shark SCS quota underutilized. Between 2014 and 2015, the Atlantic non-blacknose SCS quota has been underutilized by an average of 314,625 lb dw, or 54 percent of the quota. This represents an average annual ex-vessel loss of $298,583 for the fishery, assuming an average value for 2014-2015 of $0.74/lb dw for meat and $4.18/lb dw for fins. Based on the 27 vessels that landed SCS in the Atlantic, the individual vessel impact would be an approximate loss of $11,059 per year.

Alternative 2a would remove the quota linkage to blacknose sharks for shark directed limited access permit holders in the Atlantic region south of 34°00'N. latitude once the blacknose shark quota is reached and would implement a commercial retention limit of 50 non-blacknose SCS per trip at that point. Additionally, this alternative would adjust the blacknose shark quota to 15.0 mt dw (33,069 lb dw) assuming a 5 lb dw carcass, or 11.8 mt dw (26,089 lb dw) assuming a 12 lb dw carcass. Reduction of the blacknose shark quota would result in an average ex-vessel revenue loss of $5,275 for the fishery assuming a 5 lb dw carcass, or $12,660 assuming a 12 lb dw carcass. Conversely, increased landings of non-blacknose SCS would result in an overall estimated average ex-vessel revenue gain of $34,470 for the fishery. NMFS estimates that this bycatch retention limit would result in a net gain of $21,810 to $29,195 in average ex-vessel revenue for the fishery per year depending on the average carcass weight of blacknose sharks, or $808 to $1,081 per vessel for the 27 vessels that targeted non-blacknose SCS in 2015.

Alternative 2b would remove the quota linkage to blacknose sharks for shark directed limited access permit holders in the Atlantic region south of 34°00'N. latitude once the blacknose shark quota is reached and would implement a commercial retention limit of 150 non-blacknose SCS per trip at that point. Additionally, this alternative would adjust the blacknose shark quota to 10.5 mt dw (23,148 lb dw) assuming a 5 lb dw carcass, or 1.1 mt dw (2,521 lb dw)

assuming a 12 lb dw carcass. Reduction of the blacknose shark quota would result in an average ex-vessel revenue loss of $15,783 for the fishery assuming a 5 lb dw carcass, or $37,878 assuming a 12 lb dw carcass. Conversely, increased landings of non-blacknose SCS would result in an overall estimated average ex-vessel revenue gain of $65,139 for the fishery. NMFS estimates that this bycatch retention limit would result in a net gain of $27,261 to $49,357 in average ex-vessel revenue for the fishery per year depending on the average carcass weight of blacknose sharks, or approximately $1,010 to $1,828 per vessel for the 27 vessels that targeted non-blacknose SCS in 2015.

Alternative 2c would remove the quota linkage to blacknose sharks for shark directed limited access permit holders in the Atlantic region south of 34°00'N. latitude once the blacknose shark quota is reached and would implement a commercial retention limit of 250 non-blacknose SCS per trip at that point. This alternative would also adjust the blacknose shark quota to 6.1 mt dw (13,448 lb dw) assuming a 5 lb dw carcass, or 0.0 mt dw (0.0 lb dw) assuming a 12 lb dw carcass. Reduction of the blacknose shark quota would result in an average ex-vessel revenue loss of $26,295 for the fishery assuming a 5 lb dw carcass, or $40,575 assuming a 12 lb dw carcass. Conversely, increased landings of non-blacknose SCS would result in an estimated average ex-vessel revenue gain of $80,339 for the fishery. NMFS estimates that this bycatch retention limit would result in a net gain of $39,764 to $54,044 in average ex-vessel revenue for the fishery per year depending on the average carcass weight of blacknose sharks, or approximately $1,473 to $2,002 per vessel for the 27 vessels that targeted non-blacknose SCS in 2015.

Alternative 3a would establish a commercial retention limit of 50 blacknose sharks per trip for shark directed limited access permit holders in the Atlantic region south 34°00'N. latitude and maintain the quota linkage between blacknose sharks and non-blacknose SCS. This alternative would have minor beneficial to neutral economic impacts as a retention limit of this size would allow an average of 250 to 600 lb dw blacknose sharks per trip and would take an estimated 63 to 152 trips for fishermen to land the full blacknose shark quota. This alternative will prevent targeted take of blacknose sharks as the per trip value of 50 blacknose sharks would range between $270 ($218 for meat and $52 for fins) assuming an average weight of 5 lb dw per blacknose shark, or $642 ($522 for meat and $120 for fins) assuming an average weight of 12 lb dw for the estimated 13 vessels that land blacknose sharks in the Atlantic. Based on 2015 eDealer reports, 106 trips landed blacknose sharks, and between 14 to 33 percent landed blacknose sharks in excess of a commercial retention limit of 50 blacknose sharks depending on the average trip weight used in the calculations (250 - 600 lb dw). This alternative would likely increase the number of trips needed to fill the blacknose shark quota when compared to the average from 2010 through 2015 under Alternative 1. A retention limit of 50 blacknose sharks could potentially cause the SCS fisheries to close as early as June or July if every trip landing blacknose sharks landed the full retention limit but, since few fishermen land that many blacknose sharks per trip now, NMFS believes a change in behavior as a result of this alternative is unlikely.

Alternative 3b would establish a commercial retention limit of 16 blacknose sharks per trip for all Atlantic shark limited access permit holders in the Atlantic region south 34°00'N. latitude and maintain the quota linkage between blacknose sharks and non-blacknose SCS. This alternative would have minor beneficial economic impacts as a retention limit of this size would allow an average of 80 to 192 lb dw blacknose sharks per trip and would take an estimated 198 to 474 trips for fishermen to land the full blacknose shark quota. Based on 2015 eDealer reports, 38 to 55 percent of the overall number of trips landed blacknose sharks in excess of a commercial retention limit of 16 blacknose sharks depending on the average trip weight used in the calculations (80 - 192 lb dw). This alternative would dramatically increase the number of trips needed to fill the blacknose shark quota when compared to the yearly averages under Alternative 1. Currently, the linkage between the blacknose shark quota and the non-blacknose SCS quota causes the closure of both fisheries once the lower blacknose shark quota is attained. NMFS expects that, under this alternative, the blacknose shark quota would not be filled and the SCS fisheries in the South Atlantic region would not close early. Thus, this alternative would have minor beneficial economic impacts to the Atlantic SCS fisheries as it would allow for the potential full utilization of the non-blacknose SCS quota, and potentially increase total ex-vessel revenue by as much as $298,583 a year. However, given the low monthly trip rates occurring to harvest SCS in the Atlantic, the non-blacknose SCS quota is likely to remain underutilized. Using calculations based on observed trip and landings rates of non-blacknose SCS in 2015, a more likely result of this alternative would be additional landings of 104,962 lb dw of non-blacknose SCS valued at $98,664, or approximately $3,654 per vessel for the 27 vessels that participated in the fishery in 2015. Any financial losses due to underutilization of the blacknose shark quota would be minimal in comparison.

Alternative 3c, the preferred alternative, would establish a commercial retention limit of eight blacknose sharks per trip all Atlantic shark limited access permit holders in the Atlantic region south 34°00'N. latitude and maintain the quota linkage between blacknose sharks and non-blacknose SCS. Because this retention limit would be less than the current retention limit for shark incidental limited access permit holders, the retention limit for shark incidental limited access permit holders would need to change slightly. The adjusted retention limit for incidental permit holders would still allow fishermen to land a total of 16 pelagic or small coastal sharks per trip but, of those sharks, no more than eight could be blacknose sharks. This alternative would have moderate beneficial economic impacts as a retention limit of this size would allow an average of 40 to 96 lb dw blacknose sharks per trip and would take an estimated 395 to 948 trips to land the full blacknose shark quota. Based on 2015 eDealer reports, 55 to 70 percent of the overall number of trips landed blacknose sharks in excess of the commercial retention limit of eight blacknose sharks depending on the average trip weight used in the calculations (40 - 96 lb dw). This alternative would dramatically increase the number of trips needed to fill the blacknose shark quota when compared to the yearly averages under Alternative 1. Currently, the linkage between the blacknose shark quota and the non-blacknose SCS quota causes the closure of both fisheries once the lower blacknose shark quota is attained. NMFS expects that, under this alternative, the blacknose shark quota would not be filled and the SCS fisheries in the South Atlantic region would not close early. Thus, this would have moderate beneficial economic

impacts as the fishermen would still be allowed to land blacknose sharks and the fishery would remain open for a longer period of time, significantly increasing non-blacknose SCS revenues by as much as $298,583 a year on average if the non-blacknose SCS quota is fully utilized. However, given current monthly trip rates in the Atlantic, the non-blacknose SCS quota is likely to remain underutilized. Using calculations based on observed trip and landings rates of non-blacknose SCS in 2015, a more likely result of this alternative would be additional landings of 104,962 lb dw of non-blacknose SCS valued at $98,664, or approximately $3,654 per vessel for the 27 vessels that participated in the fishery in 2015. Any financial losses due to underutilization of the blacknose shark quota would be minimal in comparison.

8.0 Community Profiles

Section 102(2)(a) of the NEPA requires federal agencies to consider the interactions of natural and human environments by using "a systematic, interdisciplinary approach which will ensure the integrated use of the natural and social sciences in planning and decision-making." Federal agencies should address the aesthetic, historic, cultural, economic, social, or health effects which may be direct, indirect, or cumulative. The Magnuson-Stevens Act also requires, among other matters, consideration of social impacts. Consideration of the social impacts associated with fishery management measures is a growing concern as fisheries experience variable participation and/or declines in stocks.

Profiles for HMS fishing communities were included in Chapter 9 of the 2006 Consolidated HMS FMP and updated in Chapter 6 of the 2012 and 2013 Stock Assessment and Fishery Evaluation Reports for Atlantic Highly Migratory Species. These profiles are incorporated here by reference. The shark fisheries of the Atlantic and Gulf of Mexico extend from Maine to Texas and include Puerto Rico and the U.S. Virgin Islands. Directed shark fishing occurs on a seasonal basis, depending on area and the length of the fishing season, and vessels in the SCS fishery fish for different species at other times of the year. This rulemaking would only affect commercial directed shark permit holders south of 34°00'N. latitude in the Atlantic region (Florida, Georgia, South Carolina and North Carolina) with the majority of the impacts to fishermen in Florida as they land the most SCS south of 34°00'N. latitude. As described above, NMFS expects the socioeconomic impacts of the preferred alternative to be beneficial to the fishermen in these states.

9.0 Other Considerations

9.1 Magnuson-Stevens Act

NMFS has determined that this action is consistent with the Magnuson-Stevens Act and other applicable laws, subject to further consideration after public comment. The analyses in this document are consistent with the Magnuson-Stevens Act National Standards (NSs) (see 50 C.F.R. Part 600, Subpart D for National Standard Guidelines).

NS 1 requires NMFS 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, NMFS has undertaken numerous management actions, including Amendment 3, Amendment 5a, and Amendment 6 to end overfishing and to rebuild Atlantic blacknose shark stocks. The preferred alternative in this document is consistent with ongoing management efforts to rebuild, manage, and conserve target species in accordance with the NS 1 guidelines and section § 1854(e)(4) of the Magnuson-Stevens Act. The preferred alternative would establish a commercial retention limit of eight blacknose sharks per trip. As described in Chapters 1 and 2, the quota linkage between the blacknose shark quota and the non-blacknose SCS quota has resulted in the early closure of the entire SCS fishery due to rapid blacknose shark landings. Establishing a commercial retention limit for blacknose sharks would prevent overharvest and minimize mortality and discard rates of blacknose sharks, while providing opportunities to fully harvest the non-blacknose SCS quota, consistent with NS 1.

NS 2 requires that conservation and management measures be based on the best scientific information available. The preferred alternative in this document is consistent with NS 2 guidelines. The current management measures for blacknose sharks are based on the latest SEDAR 21 stock assessments for Atlantic and Gulf of Mexico blacknose sharks, which NMFS has determined to be the best scientific information available. For each alternative, including the no action alternative, the commercial retention limit alternatives for blacknose sharks, and bycatch retention limit alternatives for non-blacknose SCS, NMFS also used self-reported fisheries logbook data, dealer reports, and observer reports; these sources represent the best scientific information available.

NS 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 alternative to establish a new retention limit for blacknose sharks is consistent with NS 3 because it would apply to Atlantic shark stocks for blacknose, Atlantic sharpnose, bonnethead sharks, and finetooth sharks in the Atlantic region. Federal permit requirements and quotas would apply to all shark fishermen fishing for sharks.

NS 4 requires that conservation and management measures 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; should 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 alternative that would establish a retention limit for blacknose sharks is equitable since it applies to all directed and incidental shark permit holders across all states when fishing in the Atlantic region south of 34°00' N. latitude.

NS 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 has economic allocations as its sole purpose. The preferred alternative in this rulemaking is specifically designed to be consistent with NS 5. The preferred alternative would establish a new retention limit for blacknose sharks in order to improve efficiencies throughout the SCS fisheries, while maintaining sustainable fisheries for, and preventing overfishing of, Atlantic sharks.

NS 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 alternative in this document was specifically designed to be consistent with this national standard by providing flexibility for fishermen and managers to address variations in the Atlantic SCS fisheries. The preferred alternative would establish a new retention limit for blacknose sharks that considers the variations among, and contingencies in, fisheries, fishery resources, and catches. The preferred measure relates to fishing effort and retention restrictions, including the blacknose shark retention limit. In reaching the preferred management measure, NMFS analyzed the data considering variations among the fisheries, fishery resources, and catches as described in Chapters 2, 3, 4, and 7 of this document. Measures are already in place to ensure quotas are not exceeded in the presence of variations in the fishery and catches; however, retention limits could change in the future if warranted by new stock assessments or changes in the fishery. Timely reporting of catch data and the requirement to close the fishery after 80 percent of the quota is utilized would allow for these measures to adjust to variations and contingencies, which is consistent with NS 6, to allow for variations in the fishery.

NS 7 states that conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication. The preferred alternative in this document is consistent with NS 7 because it would not implement new requirements that would be costly for fishermen nor duplicate any current requirements. Additionally, the preferred alternative is aimed to minimize costs and increase efficiencies for fishermen. As a part of this rulemaking, NMFS would establish a commercial retention limit of eight blacknose sharks per trip for shark directed and incidental permit holders. Even though this alternative would restrict shark directed and incidental permit holders to eight blacknose sharks per trip, the retention limit would allow fishermen to continue harvesting non-blacknose SCS year-round and make trips more profitable for fishermen since they would not need to discard the non-blacknose SCS later in the season as occurred in past fishing seasons.

NS 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 alternative is consistent with NS 8. The preferred alternative would implement a commercial retention limit for blacknose sharks and would provide beneficial economic impacts since the retention limit would restrict the harvest of the lower blacknose shark quota and allow fishermen to continue harvesting the larger non-blacknose SCS year-round. Thus, trips could be more profitable for fishermen since they will not need to discard the non-blacknose SCS later in the year as occurred in past fishing seasons.

NS 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 alternative is consistent with NS 9. The preferred alternative is not expected to cause significant changes in fishing effort, areas, or practices, and thus is not expected to lead to increases in potential bycatch or increased interactions with non-target, incidentally caught species, including protected species. The preferred alternative would establish a retention limit for a non-targeted species for the majority of the fleet and should minimize bycatch since fishermen could retain non-blacknose SCS year-round instead of discarding them once the fishing season has closed.

NS 10 states that conservation and management measures shall, to the extent practicable, promote the safety of human life at sea. The preferred alternative in the document is consistent with this NS because no impact to safety of life at sea is anticipated to result from the preferred alternative. The management measure in the preferred alternative would not require fishermen to travel greater distances, fish in bad weather, or otherwise fish in an unsafe manner.

9.2 E. O. 13132

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

10.0 List of Preparers

This Environmental Assessment, Regulatory Impact Review, and Final Regulatory Flexibility Analysis were prepared by Guý DuBeck, Erica Fruh, Larry Redd, Jr., Cliff Hutt, Karyl Brewster-Geisz, and Margo Schulze-Haugen from the HMS Management Division, Office of Sustainable Fisheries. Please contact the HMS Management Division for a complete copy of current regulations for the Atlantic HMS commercial and recreational fisheries.

Highly Migratory Species Management Division
NMFS SSMC3 F/SE1
1315 East-West Highway
Silver Spring MD, 20910
Phone: (301) 427 -8503 Fax: (301) 713-1917

11.0 List of Agencies/persons consulted

Discussions relevant to the formulation of the preferred alternative and the analyses for this document involved input from several NMFS components and constituent groups, including: NOAA General Counsel Enforcement Section and Fisheries and Protected Resources Section, NMFS Southeast Fisheries Science Center, NMFS Office for Law Enforcement, NMFS Office of Science and Technology, members of the HMS Advisory Panel (which includes representatives from the commercial and recreational fishing industries, environmental and academic organizations, state representatives, and fishery management councils).

In March 2016, NMFS specifically solicited opinions and advice from the HMS Advisory Panel on the potential range of options presented and whether there were additional options that should be addressed and considered in the rulemaking process. Based on the comments received at that time from the HMS Advisory Panel and other commenters, NMFS developed this draft EA on the management measures for the SCS fisheries.

The proposed rule published on August 3, 2016 (81 FR 51165) and the public comment period ended on September 28, 2016. During the public comment period, NMFS held a conference call on August 16, 2016 and a public hearing on August 24, 2016. Additionally, NMFS presented the proposed rule to the HMS Advisory Panel on September 8, 2016 and to the South Atlantic Fishery Management Council (SAFMC) on September 15, 2016. During that time, NMFS received 15 written and oral comments. All written comments are available on regulations.gov. A summary of the substantive comments received can be found in Appendix A of this document and the final rule.

Finding of No Significant Impact

Finding of No Significant Impact for a final rule to implement blacknose shark management measures

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

This EA considers various management measures for the Atlantic commercial shark fisheries and was developed as an integrated document that includes a Regulatory Impact Review and Final Regulatory Flexibility Analysis. Specifically this rulemaking proposes to:

(1) Obtain optimum yield from the blacknose and non-blacknose-SCS fisheries;
(2) Reduce dead discards of sharks, particularly small coastal sharks;
(3) Continue to rebuild the Atlantic blacknose shark stock; and
(4) End overfishing of the Atlantic blacknose shark stock.

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. 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

http://www.nmfs.noaa.gov/sfa/hms

The preferred alternative analyzed in the EA and preferred for implementation in the final rule is:

- Alternative 3c: Establish a commercial retention limit of eight blacknose sharks for all Atlantic shark limited access permit holders in the Atlantic region south 34°00'N. latitude.

The Council on Environmental Quality regulations at 40 C.F.R. § 1508.27 state that the significance of an action should be analyzed both in terms of context and intensity. Each criterion listed below is relevant to making a finding of no significant impact and has been

considered individually, as well as in combination with the others. The significance of this action is analyzed based on the CEQ's context and intensity criteria. These include:

1. Can the action be reasonably expected to jeopardize the sustainability of any target species that may be affected by the action?

No. The action is not expected to jeopardize the sustainability of any of the species in the SCS management groups. Establishing a blacknose shark retention limit in the Atlantic region would not likely jeopardize the sustainability of the blacknose or non-blacknose SCS stocks as the overall baseline quotas for these species are not being modified in the preferred action. The preferred action would establish a retention limit so that fishermen avoid blacknose sharks in order to fully utilize the non-blacknose shark quota. For these reasons, this action is not expected to jeopardize the sustainability of SCS management groups.

2. Can the action be reasonably expected to jeopardize the sustainability of any non-target species?

No. The preferred action is not expected to jeopardize the sustainability of any non-target shark species because overall fishing effort is not expected to increase and non-target shark species catches would still be limited within the applicable quotas established consistent with NMFS' obligations to end overfishing and rebuild overfished stocks. When considering each of the alternatives in this action, NMFS explicitly considered the impact on non-target shark species and, as a result of this action, NMFS believes that the preferred measure is not likely to increase effort in the fishery beyond what was analyzed in Amendments 3 and 5a and therefore is unlikely to increase impacts on non-target shark species.

3. Can the action be reasonably expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat (EFH) as defined under the Magnuson-Stevens Act and identified in the FMP?

No. Impacts to EFH due to actions in this EA would likely be neutral and have no adverse effects because the preferred alternative would cause minor changes to the current landings and fishing effort but not beyond what was analyzed in Amendments 3 and 5a, which analyzed a year round SCS fishery. There would be no adverse effects due to the blacknose shark retention limit since it would not impact current fishing effort on quota-limited management groups. Additionally, potential increases to the non-blacknose SCS quotas are not expected to have any impacts on EFH because NMFS does not expect the overall fishing effort to increase beyond what was analyzed in Amendments 3 and 5a. In the 2006 Consolidated HMS FMP and Amendment 1 to the 2006 Consolidated HMS FMP (Amendment 1), NMFS reviewed the various gear types with the potential to affect EFH and, based on the best information available at that time, NMFS determined that shark fishing is not likely to adversely affect EFH. Gears commonly used in the Atlantic shark fisheries include bottom longline, gillnet, and rod and reel gear. Amendment 1 analyzed EFH impacts resulting from these gear types and found that

bottom longline and gillnet interact with the sea floor in areas deemed EFH by the regional councils or NMFS but that the impact did not warrant additional conservation measures. There is no new information on the effects shark fishing gear would have on EFH. Certain fishing gears can have negative effects on EFH but the preferred alternative is not expected to change the fishing gears authorized relative to the status quo. Thus, there is no evidence to suggest that implementing the preferred alternative in this draft EA would adversely affect EFH. NMFS is currently in the process of updating the EFH areas for HMS species including blacknose, Atlantic sharpnose, bonnethead, and finetooth sharks based on reviewing new literature and data that have become available since 2009 and released Draft Amendment 10 to the 2006 Consolidated HMS FMP on September 8, 2016 (81 FR 62100). The comment period on Draft Amendment 10 ends on December 22, 2016.

4. Can the action be reasonably expected to have a substantial adverse impact on public health and safety?

No. The proposed implementation of a commercial retention limit for blacknose sharks for all Atlantic shark limited access permit holders is not likely to have substantial adverse impacts on public health and safety because the actions are not expected to change current fishery practices and behaviors. Therefore, no effects to public health and safety are anticipated from their implementation.

5. Can the action reasonably be expected to adversely affect endangered or threatened species, marine mammals, or critical habitat of these species?

No. There would not be any additional negative ecological impacts to endangered or threatened species, marine mammals, or the critical habitat of these species beyond those impacts currently analyzed in the 2012 Biological Opinion (BiOp) for the Atlantic shark and smoothhound shark fisheries. The 2012 Shark BiOp issued under the ESA determined that the continued operation of the Atlantic shark fisheries is not likely to jeopardize the continued existence of Atlantic sturgeon, smalltooth sawfish, or any species of ESA-listed large whales or sea turtles. In order to be exempt from take prohibitions established by Section 9 of the ESA, NMFS must comply with the RPMs and TCs listed in the 2012 Shark BiOp. The final 2015 MMPA List of Fisheries classified the southeastern Atlantic shark gillnet fishery as Category II (occasional serious injuries and mortalities) and the southeastern Atlantic shark bottom longline as Category III (remote likelihood or no known serious injuries or mortalities). This action would not significantly increase fishing effort rates, levels, or locations or fishing mortality beyond what was analyzed in Amendments 3 and 5a. The preferred alternative would not increase effort because the blacknose shark and non-blacknose SCS quotas are not being modified in this action and the modifications to the blacknose shark retention limits are not expected to increase overall fishing effort beyond the year round SCS fishery analyzed in Amendments 3 and 5a.

In addition, the preferred alternative is not expected to alter interactions with protected species. NMFS issued a final determination to list four separate DPSs of the scalloped hammerhead shark (*Sphyrna lewini*) under the ESA (79 FR 38214; July 3, 2014). The DPSs are Central and Southwest Atlantic, Indo-West Pacific, Eastern Atlantic, and Eastern Pacific. The Eastern Atlantic and Eastern Pacific DPSs are listed as endangered, and the Central and Southwest Atlantic and the Indo-West Pacific DPSs are listed as threatened. NMFS determined that each of the DPSs was significant and distinct based on genetic, behavioral, and physical factors, and in some cases, differences in the control of exploitation of the species across international boundaries. On August 27, 2014, NMFS published a final rule to list the following 20 coral species as threatened: five in the Caribbean, including Florida and the Gulf of Mexico (*Dendrogyra cylindrus*, *Orbicella annularis*, *Orbicella faveolata*, *Orbicella franksi*, and *Mycetophyllia ferox*); and 15 in the Indo-Pacific (*Acropora globiceps*, *Acropora jacquelineae*, *Acropora lokani*, *Acropora pharaonis*, *Acropora retusa*, *Acropora rudis*, *Acropora speciosa*, *Acropora tenella*, *Anacropora spinosa*, *Euphyllia paradivisa*, *Isopora crateriformis*, *Montipora australiensis*, *Pavona diffluens*, *Porites napopora*, and *Seriatopora aculeata*). Two Caribbean species currently listed as threatened (*Acropora cervicornis* and *Acropora palmata*) still warranted listing as threatened. The Central and Southwest Atlantic DPS of scalloped hammerhead shark and the seven Caribbean species of coral occur within the boundary of Atlantic HMS commercial and recreational fisheries. On October 30, 2014, based on the new listings, NMFS requested re-initiation of ESA section 7 consultation on the continued operation and use of HMS gear types (including gillnet, bottom longline, and rod and reel gear) and associated fisheries management actions in the 2006 Consolidated Atlantic HMS FMP and its amendments. NMFS has preliminarily determined that the ongoing operation of the fisheries is consistent with the 2012 BiOp and is not likely to jeopardize the continued existence of the Central and Southwest DPS of scalloped hammerhead sharks or the threatened coral species or result in an irreversible or irretrievable commitment of resources which would foreclose formulation or implementation of any RPMs for these species.

6. Can the action be expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area (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 action is not expected to increase fishing effort or fishing mortality or change fishing practices, or interactions with non-target and endangered or threatened species beyond what was analyzed in Amendments 3 and 5a. Thus, the action as a whole is not likely to have substantial adverse impacts on biodiversity and/or ecosystem function within the Atlantic Ocean.

7. Are significant social or economic impacts interrelated with significant natural or physical environmental effects?

No. There are no anticipated significant natural or physical environmental effects associated with the proposed action and no significant social or economic impacts interrelated with natural or physical environmental effects that would result from the action. The socioeconomic impacts from establishing a commercial retention limit for blacknose sharks would likely result in either minor or moderate beneficial effects because it would allow fishermen to fully utilize the non-blacknose SCS quota while limiting the retention of blacknose sharks. However, NMFS does not expect any of these impacts to be significant since the proposed action is not expected to increase overall fishing mortality or fishing effort beyond a year round SCS fishery analyzed in Amendments 3 and 5a.

8. Are the action's effects on the quality of the human environment expected to be highly controversial?

No. This action is not expected to have impacts on the quality of the human environment. Since the public has been involved in the development of this action and the preferred action was selected based on feedback from fishermen on the Atlantic HMS Advisory Panel, the effects of this action on the human environment are not expected to be highly controversial. However, 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 action are well-defined by the preferred alternatives.

9. Can the action be expected to result in substantial impacts to unique areas, such as historic or cultural resources, park land, 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 land, 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 land, prime farmlands, wetlands, or wild and scenic rivers, so there could be no impacts to these areas.

10. Are the 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 shark actions since 1999, some of which have been considered in the FEIS prepared for the 2006 Consolidated HMS FMP as well as the EISs for the amendments to the 2006 Consolidated HMS FMP. None of the previous actions resulted in highly uncertain effects or unique or unknown

risks. This action would implement a blacknose shark retention limit for shark limited access permit holders, none of which involve unique or unknown risks.

11. Is the action related to other actions with individually insignificant, but cumulatively significant impacts?

No. NMFS does not anticipate there to be any significant cumulative ecological, economic, or social impacts. Overall, the preferred alternative in this rulemaking for the SCS fisheries would have neutral cumulative ecological impacts because it would have no significant impact on current landings or fishing effort or behavior beyond what was analyzed in Amendments 3 and 5a. The neutral ecological impacts associated with the proposed action make this action favorable, particularly given the associated economic benefits to shark fishermen. The action would have no significant impact on current fishing levels or fishing mortality beyond a year round SCS fishery analyzed in Amendments 3 and 5a. Additionally, there would be no major impacts on EFH, and the preferred alternative would both maintain sustainable shark fisheries and maintain the status quo for species currently under a rebuilding plan. Overall, the preferred alternative in this action for SCS fisheries has a combination of minor to moderate beneficial socioeconomic impacts and would likely increase the efficiency in these fisheries, increase equity across all shark fishermen and regions, and increase economic viability for the shark fishery participants by increasing the likelihood of obtaining optimum yield from the SCS fisheries. This action is a continuation of the 2006 Consolidated 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 from this draft EA are not expected to result in cumulatively significant impacts.

12. Is the action likely 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 action would occur in the inshore and offshore waters of the Atlantic 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.

13. Can the action reasonably be expected to result in the introduction or spread of a non-indigenous species?

No. The action is not expected to result in any change in fishing patterns or behaviors to those previously analyzed in Amendments 3 and 5a. Most vessels in the Atlantic shark fisheries are small vessels with limited range and 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.

14. Is the action likely 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 Atlantic shark fisheries that can be implemented in the short-term that may better address the current issues facing these fisheries, while potentially providing economic benefit to the Atlantic shark fishery participants. It is NMFS' goal to implement management measures that will increase management flexibility to adapt to the changing needs of the Atlantic shark fisheries and achieve optimum yield while aiding in rebuilding overfished shark stocks and ending overfishing. Therefore, this action does not set a precedent for future action or represent a formal policy direction.

15. Can the action reasonably be expected to threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment?

No. The action would be consistent with the Magnuson-Stevens Act and the HMS regulations at 50 CFR part 635. NMFS has determined that the action 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 action would not be expected to violate any Federal, state, or local law or requirement imposed for the protection of the environment.

16. Can the action reasonably be expected to result in cumulative adverse effects that could have substantial effect on the target species or non-target species?

No. The action is not expected to result in cumulative adverse effects that could have a substantial effect on target species or non-target species. The action would not result in an increase in overall fishing effort in the Atlantic shark fisheries and therefore would not have substantial effect on the target species. With regards to non-target species, NMFS anticipates that fishermen in the Atlantic shark fisheries would not have adverse impacts to ESA-listed species beyond those impacts analyzed in the 2012 Shark BiOp, which concluded that these fisheries would not jeopardize any ESA-listed species. Following the listing of the Central and Southwest Atlantic DPS of scalloped hammerhead and seven coral species in the Caribbean, NMFS requested re-initiation of ESA section 7 consultation for the 2006 Consolidated Atlantic HMS FMP activities as amended and as previously consulted on in the 2001 Atlantic HMS, the 2012 directed shark and smoothhound fishery, and the 2004 pelagic longline biological opinions, to assess potential adverse effects of certain gear types on the Central and Southwest DPS of scalloped hammerhead shark and the seven coral species. The biological evaluation provided supplemental information for the reinitiated consultation on pelagic longline gear and to support the request for ESA section 7 consultation for all other HMS gear types and the potential effects on the Central and Southwest DPS of scalloped hammerhead shark and threatened coral species.

DETERMINATION

In view of the information presented in this document and the analysis contained in the attached EA that was prepared to address SCS retention limits for shark limited access permit holders in the Atlantic south 34°00'N. latitude, it is hereby determined that this action would not significantly impact the quality of the human environment as described above and in the EA. In addition, all impacts to potentially affected areas, including national, regional, and local, have been addressed to reach the conclusion of no significant impact. Accordingly, preparation of an EIS for this action is not necessary.

Emily Menashes for

Alan D. Risenhoover
Director, Office of Sustainable Fisheries, NOAA

12/2/16
Date

APPENDIX A: PUBLIC COMMENT AND AGENCY RESPONSES

NMFS received numerous comments regarding the proposed blacknose retention limit in the Atlantic region. Below, NMFS summarizes and responds to all substantive comments made specifically on the proposed rule.

Comment 1: NMFS received a number of comments regarding the preferred retention limit of eight blacknose sharks per trip within the Atlantic region south of 34 °00' N. latitude. The South Atlantic Fishery Management Council, a number of HMS Advisory Panel members, and other commenters supported the preferred retention limit of eight blacknose sharks per trip within the Atlantic region south of 34 °00' N. latitude. Some commenters were concerned that the preferred retention limit was not low enough and would still result in the early closure of the non-blacknose SCS fishery. Some commenters suggested that the preferred retention limit of eight blacknose sharks per trip should apply only to directed shark limited access permit holders and that incidental shark limited access permit holders should not be allowed to land blacknose sharks or should have a lower retention limit. Lastly, other commenters suggested that NMFS should adjust the blacknose shark retention limit on an inseason basis, similar to what is done in the large coastal shark fishery.

Response: In this final action, NMFS is establishing a commercial retention limit of eight blacknose sharks per trip since the retention limit would have moderate beneficial ecological impacts on blacknose sharks, neutral ecological impacts on non-blacknose SCS, and minor beneficial socioeconomic impacts for SCS fishermen because they would be able to continue utilizing the non-blacknose SCS quota. Based on the analyses conducted, NMFS believes this retention limit would allow between approximately 40 and 96 lb dw blacknose sharks to be landed per trip, depending on the average weight of blacknose sharks used. Using these weights landed per trip, the full blacknose shark quota could be landed in approximately 395 to 948 trips. This result is more than double and could be as high as 10 times the number of trips that harvested the blacknose quota from the 2011 to 2015 average. As such, the final retention limit of eight blacknose sharks per trip should allow for the blacknose and non-blacknose SCS quotas to remain open throughout the year and not cause the fisheries to close early. Because the retention limit should allow for the fisheries to remain open and because incidental shark permit holders by definition do not target sharks, NMFS does not believe it is necessary to consider separate blacknose retention limits by permit type. Regarding the comment about inseason adjustments to the retention limit, NMFS did not consider establishing an adjustable retention limit for blacknose sharks because this species should only be landed at incidental levels in order to allow for rebuilding and the final action to establish an eight blacknose shark retention limit should prevent early closure of the SCS fishery. NMFS may revisit inseason adjustments to the blacknose shark retention limit in the future as warranted.

Comment 2: NMFS received a comment suggesting that the average dressed weight for blacknose sharks should be increased from the 5 lb dw used in the latest stock assessment to 10 to 20 lb dw because larger blacknose sharks are more typically landed in the fishery.

Response: In all the calculations in the proposed rule, NMFS used an average dressed weight of 5 lb for blacknose shark. This average weight is the average weight that was derived for the 2011 stock assessment using a length-weight conversion function. However, based on these public comments, NMFS reviewed data from observed bottom longline and gillnet trips that landed blacknose sharks in the years 2013 through 2015, and found that these data indicate that fishermen are landing blacknose sharks with an average weight of 12 lb dw. As a result, NMFS provided information on both weights in the final EA and final rule. Based on data analysis, using either average weight would support using an eight blacknose shark retention limit and accomplish the goals of the rulemaking.

Comment 3: NMFS received a comment requesting the removal of the quota linkage between the blacknose shark and the South Atlantic non-blacknose SCS quotas so that fishermen would not have to discard non-blacknose SCS after the blacknose quota is filled.

Response: The objectives of this action are to continue rebuilding the Atlantic blacknose shark stock; to aid in end overfishing of the Atlantic blacknose shark stock; to aid in achieving optimum yield in the blacknose and non-blacknose-SCS fisheries; and to reduce dead discards of small coastal sharks. The quota linkage was established to prevent further overfishing and aid in rebuilding blacknose sharks. Without the quota linkage, fishermen would lose an important incentive for avoiding blacknose sharks, thus jeopardizing the rebuilding plan for blacknose sharks and potentially increasing overfishing of blacknose sharks.

Comment 4: NMFS received a comment suggesting that the SCS season open in September instead of January.

Response: The final action does not reanalyze the overall start date for SCS, which was analyzed in the 2006 Consolidated HMS FMP and its amendments. NMFS could consider this in a future rulemaking.

Comment 5: NMFS received a comment requesting that the 80-percent threshold closure policy for shark fisheries be changed.

Response: NMFS' goal is to allow shark fishermen to harvest the full quota without exceeding it in order to maximize economic benefits to stakeholders while achieving conservation goals, including preventing overfishing. The 80-percent threshold closure policy refers to NMFS calculating that the overall, regional, and/or sub-regional landings for any species and/or management group has reached or is projected to reach 80 percent of the available overall, regional, and/or sub-regional quota and NMFS closing the species and/or management

groups for the rest of the season. Based on current experiences with monitoring quotas for all shark species and management groups, NMFS believes that the 80-percent threshold allows for all or almost the entire quota to be harvested without exceeding the quota. As such, NMFS expects that, in general, the quotas would be harvested between the time that the 80-percent threshold is reached and the time that the season actually closes. In addition, NMFS must also account for late reporting by shark dealers even with the improved electronic dealer system and provide a buffer to include landings received after the reporting deadline in an attempt to avoid overharvests. NMFS will continue to evaluate the 80-percent threshold and may consider changes in a future rulemaking.

Comment 6: NMFS received a comment suggesting that an Atlantic blacknose update stock assessment be performed in 2019 along with the Atlantic blacktip benchmark assessment.

Response: Most of the domestic shark stock assessments follow the SEDAR process. 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. With regard to the timing of upcoming shark stock assessments, NMFS aims to conduct a number of shark stock assessments every year and to regularly reassess these stocks. The number of species that can be assessed each year depends on whether assessments are establishing baselines or are only updates to previous assessments. Assessments also depend on ensuring there are data available for a particular species. In addition to the shark assessments being conducted by the International Commission for the Conservation of Atlantic Tunas (ICCAT), NMFS intends to conduct, through the SEDAR process, a sandbar shark benchmark assessment in 2017, a Gulf of Mexico blacktip shark update assessment in 2018, and an Atlantic blacktip benchmark assessment in 2019. NMFS will continue to monitor options for future stock assessments, including an assessment for Atlantic blacknose sharks.