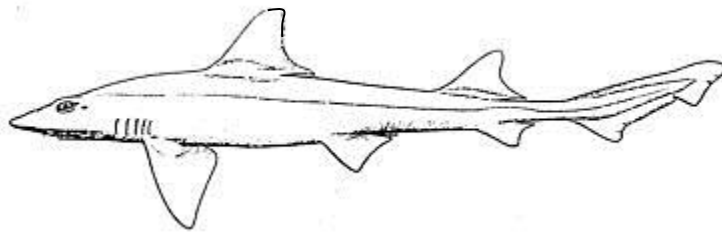


FINAL

**AMENDMENT 9 TO THE 2006 CONSOLIDATED
ATLANTIC HIGHLY MIGRATORY SPECIES FISHERY
MANAGEMENT PLAN**

Including:

*A Final Environmental Assessment
A Final Regulatory Impact Review
A Final Regulatory Flexibility Analysis*



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

November 2015

ABSTRACT

- Proposed Action:** Implement Final Amendment 9 to the 2006 Consolidated Atlantic Highly Migratory Species Fishery Management Plan
- 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/SF1)
1315 East-West Highway
Silver Spring, Maryland 20910
Phone: (301)-427-8503; Fax: 301-713-1917
- Abstract:** Final Amendment 9 to the 2006 Consolidated Highly Migratory Species Fishery Management Plan establishes smoothhound shark annual quotas based on recent stock assessments, implements the smoothhound shark-specific requirements of the 2012 Shark Biological Opinion, and modifies current regulations related to the use of Vessel Monitoring Systems by Atlantic shark fishermen using gillnet gear. Except for certain Shark Conservation Act of 2010 (P.L. 111-348) (SCA) provisions, which apply only to smooth dogfish (*Mustelus canis*), the management measures in Final Amendment 9 address “smoothhound sharks,” which for purposes of this Amendment include smooth dogfish (*Mustelus canis*), Florida smoothhound (*M. sinusmexicanus*), and Gulf smoothhound (*M. norrisi*). The Final Amendment also implements the smooth dogfish-specific provisions in the SCA. The SCA requires that all sharks landed in the United States be landed with their fins and tail naturally attached to the carcass but includes a limited exception for smooth dogfish. For the federal Atlantic shark fisheries, current regulations already require all sharks to be landed with all fins naturally attached to the carcass, and the SCA’s fins-attached requirement is being implemented nationwide through a separate ongoing rulemaking. Thus, this Final Amendment addresses only the provision contained in the SCA that allows at-sea fin removal of Atlantic smooth dogfish. The action will also establish an effective date for previously-adopted shark management measures finalized in Amendment 3 to the 2006 Consolidated HMS FMP and the 2011 HMS Trawl Rule, although those measures were not developed through the Amendment 9 process.

TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1	Background.....	1
1.2	Stock Composition.....	5
1.3	Purpose, Need, and Objectives for the Action.....	6
1.4	Scope and Organization of this Document.....	9
2.0	SUMMARY OF THE ALTERNATIVES	12
2.1	Alternatives to Implement the Smooth Dogfish-Specific Provisions in Shark Conservation Act of 2010.....	13
2.2	Smoothhound Shark Commercial Quotas.....	18
2.3	Biological Opinion Implementation.....	24
2.4	Atlantic Shark Gillnet Vessel Monitoring System Requirements.....	26
2.5	Alternatives Considered But Not Further Analyzed.....	28
3.0	AFFECTED ENVIRONMENT	30
3.1	Biology and life history of smoothhound sharks.....	30
3.1.1	Smooth Dogfish.....	30
3.1.2	Florida Smoothhound and Gulf Smoothhound.....	36
3.2	Smoothhound Habitat.....	37
3.3	Stock Status of Smoothhound Sharks.....	39
3.4	Smoothhound Shark Fishery Description.....	42
3.4.1	Sink Gillnet Gear Smooth Dogfish Fishery.....	43
3.4.2	Bottom Otter Fish Trawl Smooth Dogfish Fishery.....	46
3.5	Catch and Landings of Smoothhound Sharks.....	49
3.5.1	Annual landings trends.....	49
3.5.2	Geographic distribution of Landings.....	51
3.5.3	Landings comparison by gear.....	52
3.6	Social and Economic Aspects of the Smoothhound Fishery.....	54
3.6.1	Social.....	54
3.6.2	Economic.....	55
3.7	Gillnet Fishery for Sharks other than Smoothhound Sharks.....	56
3.7.1	Current Management.....	57
3.7.2	Recent Catch, Landings, and Discards.....	57
3.8	Protected Species Interactions in HMS Fisheries.....	57
3.8.1	Interactions and the Marine Mammal Protection Act.....	57
3.8.2	Interactions and the Endangered Species Act.....	59
4.0	ENVIRONMENTAL CONSEQUENCES OF THE ALTERNATIVES	62
4.1	Smooth Dogfish provisions of the Shark Conservation Act of 2010.....	62
4.1.1	Ecological Impacts.....	63
4.1.2	Social and Economic Impacts.....	70
4.1.3	Conclusion.....	78
4.2	Smoothhound Shark Commercial Quotas.....	78
4.2.1	Ecological Impacts.....	79
4.2.2	Social and Economic Impacts.....	82

4.2.3	Conclusion	84
4.3	Biological Opinion Implementation	84
4.3.1	Ecological Impacts.....	85
4.3.2	Social and Economic Impacts.....	88
4.3.3	Conclusion	90
4.4	Atlantic Shark Gillnet Vessel Monitoring System Requirements	90
4.4.1	Ecological Impacts.....	90
4.4.2	Social and Economic Impacts.....	91
4.4.3	Conclusion	92
4.5	Impacts on Essential Fish Habitat.....	92
4.6	Impacts on Protected Resources	93
4.7	Environmental Justice Concerns.....	96
4.8	Coastal Zone Management Act (CZMA)	97
4.9	Cumulative Impacts	100
4.10	Comparison of Alternatives	103
5.0	MITIGATION AND UNAVOIDABLE ADVERSE IMPACTS	109
5.1	Mitigating Measures	109
5.2	Unavoidable Adverse Impacts	111
5.3	Irreversible and Irrecoverable Commitment of Resources.....	112
6.0	ECONOMIC EVALUATION	112
6.1	Number of Vessels and Permit Holders.....	112
6.2	Gross Revenues of Commercial Fishermen.....	113
7.0	REGULATORY IMPACT REVIEW.....	115
7.1	Description of Management Objectives.....	115
7.2	Description of Fishery.....	115
7.3	Statement Of Problem.....	115
7.4	Description of Each Alternative.....	115
7.5	Economic Analysis of Expected Effects of Each Alternative Relative to the Baseline	115
7.6	Conclusion	119
8.0	FINAL REGULATORY FLEXIBILITY ANALYSIS.....	120
8.1	Statement of the Need for and Objectives of this Final Rule	120
8.2	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	120
8.3	Description and Estimate of the Number of Small Entities to Which the Final Rule Will Apply	121
8.4	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	122
8.5	Description of the Steps the Agency Has Taken to Minimize the Significant Economic Impact on Small Entities Consistent with the Stated Objectives of	

Applicable Statutes, 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	122
9.0 COMMUNITY PROFILES.....	133
10.0 OTHER CONSIDERATIONS	133
10.1 Magnuson-Stevens Act: National Standards	133
10.2 Consideration of Magnuson-Stevens Act Section 304(g) Measures	136
10.3 Paperwork Reduction Act.....	139
10.4 E. O. 13132	139
11.0 LIST OF PREPARERS	140
12.0 LIST OF AGENCIES/PERSONS CONSULTED	140
13.0 REFERENCES.....	141
FINDING OF NO SIGNIFICANT IMPACT.....	144
APPENDIX A: RESPONSE TO COMMENTS.....	152

LIST OF FIGURES

Figure 2.1 Area affected by the Smooth Dogfish-Specific Provisions in the SCA of 2010 under Sub-Alternative A2-3a.....	17
Figure 2.2 Area affected by the Smooth Dogfish-Specific Provisions in the SCA of 2010 under Sub-Alternative A2-3b.....	18
Figure 2.3 Four quota alternatives relative to recent smoothhound shark landings. Note that Alternative B4 is the sum of the Atlantic and Gulf of Mexico regional quotas; the quotas for the other alternatives would also apply to both regions but do not have a specific split between regions. Source: ACCSP Data Warehouse 1998-2014	24
Figure 2.4 Southeast U.S. Monitoring Area; Source: Guide to the Atlantic Large Whale Take Reduction Plan, NOAA Fisheries	27
Figure 3.1 Seasonal distribution of <i>Mustelus canis</i> along the East coast of the United States. Months highlighted indicate presence while those in black represent peak abundance. References: 1. Bigelow and Schroeder (1948), 2. Skomal (2007), 3. NMFS Commercial Landings Database, 4. Rountree and Able (1996), 5. C. McCandless, personal communication, 6. Schwartz (1964), 7. Grubbs and Musick (2007), 8. UNC Longline Shark Database, 9. Jensen and Hopkins (2001), 10. Ulrich et al. (2007), 11. C. Belcher, personal communication, 12. Gelsleichter, personal communication. 13. Kohler et al. (2014).....	31
Figure 3.2 Seasonal distribution pattern of smooth dogfish along the East coast of the United States. Winter (Blue) is the distribution from December to February. Spring (Green) is the distribution from March through May. Summer (Red) is the distribution from June through August. Fall (Orange) is the distribution from September through November.	32
Figure 3.3 Diet analysis of coastal populations of smooth dogfish sampled in spring and fall NEAMAP trawl surveys; Source: C. Bonzak, NEAMAP, VIMS.....	34
Figure 3.4 Sex ratios of coastal smooth dogfish by length category sampled in spring and fall NEAMAP trawl surveys. Source: C. Bonzak, NEAMAP, VIMS	36
Figure 3.5 Smoothhound shark observations from fishery-independent surveys; Data sources: SEFSC, COASTSPAN, SEAMAP, VIMS Nursery Study	38
Figure 3.6 Smoothhound shark EFH designation based on fisheries independent surveys. Note: all life stages combined. EFH identified in the Atlantic is primarily that of smooth dogfish. EFH identified in the Gulf of Mexico is for all three smoothhound shark species.	39
Figure 3.7 Smooth Dogfish Landings by Gear Type (2003-2014). Source: Vessel Trip Report (VTR) Data, 2003-2014	42
Figure 3.8 Frequency of sink gillnet trips retaining varying percentages smooth dogfish relative to total catch; Source: VTR Database 2003-2014.....	43
Figure 3.9 Proportion of smooth dogfish caught in trips greater than and less than 75 percent retained smooth dogfish catch in the sink gillnet fishery; Source: VTR Data, 2003-2014	44
Figure 3.14 Species caught with smooth dogfish in sink gillnet gear, relative levels; Source - VTR data (2003 – 2014).....	46
Figure 3.11 Frequency of otter bottom fish trawl trips retaining varying percentages smooth dogfish relative to total catch; Source: VTR Database 2003-2014.....	47

Figure 3.12	Species caught with smooth dogfish in otter bottom fish trawl gear, relative levels; Source - VTR data (2003 – 2014)	48
Figure 3.13	Species caught with smooth dogfish in otter bottom fish trawl gear, absolute levels; Source - VTR data (2003-2014)	49
Figure 3.14	Graphical representation of ACCSP smooth dogfish landings data; Source: ACCSP Data Warehouse	50
Figure 3.15	State landings of smooth dogfish, 2002-2014; Source: ACCSP Data Warehouse	51
Figure 3.16	Monthly smooth dogfish landings in the four primary states, aggregated from 1998-2014; Source: ACCSP Data Warehouse	52
Figure 3.17	Pounds of smooth dogfish landed from dominant gear types; Source: VTR data, 2003-2014	53
Figure 3.18	Number of trips of each dominant gear type that landed smooth dogfish; Source: VTR data, 2003-2014	54

LIST OF TABLES

Table 0.1	The preferred alternatives at the draft and final stage of Amendment 9 to the 2006 Consolidated HMS FMP.....	3
Table 2.1	Annual landings for smoothhound sharks, dressed weight (1998-2014); Note that all commercial landings below are smooth dogfish from the Atlantic; Source: ACCSP Data Warehouse	19
Table 2.2	Average annual smoothhound shark mortality (2008-2012) used to estimate the smoothhound.....	23
Table 3.1	Number of vessels and trips landing smooth dogfish in sink gillnet gear, by year; Source: VTR data, 2003-2014	45
Table 3.2	Number of vessels and trips landing smooth dogfish caught in trawl gear, by year. Source: VTR data, 2003-2014	47
Table 3.3	Annual landings for smooth dogfish, dressed weight (1998-2014); Source: ACCSP Data Warehouse	50
Table 3.4	Smooth dogfish landings by gear type; Source: VTR Data, 2003-2014	52
Table 3.5	Summary of revenues from the sink gillnet smooth dogfish fishery; Source: VTR data, 2003-2014.....	56
Table 4.1	Catch composition of “other sharks” caught while fishing for smooth dogfish 74	
Table 4.2	Gross revenues from trips retaining 0 to 25% smooth dogfish.....	74
Table 4.3	Gross revenues from trips retaining 26 to 50% smooth dogfish.....	75
Table 4.4	Gross revenues from trips retaining 51 to 75% smooth dogfish.....	75
Table 4.5	Gross revenues from trips retaining 76 to 100% smooth dogfish.....	76
Table 4.6	Comparison of alternatives considered.....	103
Table 6.1	Number of vessels and trips landing smooth dogfish, by year; Source: VTR data, 2003-2014.....	112
Table 6.2	Number of vessels and trips landing smooth dogfish in sink gillnet gear, by year; Source: VTR data, 2003-2014	113
Table 6.3	Number of vessels and trips landing smooth dogfish caught in trawl gear, by year. Source: VTR data, 2003-2014	113
Table 6.4	Average Ex-vessel Prices per Pound for Atlantic HMS, by Area (2004-2013); Sources: HMS eDealer, Dealer weighout slips from the Southeast Fisheries Science Center (SEFSC), Northeast Fisheries Science Center (NEFSC), and bluefin tuna dealer reports from the Northeast Regional Office. Gulf of Mexico includes: TX, LA, MS, AL, and the west coast of FL. S. Atlantic includes: east coast of FL. GA, SC, and NC dealers reporting to SEFSC. Mid-Atlantic includes: NC dealers reporting to NEFSC, VA, MD, DE, NJ, NY, and CT. N. Atlantic includes: RI, MA, NH, and ME. 114	
Table 7.1	Net Economic Benefits and Costs of Alternatives.	115

1.0 INTRODUCTION

1.1 BACKGROUND

Before 2010, federal management measures did not exist for smoothhound sharks, except for restrictions on finning. In the 1999 Fishery Management Plan (FMP) for Atlantic Tunas, Swordfish, and Sharks (1999 FMP), smoothhound sharks were included in a federal fishery management unit that included deep water and other sharks solely to prevent finning. These species were removed from the fishery management unit in the 2003 Amendment 1 to the 1999 FMP since they became protected from finning under the Shark Finning Prohibition Act (67 FR 6124, February 11, 2002) and the FMP measures therefore were no longer needed. In 2008, the Atlantic States Marine Fisheries Commission (ASMFC) adopted management measures for smoothhound sharks in state waters; the ASMFC measures were effective in January 2010.

In 2010, through Amendment 3 to the 2006 Consolidated HMS FMP, NMFS determined that smoothhound sharks were in need of federal conservation and management measures and that they would appropriately be included within the HMS-managed stocks, given the wide geographic distribution and range of smoothhound sharks and the Secretarial management authority over HMS, including “oceanic sharks,” in the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). Details about NMFS’ authority and decision to manage smoothhound sharks can be found in the Final Environmental Impact Statement (EIS) for Amendment 3. At that time “smoothhound sharks” referred to a species complex consisting of smooth dogfish and Florida smoothhounds (75 FR 30484, June 1, 2010). The final rule implementing Amendment 3 published in June 2010 and delayed the effective date of the smoothhound shark management measures pending approval for related data collection under the Paperwork Reduction Act (PRA) by the Office of Management and Budget (OMB), to provide time for implementation of a permit requirement, to provide time for NMFS to complete a BiOp under section 7 of the ESA, and to provide time for affected fishermen to change business practices, particularly as it related to keeping the fins attached to the carcass through offloading (June 1, 2010, 75 FR 30484). OMB approved the PRA data collection in May of 2011 and NMFS met informally with smoothhound shark fishermen along the east coast in the fall of 2010.

In January 2011, the President signed the Shark Conservation Act of 2010 (SCA). The SCA requires that all sharks landed in the United States be landed with their fins naturally attached to the carcass but included a limited exception for smooth dogfish (*Mustelus canis*), which is described in detail below in Section 1.3. Throughout this document, the term “fins” includes both the tail and the fins of the shark.

Also, in 2011, NMFS published a final rule regarding trawl gear (August 10, 2011, 76 FR 49368)(HMS Trawl Rule). The HMS Trawl Rule, among other things, allowed for the retention of smoothhound sharks caught incidentally with trawl gear, provided that total smoothhound shark catch on board or offloaded did not exceed 25 percent of the total catch by weight.

In November 2011, NMFS published a rule (76 FR 70064, November 10, 2011) that delayed the effective date for all smoothhound shark management measures in both Amendment 3 and the 2011 trawl rule indefinitely to provide time for NMFS to consider the smooth dogfish-specific provisions in the SCA and for NMFS to finalize a Biological Opinion on the federal actions in Amendment 3, among other things.

Since that time, the 2012 Atlantic Shark Biological Opinion (2012 Shark BiOp) on federal actions in Amendment 3 has been completed. Except for consideration of the smooth dogfish-specific measures in the SCA, all reasons for delaying implementation of Amendment 3 and the 2011 HMS trawl gear rule have been addressed. Thus, NMFS is ready to make effective most of the previously-finalized smoothhound shark measures from Amendment 3 and the 2011 HMS trawl gear rule.

On August 7, 2014, NMFS published a proposed rule (79 FR 46217) and released a supporting Draft EA for Amendment 9. The Draft EA and proposed rule analyzed the potential environmental impacts related to modifying prohibitions on at-sea fin removal of smooth dogfish consistent with the SCA; implementing Term and Condition 4 of the 2012 Shark BiOp; adjusting the smoothhound shark quota finalized in Amendment 3 based on updated catch data; and modifying the VMS requirements for shark gillnet vessels. NMFS held two public hearings and two conference calls/webinars during that time and consulted with the five Atlantic Regional Fishery Management Councils, the Atlantic and Gulf of Mexico States Marine Fisheries Commission, and the HMS Advisory Panel (HMS AP). A summary of both oral and written public comments received, as well as NMFS' response to those comments, is included as Appendix A of this document and is also in the final rule implementing the regulations. Copies of all the written comments received can be found at <http://regulations.gov> (search for NOAA-NMFS-2014-0100).

In March 2015, the Southeast Data, Assessment, and Review (SEDAR) 39 stock assessments for smoothhound sharks were completed. Notice of stock status determinations of no overfishing and not overfished for Atlantic smooth dogfish and Gulf of Mexico smoothhound sharks published on June 29, 2015 (80 FR 36974). These stock assessments provided information that could allow NMFS to establish scientifically-based quotas and Final Amendment 9 considers that new information and resulting quotas.

After considering public comments and new information and analyses, NMFS began working on this Final Environmental Assessment and a final rule. Some measures are being finalized as proposed, other have changed between proposed and final rule. A summary of the changes to the preferred alternatives from the Draft EA to the Final EA and the reasons for those changes are included in Table 1.1.

Table 1.1 The preferred alternatives at the draft and final stage of Amendment 9 to the 2006 Consolidated HMS FMP

Alternative Topics	Preferred Alternatives in Draft EA	Preferred Alternatives in Final EA
<p>Implementing the Smooth Dogfish-Specific Provisions in Shark Conservation Act</p>	<p><i>Alternative A2</i> Implement the smooth dogfish-specific measures in the Shark Conservation Act of 2010 to establish an allowance for the removal of smooth dogfish fins while at sea, considering eight sub-alternatives</p> <p><i>Sub-Alternative A2-1c</i> Smooth dogfish must make up at least 75 percent of the retained catch (no other sharks can be retained).</p> <p><i>Sub-Alternative A2-2b</i> Require any state commercial fishing permit that allows smooth dogfish retention in conjunction with the federal smoothhound permit.</p> <p><i>Sub-Alternative A2-3b</i> Apply the exception for smooth dogfish along the Atlantic Coast but not to Florida’s coast in the Gulf of Mexico.</p>	<p><i>Alternative A2</i> Implement the smooth dogfish-specific measures in the Shark Conservation Act of 2010 to establish an allowance for the removal of smooth dogfish fins while at sea, considering eight sub-alternatives</p> <p><i>Sub-Alternative A2-1e (New sub-alternative)</i> Smooth dogfish must make up at least 25 percent of the retained catch and other sharks may be retained provided their fins remain naturally attached to the carcass.</p> <p><i>Sub-Alternative A2-2b (Same)</i> Require any state commercial fishing permit that allows smooth dogfish retention in conjunction with the federal smoothhound permit.</p> <p><i>Sub-Alternative A2-3b (Same)</i> Apply the exception for smooth dogfish along the Atlantic Coast but not to Florida’s coast in the Gulf of Mexico.</p>
<p>Reason for Changes: In response to public comments, NMFS undertook additional data analyses with updated data to consider further the mixed nature of the smoothhound shark fishery and how well the proposed rule's catch composition requirement reflected the fishery and target species. These new updated analyses showed that the smooth dogfish fishery is more mixed than previously understood and highlighted that considerable dead discards would occur and revenue would be lost by fishermen directing effort on smooth dogfish if they could not also retain other species, with smooth dogfish comprising less than 75 percent of the total catch. Therefore, NMFS in the final rule has developed a new alternative that would require smooth dogfish to make up at least 25 percent of the total retained catch in order to remove the fins of smooth dogfish while at sea. This catch composition is consistent with the smooth dogfish-specific provision in the SCA that limits the exception to those fishermen that are fishing “for” smooth dogfish while acknowledging the need for enhanced flexibility in what we now understand to be primarily a mixed fishery. It is within the range of alternatives considered and analyzed in the proposed rule, is a logical outgrowth of that rule, and therefore is properly included in the final rule.</p> <p>Additionally, under the new preferred sub-alternative on catch composition, fishermen could retain other sharks on board provided that the fins of other shark species remain naturally attached to the carcass through offloading. This measure is included in the new sub-alternative based on public comment and additional analyses, and in recognition that a prohibition on having other sharks on board would likely increase regulatory discards. Specifically, additional analyses indicate that the smooth dogfish fishery is more mixed than previously thought, and that other sharks, particularly spiny dogfish and common thresher sharks, make up a considerable portion of the catch and revenue for fishermen also fishing for smooth dogfish. Under the new preferred sub-alternative, fishermen would not have to choose whether to land</p>		

Alternative Topics	Preferred Alternatives in Draft EA	Preferred Alternatives in Final EA
<p>smooth dogfish with the fins removed or another species of shark with the fins attached. This is a change from the proposed rule, which would have prohibited the retention of other sharks when the fins were removed from smooth dogfish at sea. As proposed, a fisherman who wanted to remove smooth dogfish fins at sea would not have been able to retain non-smooth dogfish sharks even if those sharks were dead and otherwise legally retainable based on species, size, and permits. This would have resulted in the fishermen potentially either discarding non-smooth dogfish species or retaining non-smooth dogfish sharks and discarding smooth dogfish carcasses and fins that had already been processed. In either situation, as proposed, dead discards would likely increase given the mixed catches in the smooth dogfish fishery and that the 75/25 percent ratios were not proportionate or realistic given what we now understand to be the more mixed nature of the fishery.</p>		
<p>Commercial Quota Adjustment for the Smoothhound Shark Fishery</p>	<p><i>Alternative B3</i> Establish a smoothhound shark quota that is equal to the maximum annual landings from 2004-2013 plus two standard deviations (1,739.9mt dw).</p>	<p><i>Alternative B4</i> Establish a smoothhound shark TAC of 1,430.6 mt dw and commercial quota of 1,201.7 mt dw in the Atlantic region, and a TAC of 509.6 mt dw and commercial quota of 336.4 mt dw in the Gulf of Mexico region based on results of the 2015 smoothhound shark stock assessment.</p>
<p>Reason for Changes: At the time that the proposed rule and Draft EA for Amendment 9 were published, results of the SEDAR 39 smoothhound shark stock assessments had not been finalized. During the public comment period for the Amendment 9 proposed rule, NMFS received many comments opposed to the preferred quota alternative and stated that NMFS should not implement a landings-based quota but should instead implement a quota consistent with the results of SEDAR 39. Based on these comments and the updated scientific data available as a result of SEDAR 39, NMFS in the final rule would implement regional smoothhound shark TACs and commercial quotas based on the results of SEDAR 39. Specifically, while NMFS proposed an overall commercial quota of 1,739.9 mt dw covering both the Atlantic and Gulf of Mexico regions (using commercial landings data in the absence of a stock assessment), the final rule would establish separate regional TACs and commercial quotas within those TACs as follows: an Atlantic regional smoothhound shark TAC of 1,430.6 mt dw with a commercial quota of 1,201.7 mt dw, and a Gulf of Mexico regional smoothhound shark TAC of 509.6 mt dw with a commercial quota of 336.4 mt dw.</p>		
<p>Biological Opinion Implementation</p>	<p><i>Alternative C4</i> Establish a soak time limit of 24 hours for sink gillnet gear and a 0.5 to 2 hour net check requirement for drift gillnet gear in the Atlantic shark and smoothhound shark fisheries.</p>	<p><i>Alternative C4 (same)</i> Establish a soak time limit of 24 hours for sink gillnet gear and a 0.5 to 2 hour net check requirement for drift gillnet gear in the Atlantic shark and smoothhound shark fisheries.</p>
<p>Reason for Changes: No changes from the Draft EA to Final EA.</p>		
<p>Atlantic Shark Gillnet Vessel Monitoring System Requirements</p>	<p><i>Alternative D2</i> Require federal directed shark permit holders with gillnet gear on board to use VMS only in the Southeast U.S. Monitoring Area, pursuant to Atlantic Large Whale Take Reduction Plan requirements.</p>	<p><i>Alternative D2 (same)</i> Require federal directed shark permit holders with gillnet gear on board to use VMS only in the Southeast U.S. Monitoring Area, pursuant to Atlantic Large Whale Take Reduction Plan requirements.</p>
<p>Reason for Changes: No changes from the Draft EA to Final EA.</p>		

1.2 STOCK COMPOSITION

During the development of Amendment 3 in 2009, molecular and morphological research at that time indicated that Florida smoothhound (*Mustelus norrisi*) had been historically misclassified as a separate species from smooth dogfish (*M. canis*) (Jones, pers. comm.). Additionally, the Southeast Fisheries Science Center (SEFSC) advised that there were insufficient data at the time to separate smooth dogfish and Florida smoothhound into two separate species, and that they should be treated as a single stock until scientific evidence indicated otherwise. Accordingly, in Amendment 3, NMFS decided to manage both Florida smoothhound sharks and smooth dogfish together as “smoothhound sharks” because of this taxonomic correction and based upon SEFSC advice. Since the finalization of Amendment 3 in 2010, additional scientific information has become available from the SEFSC regarding species identification of smoothhound sharks. This updated scientific data shows that Florida smoothhound, smooth dogfish, and Gulf smoothhound (*M. sinusmexicanus*) are separate species and that there may be additional smoothhound species (e.g., *M. hagmani*, small-eye smoothhound) in the Gulf of Mexico.

The majority of the landings in the commercial smoothhound fishery currently occur in the mid-Atlantic region. Scientific evidence indicates that smooth dogfish are almost exclusively the species found in this area and along the coast throughout the Atlantic region. In the Gulf of Mexico region, all three *Mustelus* species are commonly found.

Identification between these species is difficult, and all three species’ range overlap in the Gulf of Mexico. Jones et al. (2004) noted that the most commonly used macroscopically visible external characteristics such as dermal denticle and labial furrow differences, cannot be reliably used for species identification. Some limited success has been achieved by using other external characteristics such as hyomandibular pore distribution (Giresi et al 2012) but misidentification is still common, especially for juvenile specimens. Data examined for the SEDAR 39 smoothhound stock assessment found that during shark surveys, Florida smoothhound was only correctly identified 40 percent of the time and Gulf smoothhound was only correctly identified 64 percent of the time, with the greatest identification difficulty occurring between Gulf smoothhound and smooth dogfish (Giresi pers comm). Thus, it is unlikely that shark fishermen and enforcement officers would be able, without very specific training, to tell these three species of smoothhound sharks apart, without genetic analyses to differentiate between the three species, which is impractical and not feasible to require during routine fishing operations.

Because of the overlap in range between the different species and the extreme difficulty in distinguishing among the three species, NMFS will continue to group all the smoothhound species (all *Mustelus* species that are currently known and those that may be discovered within the U.S. EEZ of the Atlantic, Gulf of Mexico, and Caribbean) together within the term “smoothhound sharks” for

management purposes¹ and will manage them as a complex. The SCA, however, explicitly limits the fin-removal exception to commercial fishing for smooth dogfish. Given the above issues, NMFS examines two alternatives for applying the exception for smooth dogfish: one that applies the exception along the Atlantic Coast and the Florida Coast in the Gulf of Mexico and a second that would apply the exception along the Atlantic Coast but not in the Gulf of Mexico.

1.3 PURPOSE, NEED, AND OBJECTIVES FOR THE ACTION

Proposed Action: In Final Amendment 9, NMFS would establish scientifically-based quotas using results from the SEDAR 39 smoothhound shark stock assessments; implement limited exceptions from certain provisions of the SCA that specifically apply to smooth dogfish; implement Term and Condition 4 of the 2012 Shark BiOp, which required either net checks or soak time restrictions in the Atlantic shark gillnet fisheries; and reduce the vessel monitoring system (VMS) requirements for shark gillnet fishermen. Smoothhound sharks are not currently under active federal management, although this action will create effective conservation and management measures to manage them actively.

Establishing an effective date for previously-adopted shark management measures finalized in Amendment 3 to the 2006 Consolidated HMS FMP and in the 2011 HMS trawl rule

In addition to Final Amendment 9's management measures, this action will establish an effective date for certain conservation and management measures for smoothhound sharks finalized in Amendment 3. As described above, implementation of these measures was delayed indefinitely. Finalization of this action will implement an effective date for the previously-delayed Amendment 3 management measures for smoothhound sharks, including:

- A research set-aside quota;
- An accountability measure (AM) that closes the fishery when smoothhound shark landings reach, or are expected to reach, 80 percent of the quota;
- A requirement for a dealer permit for purchase of smoothhound sharks;
- A requirement for dealers to report smoothhound shark purchases;
- A smoothhound permit requirement for commercial and recreational fishing and retention;
- A requirement for vessels fishing for smoothhound sharks to carry an observer, if selected;

¹ The SEDAR 39 stock assessment scientists also decided to group these three species into a single stock in the Gulf of Mexico

- A requirement for vessels fishing for smoothhound sharks to comply with applicable Take Reduction Plans pursuant to the Marine Mammal Protection Act; and
- A requirement for commercial vessels to sell catch only to federally-permitted shark dealers.

In addition, this action will implement an effective date for the smoothhound shark management measures in the 2011 HMS trawl rule published on August 10, 2011 (76 FR 49368). As described above, the HMS trawl rule allowed, among other things, for the retention of smoothhound sharks caught incidentally with trawl gear, provided that total smoothhound shark catch on board or offloaded does not exceed 25 percent of the total catch by weight.

Smoothhound Shark Commercial Quotas

When Amendment 3 was finalized, smoothhound shark data were available through 2007, although there was no stock assessment for the species. Since then, in March 2015, the SEDAR 39 smoothhound shark stock assessments were finalized. For both the Atlantic smooth dogfish stock and the Gulf of Mexico smoothhound shark stock, the assessments concluded that the stock is not overfished and overfishing is not occurring based on the base model and range of associated sensitivities. Specifics and results of the stock assessments are discussed in Chapters 2 and 3. In this action, NMFS analyzes a range of quota alternatives that would implement quotas based on updated landings data or results of the SEDAR 39 stock assessments.

Implementation of the Smooth Dogfish-Specific Provisions in the Shark Conservation Act of 2010

On January 4, 2011, the Shark Conservation Act of 2010 (SCA) was signed into law (Public Law 111-348). This law amended the Magnuson-Stevens Act to provide greater protection from illegal "finning" of sharks. Finning is the act of removing the fins of a shark at sea and dumping the carcass in the ocean. Among the provisions in subsection 103(a) of the SCA is a requirement that all sharks landed in the United States be maintained with the fins naturally-attached to the carcass through offloading. Subsection (b), however, provides the following exception: "The amendments made by subsection (a) do not apply to an individual engaged in commercial fishing for smooth dogfish (*Mustelus canis*) in that area of the waters of the United States located shoreward of a line drawn in such a manner that each point on it is 50 nautical miles from the baseline of a State from which the territorial sea is measured, if the individual holds a valid State commercial fishing license, unless the total weight of smooth dogfish fins landed or found on board a vessel to which this subsection applies exceeds 12 percent of the total weight of smooth dogfish carcasses landed or found on board." The SCA provides that "State" has the same meaning as in section 803 of Public Law 103-206 (16 U.S.C. 5102), which refers to "Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida, the District of Columbia, or the Potomac River Fisheries Commission." To implement the exception, this Final Amendment considers three issues—catch

composition, state permit requirements, and geographic applicability of the exception—and explores alternatives for each issue.

Implementation of the 2012 Shark Biological Opinion

On December 12, 2012, following consultation under section 7(a)(2) of the Endangered Species Act (ESA), NMFS determined that the continued operation of the Atlantic shark and smoothhound 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 avoid take prohibited by Section 9 of the ESA, NMFS must comply with the Reasonable and Prudent Measures (RPMs) and the Terms and Conditions (TCs) in the 2012 Shark BiOp. NMFS has reviewed the 2012 Shark BiOp and associated TCs and has determined that the current regulations meet the specifications of all the TCs except for TC 4, which requires either net checks or soak time restrictions in the Atlantic shark gillnet fisheries. Therefore, Final Amendment 9 considers measures that would ensure the Atlantic shark gillnet fisheries operate consistent with TC 4 in the 2012 Shark BiOp.

Atlantic Shark Gillnet Vessel Monitoring System Requirements

This Draft Amendment would also reduce the requirement to use vessel monitoring systems (VMS) by shark fishermen using gillnet gear. Currently, federal directed shark permit holders with gillnet gear on board are required to use VMS, regardless of vessel location. This requirement was implemented as part of the 2003 Amendment 1 to the 1999 FMP to ensure shark gillnet vessels were complying with the Atlantic Large Whale Take Reduction Plan (ALWTRP) time/area closures and observer requirements (50 CFR 229.32). The ALWTRP requirements apply only to Atlantic directed shark limited access permit holders with gillnet gear on board in the Southeast U.S. Monitoring Area. At time of implementation in 2003, NMFS determined that requiring all gillnet fishermen with a directed shark permit to use VMS regardless of geographic location would simplify compliance and outreach, particularly if these fishermen regularly fished different regions, including in the Southeast U.S. Monitoring Area. Since then, however, it has become apparent that while some of these fishermen fish multiple regions, many do not fish in or even near the Southeast U.S. Monitoring Area. Thus, Final Amendment 9 considers measures to bring the VMS requirements in-line with the requirements of the ALWTRP.

Other Measures

Currently, the Atlantic shark fishery observer program is administered by the NMFS Southeast Fisheries Science Center (SEFSC). However, because a portion of the commercial smoothhound shark fishery occurs in the Greater Atlantic region, some of the observer coverage for smoothhound shark trips will be administered by the NMFS Northeast Fisheries Science Center (NEFSC). The two regional science center observers programs differ in the way they notify fishermen of their selection to carry an observer. The SEFSC notifies fishermen in writing at the time

of selection. This process is currently in the 50 CFR part 635 regulations. The NEFSC does not require written notification of selection and any vessel holding an applicable permit can be selected. Thus, NMFS is modifying the observer regulations in 50 CFR part 635 to incorporate the relevant portions of the NEFSC observer regulations found at 50 CFR part 648. In this action, NMFS updates the regulatory text to reflect the observer selection process used by the NEFSC, complementing the existing selection process used by the SEFSC. These changes are administrative in nature, will not have any biological, economic, or social impacts or impacts on the physical environment, are not anticipated to affect the current fishing level or practices in commercial highly migratory species fisheries, and, therefore, are not further analyzed in this document.

Purpose: The purpose of the proposed action is to manage the Atlantic shark fisheries, including the smoothhound shark fishery, in a manner that maximizes resources sustainability while minimizing, to the greatest extent possible, the socioeconomic impacts on affected fisheries.

Need: To achieve this purpose, and to comply with existing statutes such as the Magnuson-Stevens Act and its objectives, NMFS has identified the following objectives with regard to this proposed action:

- Establish commercial quotas (also known as the commercial sector ACL) for smoothhound sharks;
- Implement the smooth dogfish-specific provisions of the SCA;
- Implement Term and Condition 4 of the 2012 Shark BiOp in the Atlantic shark fisheries;
- Implement VMS requirements in the Atlantic shark gillnet fisheries that are consistent with the requirements of the ALWTRP;
- Implement the previously-finalized smoothhound shark measures from Amendment 3 and the HMS Trawl Rule; and
- Implement observer requirements for the smoothhound shark fishery.

1.4 SCOPE AND ORGANIZATION OF THIS DOCUMENT

In considering the proposed action outlined in this document, NMFS is responsible for complying with a number of Federal statutes, including NEPA. Under NEPA, the purpose of an Environmental Assessment (EA) is to provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement 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 that catch and interact with Atlantic sharks. In this document, NMFS evaluates the potential impacts of these management-based alternatives on the fishery, along with other impacts (e.g.,

biological, social, and economic, see Chapter 4). The chapters that follow describe the proposed action 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 proposed action and their alternatives (Chapter 4), and any mitigating measures (Chapter 5).

In developing this document, NMFS adhered to the procedural requirements of NEPA, the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 C.F.R. 1500-1508) 28, and National Oceanic and Atmospheric Administration's (NOAA) procedures for implementing NEPA. NOAA Administrative Order (NAO) 216-6 identifies NOAA's procedures to 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 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. For example, a direct impact of erosion on a stream might include sediment-laden waters in the vicinity of the action, whereas an indirect impact of the same erosion might lead to lack of spawning and result in lowered reproduction rates of indigenous fish downstream.
- 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 6 provides a summary of all the economic analyses and associated data. Chapter 7 meets the requirements under Executive Order 12866; and Chapter 8 provides the Final Regulatory Flexibility Analysis required under the Regulatory Flexibility Act. Chapters 9 through 11 also 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 that may result in less environmental harm.

To warrant detailed evaluation, an alternative must be reasonable² and meet the purpose and need (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, 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., SCA, 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 BiOp.*

This chapter includes a full range of reasonable alternatives designed to meet the purpose and need for action described in Chapter 1. The environmental, economic, and social impacts of these alternatives are discussed in later chapters. Except for the four alternatives related to the updated smoothhound shark quota noted below, this action does not reconsider alternatives or decisions made in Amendment 3 that had delayed effective dates in 2011.

² “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))

2.1 ALTERNATIVES TO IMPLEMENT THE SMOOTH DOGFISH-SPECIFIC PROVISIONS IN SHARK CONSERVATION ACT OF 2010

Alternative A1: Do not implement the smooth dogfish-specific measures in the Shark Conservation Act of 2010. By default, Amendment 3's fins-attached requirement would apply to the smooth dogfish fishery (i.e., fins and tail of all smooth dogfish must remain naturally attached to the shark carcass through offloading)

This alternative would not implement the smooth dogfish provisions in the Shark Conservation Act of 2010. Instead, under this alternative, the smooth dogfish management measure requiring all smooth dogfish be landed with fins and tail naturally attached to the carcass that was contained in Amendment 3 to the 2006 Consolidated HMS FMP would continue to be implemented.

Alternative A2: *Implement the smooth dogfish-specific measures in the Shark Conservation Act of 2010 to establish an allowance for the removal of smooth dogfish fins while at sea, considering nine sub-alternatives - Preferred Alternative*

This alternative would allow for a limited exception in the Atlantic smooth dogfish fishery to the fins-attached requirement in the Shark Conservation Act. This exception would allow fishermen engaged in commercial fishing for smooth dogfish to remove the fins of smooth dogfish while at sea, provided that the fin-to-carcass ratio of smooth dogfish when landed or onboard the vessel does not exceed 12 percent, fishing occurs within 50 nautical miles of shore, and the requirements under the sub-alternatives, described below, are met.

The following nine sub-alternatives consider measures in three categories to implement this alternative and are based on the smooth dogfish-specific language in the SCA (see Section 1.3). Specifically those sub-alternatives regarding “an individual engaged in commercial fishing for smooth dogfish (*Mustelus canis*)” are addressed under Issue 1 – Catch Composition; the alternatives regarding “if the individual holds a valid State commercial fishing license” are addressed in Issue 2 – State Fishing permit; and the alternatives regarding application are addressed under Issue 3 – Geographic Application of the SCA exception. The preferred sub-alternatives would be implemented and required as a group. In other words, a fisherman who intends to remove the fins of smooth dogfish at sea would need to meet the requirements of the preferred sub-alternatives from all three categories, ensure retained smooth dogfish catch does not exceed the 12 percent fin-to-carcass ratio, and be fishing in federal waters within 50 nautical miles of shore to be eligible for the exception. Meeting only one or two of the requirements would not allow fishermen to remove the fins of a smooth dogfish at sea; rather, the fisherman would need to keep the fins naturally attached through offloading. Additionally, fishermen fishing for smooth dogfish outside 50 nautical miles of shore and in the Gulf of Mexico would need to maintain the fins naturally attached through offloading, consistent with the SCA.

Issue 1: Catch Composition

The following sub-alternatives consider a variety of measures to implement the statutory language that refers to “an individual engaged in commercial fishing for smooth dogfish (*Mustelus canis*).”

Sub -Alternative A2-1a: Smooth dogfish can make up any portion of the retained catch (no other sharks can be retained)

This sub-alternative would prohibit the retention of any sharks other than smooth dogfish but would impose no other catch composition requirements as conditions for removing smooth dogfish fins at sea. Under this alternative, fishermen could remove the fins of a smooth dogfish regardless of the percentage of the catch smooth dogfish comprise onboard the vessel, provided no other sharks were retained. At the proposed rule stage, NMFS noted some shark species are often difficult to tell apart, particularly when dressed, so this restriction could prevent the illegal processing of non-smoothhound sharks at sea. However, as noted under the new preferred sub-alternative A2-1e, smooth dogfish can be differentiated by the presence of the pre-dorsal ridge.

Sub -Alternative A2-1b: Smooth dogfish must make up at least 25 percent of the retained catch (no other sharks can be retained)

To remove the fins of a smooth dogfish while at sea, smooth dogfish would have to make up at least 25 percent of the total retained catch by weight, and no other shark species may be on board. The fins of a smooth dogfish could be removed, provided no other sharks were retained. At the proposed rule stage, NMFS noted that some shark species are often difficult to tell apart, particularly when dressed, so this restriction could prevent processing of non-smoothhound sharks at sea. However, as noted under the new preferred sub-alternative A2-1e, smooth dogfish can be differentiated by the presence of the pre-dorsal ridge.

Sub -Alternative A2-1c: Smooth dogfish must make up at least 75 percent of the retained catch (no other sharks can be retained)

To remove the fins of a smooth dogfish while at sea, smooth dogfish would have to make up at least 75 percent of the total retained catch by weight, and no other shark species may be on board. The fins of a smooth dogfish could be removed at sea, provided no other sharks were retained. At the proposed rule stage, NMFS noted that some shark species are often difficult to tell apart, particularly when dressed, so this restriction could prevent illegal processing of non-smooth dogfish sharks at sea. This sub-alternative was preferred in the Draft EA but is no longer preferred. However, as noted under the new preferred sub-alternative A2-1e, smooth dogfish can be differentiated by the presence of the pre-dorsal ridge.

Sub -Alternative A2-1d: Smooth dogfish must make up 100 percent of the retained catch

To remove the fins of a smooth dogfish while at sea, smooth dogfish would have to make up 100 percent of the total retained catch, by weight. Thus, no other species of fish or shark species could be on board if fishermen wanted to remove smooth dogfish fins at sea. This was the preferred alternative at the proposed rule stage.

Sub -Alternative A2-1e: *Smooth dogfish must make up at least 25 percent of the retained catch and other sharks may be retained provided their fins remain naturally attached to the carcass – Preferred Alternative*

During the Draft EA and proposed rule stage, NMFS received public comments that requested NMFS to implement a lower catch composition than proposed and allow the retention of other sharks on board due to concerns that the proposed sub- alternative would be burdensome, would lead to excessive dead discards, and did not adequately reflect the mixed nature of the smooth dogfish fishery. Thus, based on public comments, updated data, and additional analyses, NMFS developed this new sub-alternative, sub-Alternative A2-1e. This sub-alternative is similar to Sub-Alternative A2-1b above in that, in order to remove the fins of a smooth dogfish while at sea, smooth dogfish must make up at least 25 percent of the total retained catch but, under this preferred sub-alternative, fishermen could retain other sharks on board provided that the fins of other shark species remain naturally attached to the carcass through offloading. We did not offer an alternative that would have allowed other sharks on board at the proposed rule stage because NMFS underestimated the importance of other sharks in the smooth dogfish fishery. At the time of the proposed rule stage, although the unique pre-dorsal ridge identifying feature was known, its use as an enforcement tool was not considered since other sharks were understood to be a negligible part of the catch. However, based on public comment, it has become apparent that other sharks make up a portion of the catch and a sizable portion of the revenue in the smooth dogfish fishery. Based on this new information, allowing other sharks on board when removing smooth dogfish at sea would reduce dead discards and increase profitability of the fishery and the existence of the pre-dorsal ridge mitigates the enforcement risk.

Issue 2: State Fishing Permit

The following sub-alternatives consider measures to implement the language of the SCA smooth dogfish provisions regarding “if the individual holds a valid State commercial fishing license.”

Sub -Alternative A2-2a: Require smooth dogfish-specific state commercial fishing permit in conjunction with the federal smoothhound permit

Under this alternative each State would need to issue a smooth dogfish-specific commercial fishing permit in order for fishermen to remove the fins of smooth dogfish while at sea. Fishermen

would be required to hold a smooth dogfish-specific commercial state fishing permit in conjunction with the federal smoothhound shark permit.

Sub -Alternative A2-2b: *Require any state commercial fishing permit that allows smooth dogfish retention in conjunction with the federal smoothhound permit - Preferred Alternative*

Under this alternative fishermen would be required to hold a state commercial fishing permit that allows smooth dogfish retention in conjunction with the federal smoothhound shark permit in order to remove the fins of smooth dogfish while at sea. The state commercial fishing permit could be a smooth dogfish-specific commercial fishing permit that allows for retention of only smooth dogfish, a shark specific commercial fishing permit that allows for retention of any shark species, or a more general state commercial fishing permit that allows for the retention of smooth dogfish, sharks, and other species of fish.

Issue 3: Geographic Applicability of Exception

The following sub-alternatives consider measures regarding the geographic applicability of the exception to address identification and enforcement issues that arise from the SCA's specific application only to smooth dogfish. In the SCA, "State" has the meaning given that term in section 803 of Public Law 103-206 (16 U.S.C. 5102). P.L. 103-206 uses "State" to refer to "Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida, the District of Columbia, or the Potomac River Fisheries Commission."

Sub-Alternative A2-3a: Apply the exception for smooth dogfish along the Atlantic Coast and to Florida's coast in the Gulf of Mexico.

This sub-alternative would apply the smooth dogfish exception 50 nautical miles from the baseline of all the States that fall under the SCA definition of "State," including along the west coast of Florida in the Gulf of Mexico. Figure 2.1 shows the affected area.

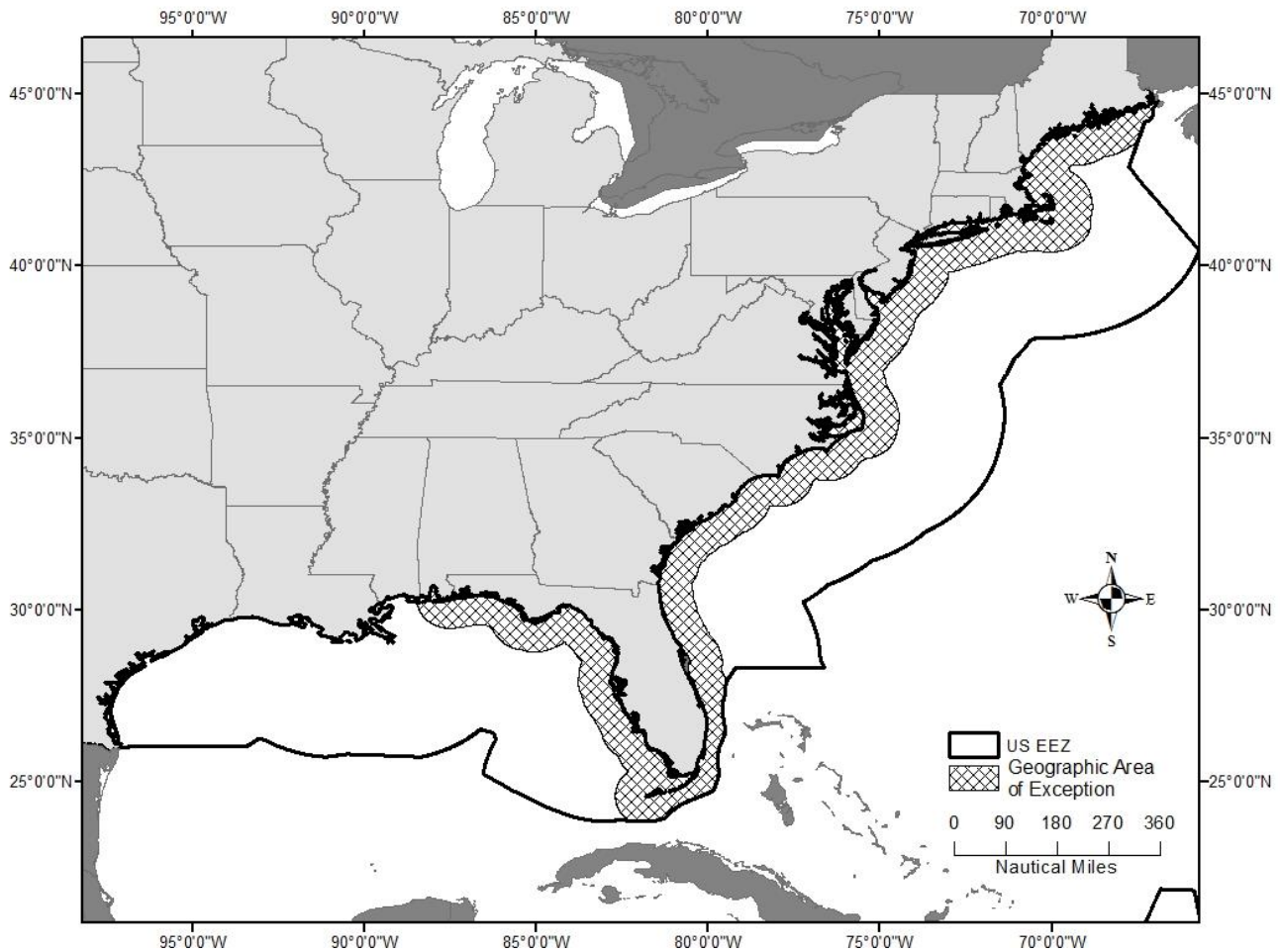


Figure 2.1 Area affected by the Smooth Dogfish-Specific Provisions in the SCA of 2010 under Sub-Alternative A2-3a.

Sub-Alternative A2-3b: *Apply the exception for smooth dogfish along the Atlantic Coast but not to Florida’s coast in the Gulf of Mexico – Preferred Alternative*

The second alternative would apply the exception along only the Atlantic Coast from Maine until the shark management boundary between the Gulf of Mexico and the Atlantic regions. This boundary is defined as “a line beginning on the east coast of Florida at the mainland at 25°20.4’ N. lat., proceeding due east” (§ 635.27 (b)(1)). Figure 2.2 shows the affected area.

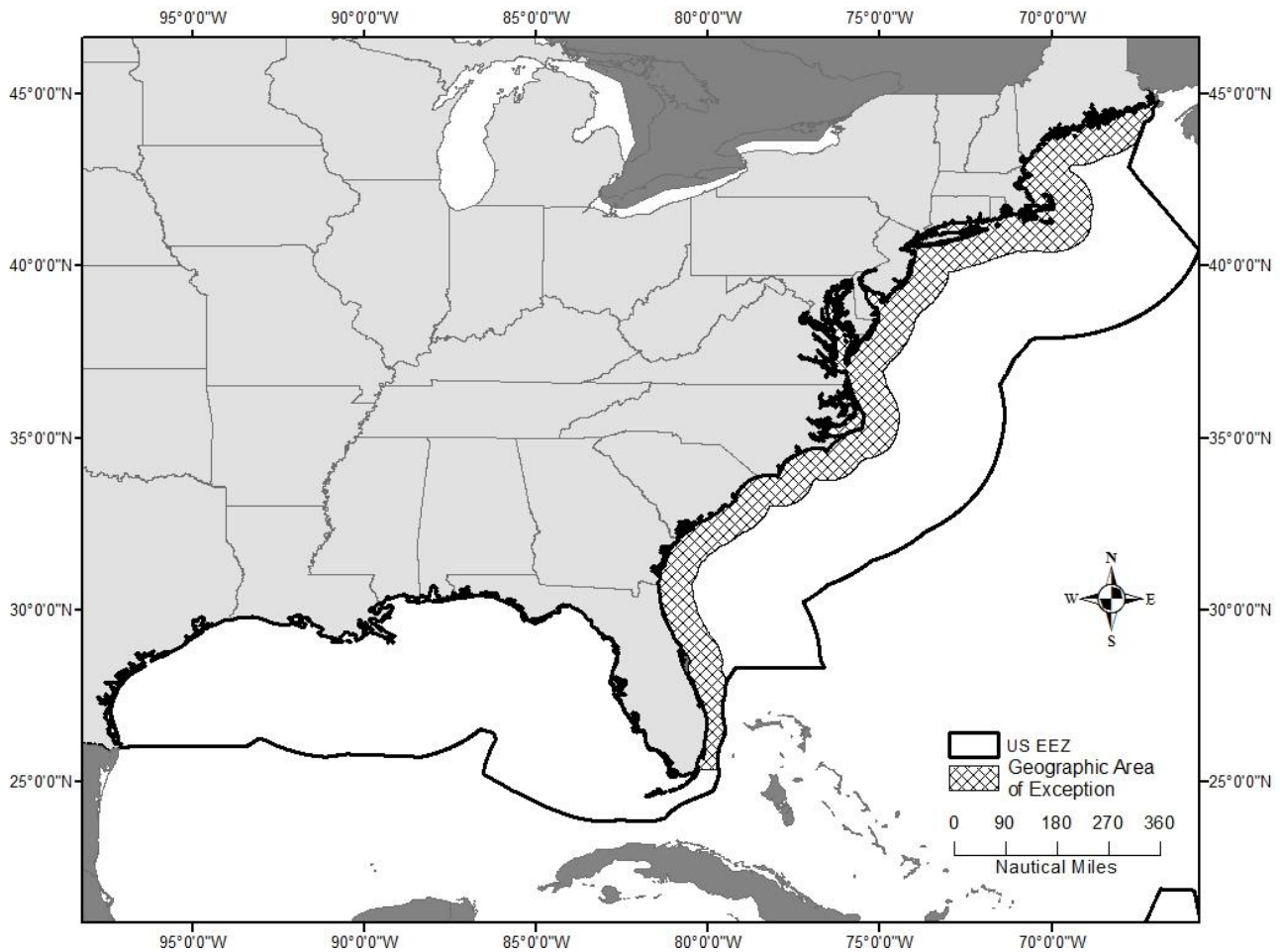


Figure 2.2 Area affected by the Smooth Dogfish-Specific Provisions in the SCA of 2010 under Sub-Alternative A2-3b.

2.2 SMOOTHSHARK COMMERCIAL QUOTAS

The following four alternatives consider the quota provisions for the smoothhound shark fishery based on the availability of new landings data and the SEDAR 39 stock assessments. In addition to the base quotas, a small smoothhound shark research set-aside quota (6 mt ww) was considered and analyzed in Amendment 3. This action does not consider altering the research set-aside quota that was finalized in Amendment 3, and therefore it is not addressed in this impact analysis. Updated landings from the ACCSP Data Warehouse are shown in Table 2.1.

Table 2.1 Annual landings for smoothhound sharks, dressed weight (1998-2014); Note that all commercial landings below are smooth dogfish from the Atlantic; Source: ACCSP Data Warehouse

Year	Landings (lb dw)	Landings (mt dw)
1998	763,717	346.4
1999	927,970	420.9
2000	754,727	342.3
2001	855,798	388.2
2002	1,008,420	457.4
2003	1,038,397	471.0
2004	1,234,606	560.0
2005	864,552	392.2
2006	798,325	362.1
2007	1,159,167	525.8
2008	1,269,300	575.8
2009	1,898,301	861.1
2010	2,688,249	1,219.4
2011	1,951,062	885.0
2012	1,554,784	705.2
2013	1,462,274	663.3
2014	1,273,770	577.8

Alternative B1: Implement a smoothhound shark quota that is equal to the maximum annual landings from 1998 – 2007 plus two standard deviations (715.5 mt) (established in Amendment 3)

Under Alternative B1, NMFS would maintain the previously-adopted quota in Amendment 3 (715.5 mt). The method used to calculate the Amendment 3 quota (“the Amendment 3 method”) which was recommended by the NMFS SEFSC to account for underreporting in the smoothhound shark fishery was maximum landings plus two standard deviations, using 1998-2007 landings data available at that time. Figure 2.3 shows this quota alternative relative to recent landings.

Alternative B2 Establish a “rolling quota” each year based upon the previous five years of available data. Annual quota would be equal to maximum landings during the previous five years of available data plus two standard deviations (2016 quota would be 1,729 mt based on 2010-2014 data).

Under Alternative B2, NMFS would calculate a new annual quota each year through annual quota specifications using the calculation methodology in Alternative B1 (the Amendment 3 method)

but using the previous five years of available data. This would result in a smoothhound shark quota that would change each year and fluctuate with changes in the fishery. The annual quota could increase each year if fishing effort continues to increase or would decrease if fishing effort decreases. Using this methodology, the 2016 quota, based on 2010-2014 data, would be 1,729 mt. Figure 2.3 shows this quota alternative relative to recent landings.

Alternative B3 Establish a smoothhound shark quota that is equal to the maximum annual landings from 2005-2014 plus two standard deviations (1,733.9 mt dw)

Under Alternative B3, NMFS would recalculate the smoothhound shark quota using the Amendment 3 quota calculation method of the maximum annual landings plus two standard deviations, using the last ten years of available data (*i.e.* 2005-2014). This alternative would not change the quota calculation methodology; rather, it would simply update the data used in the calculation to reflect the best available data. The maximum annual landings from 2005 to 2014 occurred in 2010 and were 1,219.4 mt dw. The standard deviation of annual landings from 2005 to 2014 was 257.2 mt dw. Therefore, the quota for smoothhound sharks using the Amendment 3 method and updated data from 2005 to 2014 would result in a quota of 1,733.9 mt dw. Figure 2.3 shows this quota alternative relative to recent landings.

Note that in Amendment 3, NMFS used a conversion factor of 1.39 to convert smoothhound shark data from whole weight to dressed weight, which is the conversion factor NMFS uses for quota tracking for other sharks. Since publication of the Amendment 3 final rule, NMFS has learned from ACCSP that this general shark conversion factor of 1.39 might not be appropriate for smoothhound sharks because of state and regional differences in smoothhound shark processing as well as morphological differences between smoothhound sharks and other sharks species. The updated data NMFS received from ACCSP instead used a conversion factor of 1.43 based on landings records across the entire Atlantic coast. This alternative was preferred in the Draft EA but is no longer preferred.

Alternative B4 *Establish a smoothhound shark TAC of 1,430.6 mt dw and commercial quota of 1,201.7 mt dw in the Atlantic region, and a TAC of 509.6 mt dw and commercial quota of 336.4 mt dw in the Gulf of Mexico region based on results of the 2015 smoothhound shark stock assessment - Preferred Alternative*

At the time of publication of the Draft EA, the SEDAR 39 smoothhound stock assessments were underway, but not yet complete. In anticipation that the final stock assessments could be finalized before this Final EA, NMFS considered a range of scenarios under Alternative B4 to implement the potential stock assessment results. These scenarios considered different quota levels relative to the other quota alternatives. The Draft EA analyzes and discusses the ecological and socioeconomic impacts of these different scenarios. These scenarios and the resulting analyses are not repeated in this Final EA because the SEDAR 39 stock assessments have been finalized and

“potential” scenarios are no longer relevant, given that we have actual stock assessment results. On June 29, 2015, NMFS issued a Notice of Availability (80 FR 36974) for the final stock assessments and announced the determination that the status of the Atlantic smooth dogfish and the Gulf of Mexico smoothhound complex are not overfished with no overfishing occurring. This alternative, Alternative B4, is now the preferred alternative, although it has been updated to reflect the stock assessment results, identifying specific TACs and commercial quotas based on those results. While SEDAR 39 assessed smooth dogfish only in the Atlantic since that is the only smoothhound shark known in the Atlantic at this time, NMFS is maintaining the name of the TAC and commercial quota in the Atlantic as being for “smoothhound sharks” as a broader term to avoid confusion. Specifically, under this preferred alternative, NMFS would establish a smoothhound shark TAC of 1,430.6 mt dw and commercial quota of 1,201.7 mt dw in the Atlantic region, and a TAC of 509.6 mt dw and commercial quota of 336.4 mt dw in the Gulf of Mexico region. In the draft EA, we analyzed the impacts of potential stock assessment outcomes ranging from quotas equal to approximately one-half the Alternative B1 quota (357.8 mt dw) to quotas larger than Alternative B1, approximately equal to or greater than the quota under Alternative B3 (1,739.9 mt dw) and signaled that a TAC could be established in the final rule as well.

These TACs and commercial quotas are based on the results of the SEDAR 39 stock assessments, including the projection results. Specifically, projections for the Atlantic stock suggested that smoothhound sharks could withstand annual harvest levels of 550,000 sharks through the year 2022, with at least a 70 percent chance of not becoming overfished or experiencing overfishing. To convert numbers of sharks to weight, NMFS used an average weight of 8.2 lb ww, which is the average weight of smooth dogfish caught in the gillnet fishery. NMFS felt it was appropriate to use this average weight because the majority of landings of smooth dogfish are from this fishery. As described above, NMFS used a conversion factor of 1.43, which is the conversion factor ACCSP uses for smooth dogfish, to convert whole weight to dressed weight. Thus, the smoothhound TAC for the Atlantic region is equivalent to 1,430.6 mt dw (550,000 smoothhound sharks * 8.2 lb ww average weight of smoothhound sharks / 1.43 conversion factor / 2,204.6 lb = 1,403.6 mt dw).

NMFS then calculated the Atlantic regional smoothhound shark commercial quota by subtracting all sources of smoothhound shark mortality (i.e., recreational harvest, recreational post release mortality (PRM), commercial PRM, and research set-aside mortality) from the Atlantic smoothhound shark TAC (Table 2.2). NMFS used the smoothhound shark recreational landings and recreational PRM estimates provided in SEDAR 39 by the Marine Recreational Information Program (MRIP). The commercial post release mortality (PRM) estimates for the gillnet, trawl, and longline fisheries were derived from considering the discard mortality rate for each of the gear types, and in the case of the Southeast (SE) gillnet fishery, incorporating weight-specific information from the SE Gillnet Observer Program. The research set-aside mortality is the landings and dead discards of smoothhound sharks from researchers that are issued HMS exempted fishing permits. The resulting Atlantic smoothhound shark commercial quota is 2,649,268 lb dw or 1,201.7 mt dw. The above methodology for calculating the Atlantic commercial smoothhound shark quota based on the Atlantic smoothhound shark regional projections is outlined in an equation format below:

(Atlantic smoothhound shark TAC) – (recreational Atlantic smoothhound shark landings) – (recreational Atlantic smoothhound shark post release mortality) – (commercial Atlantic smoothhound shark post release mortality) – (research set-aside) = Total Atlantic commercial smoothhound shark quota.

- **1430.6 mt dw** (Atlantic smoothhound shark TAC) – 23.5 mt dw (recreational Atlantic smoothhound shark landings) – 164.9 mt dw (recreational Atlantic smoothhound shark post release mortality) – 39.1 mt dw (commercial Atlantic smoothhound shark post release mortality) – 1.4 mt dw (research set-aside) = **1,201.7 mt dw (Atlantic commercial smoothhound shark quota)**

NMFS took a similar approach to calculate the TAC and commercial quota for the Gulf of Mexico stock using projection results from the SEDAR 39 stock assessments. Projections for the Gulf of Mexico stock suggested that smoothhound sharks could withstand annual harvest levels of 3 times the 2012 catch level (99,167 sharks) through the year 2022, with at least a 70 percent chance of not becoming overfished or experiencing overfishing. Similar to the Atlantic smoothhound stock assessment, the Gulf of Mexico smoothhound shark TAC was provided in number of sharks. To convert number of sharks to weight, NMFS used an average weight of 5.4 lb ww, which is the average weight of smoothhound shark discarded in the trawl fishery. NMFS used this average weight because fishermen targeting species in this region typically land sharks of this size. The same conversion factor was used to convert from ww to dw as used in the Atlantic (i.e., 1.43). Thus, the smoothhound TAC for the Gulf of Mexico is 509.6 mt dw (3 * 99,167 smoothhound sharks * 5.4 lb ww average weight of smoothhound sharks in the trawl fishery / 1.43 conversion factor / 2,204.6 lb = 509.6 mt dw).

To calculate the Gulf of Mexico regional smoothhound shark commercial quota, NMFS subtracted all of the other sources of smoothhound shark mortality (i.e., recreational harvest, recreational PRM, commercial discards, commercial PRM, and research set-aside mortality) from the Gulf of Mexico smoothhound shark TAC (Table 2.2). NMFS used the smoothhound shark recreational landings and recreational PRM estimates provided in SEDAR 39 by the Marine Recreational Information Program (MRIP). The commercial discard estimates in SEDAR 39 were provided by the reef fish observer programs and the Coastal Fishery Logbook Program. The commercial PRM estimates for the gillnet, trawl, and longline fisheries were derived from considering the discard mortality rate for each of the gear types, and in the case of the Southeast (SE) gillnet fishery, incorporating weight-specific information from the SE Gillnet Observer Program. The research set-aside mortality is the landings and dead discards of smoothhound sharks from researchers that are issued HMS exempted fishing permits. The resulting Gulf of Mexico smoothhound shark commercial quota is 741,627 lb dw or 336.4 mt dw. The above methodology for calculating the Gulf of Mexico commercial smoothhound shark quota based on the Gulf of Mexico smoothhound shark regional projections is outlined in an equation format below:

(Gulf of Mexico smoothhound shark TAC) – (recreational Gulf of Mexico smoothhound shark landings) – (recreational Gulf of Mexico smoothhound shark post release mortality) – (commercial Gulf of Mexico smoothhound shark post release mortality) – (research set-aside) = Total Gulf of Mexico commercial smoothhound shark quota.

- **509.6 mt dw** (Gulf of Mexico smoothhound shark TAC) – 0.6 mt dw (recreational Gulf of Mexico smoothhound shark landings) – 0 mt dw (recreational Gulf of Mexico smoothhound shark post release mortality) – 167.4 mt dw (commercial Gulf of Mexico smoothhound shark discards) – 2.4 mt dw (commercial Gulf of Mexico smoothhound shark post release mortality) – 2.8 (research set-aside) = **336.4 mt dw (Gulf of Mexico commercial smoothhound shark quota)**

Table 2.2 Average annual smoothhound shark mortality (2008-2012) used to estimate the smoothhound shark base annual quotas and TACs in the Atlantic and Gulf of Mexico.
Sources: SEDAR 39. Commercial discard and post release mortality (PRM) estimates from data reported in SEDAR 39 for the Gulf of Mexico are from the reef fish observer programs and the Coastal Fishery Logbook Program. Recreational and commercial discard and PRM estimates from data reported in SEDAR 39 for the Atlantic are from the Southeast (SE) Gillnet Observer Program and the Marine Recreational Information Program.

Region	Gear		Weight (lb dw)	Weight (mt dw)
Atlantic	Recreational Landings		51,916	23.5
	Recreational PRM		363,522	164.9
	Commercial PRM	NE Gillnet	7,420	3.4
		Trawl	75,309	34.2
		NE Longline	1,618	0.7
		SE Gillnet	1,870	0.8
Research Set-Aside		3,186	1.4	
Gulf of Mexico	Recreational Landings		1,367	0.6
	Recreational PRM		0	0.0
	Commercial Discards	Trawl	367,175	166.5
		Longline	1,925	0.9
	Commercial PRM	Longline	5,348	2.4
	Research Set-Aside		6,064	2.8

Underharvest of the regional smoothhound quotas for the Atlantic and Gulf of Mexico regions could be carried forward to the next fishing season. NMFS may increase the following year's base

annual quota by an equivalent amount of the underharvest up to 50 percent above the base annual quota. The Alternative B4 quota level (Atlantic and Gulf of Mexico, combined) is shown relative to the other alternative quotas and historical landings in Figure 2.3.

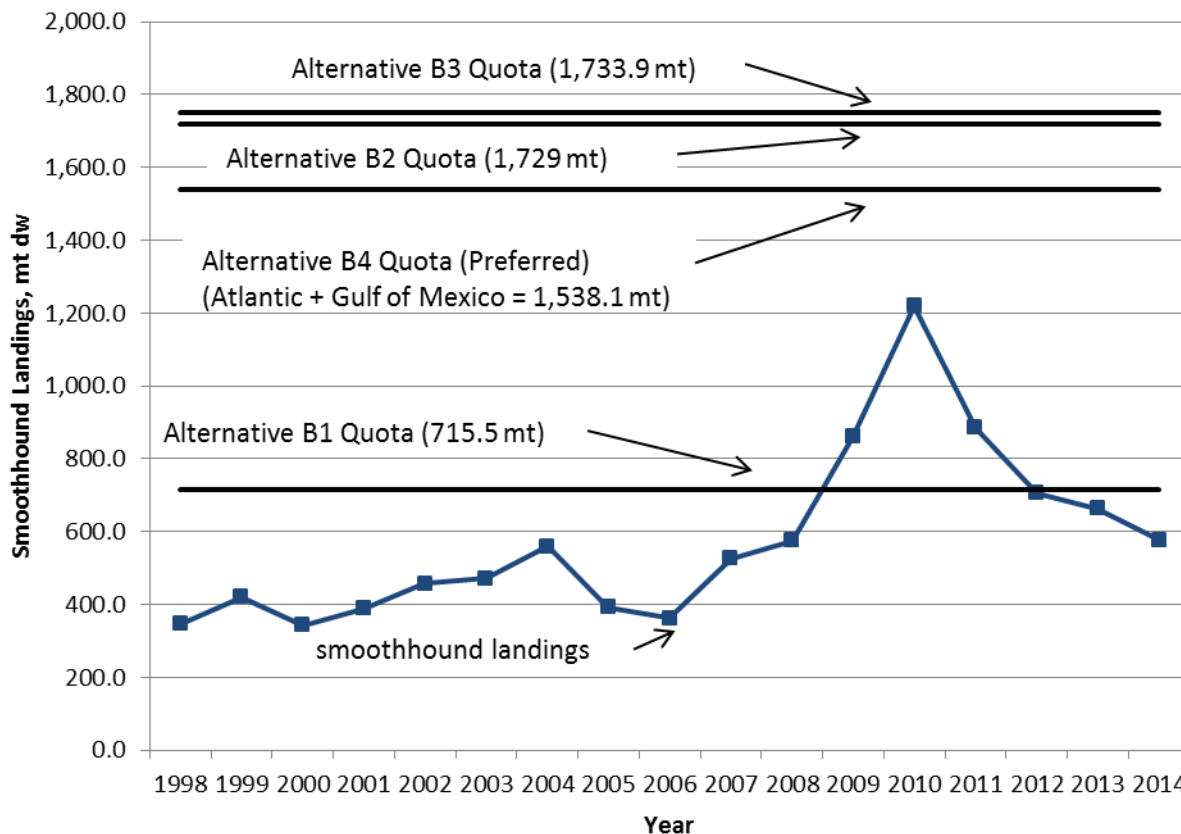


Figure 2.3 Four quota alternatives relative to recent smoothhound shark landings. Note that Alternative B4 is the sum of the Atlantic and Gulf of Mexico regional quotas; the quotas for the other alternatives would also apply to both regions but do not have a specific split between regions. Source: ACCSP Data Warehouse 1998-2014

2.3 BIOLOGICAL OPINION IMPLEMENTATION

The following four alternatives consider implementation of TC 4 contained in the 2012 Shark BiOp, which requires all Atlantic shark and smoothhound gillnet fishermen to either check their gear every 0.5 to 2.0 hours or soak their gear no longer than 24 hours. The Atlantic shark fishermen that

use gillnet gear are currently required, per a TC of the 2001 BiOp on the Atlantic HMS fisheries, to conduct net checks every 0.5 to 2 hours to look for and remove any protected species including sea turtles and marine mammals.

Alternative C1: No Action. Do not take further action to implement TC 4 in the smoothhound shark fishery

Under Alternative C1, NMFS would not implement TC 4 regarding net checks or a 24 hour maximum soak time in the Atlantic shark and smoothhound shark fisheries. This alternative would maintain status quo, which means gillnet fishermen with an Atlantic directed shark limited access permit would be required to conduct net checks every 0.5 to 2 hours.

Alternative C2 Require smoothhound shark gillnet fishermen to conduct net checks every 0.5 to 2 hours to look for and remove any sea turtles, marine mammals, smalltooth sawfish, or Atlantic sturgeon found in the net

Under Alternative C2, NMFS would require gillnet fishermen with a federal smoothhound shark permit to conduct net checks every 0.5 to 2 hours to look for and remove any sea turtles, marine mammals, smalltooth sawfish, or Atlantic sturgeon found in the net. In other words, under this alternative, all shark fishermen, including smoothhound shark fishermen, would be required to conduct net checks every 0.5 to 2 hours.

Alternative C3 Establish a gillnet soak time limit of 24 hours for smoothhound shark permit holders; fishermen holding both a directed Atlantic shark limited access permit and a smoothhound shark permit must abide by both soak time restrictions and net check requirements

Under Alternative C3, NMFS would require gillnet fishermen with a federal smoothhound shark permit to limit the soak time of gillnet gear to 24 hours to detect and release any incidentally taken ESA-listed species in a timely manner. Gillnet fishermen with an Atlantic directed shark limited access permit would still be required to conduct net checks every 0.5 to 2 hours. If a gillnet fishermen holds both an Atlantic directed shark limited access permit and a smoothhound shark permit, they must abide by both the 0.5 – 2 hour net check requirement and the 24 hour maximum soak time limit requirement.

Alternative C4 *Establish a soak time limit of 24 hours for sink gillnet gear and a 0.5 to 2 hour net check requirement for drift gillnet gear in the Atlantic shark and smoothhound shark fisheries – Preferred Alternative*

Under Alternative C4, the preferred alternative, NMFS would require gillnet fishermen with either a federal Atlantic shark or smoothhound shark permit to limit soak times to 24 hours when

fishing with sink gillnet gear or require net checks every 0.5 to 2 hours if using drift gillnet gear to look for and remove any sea turtles, marine mammals, smalltooth sawfish, or Atlantic sturgeon found in the net. Sink and drift gillnet gear would be differentiated based upon the method of fishing. Drift gillnets would be defined as those that are unattached to the ocean bottom with a float line at the surface. Sink gillnet gear would be defined as those with a weight line that sinks to the ocean bottom, has a submerged float line, and is designed to be fished on or near the bottom. Under this alternative, the current net check requirement for Atlantic shark gillnet fishermen would be modified to be based on the type of gear being fished.

2.4 ATLANTIC SHARK GILLNET VESSEL MONITORING SYSTEM REQUIREMENTS

The following two alternatives consider a change to the existing Atlantic shark gillnet VMS requirements.

Alternative D1: No Action. Do not change VMS requirements for federal directed shark permit holders with gillnet gear on board.

Under Alternative D1, NMFS would not change VMS requirements for federal directed shark permit holders with gillnet gear on board. Vessels holding a directed Atlantic shark commercial fishing permit with gillnet on board would continue to be required to use VMS regardless of vessel location.

Alternative D2 *Require federal directed shark permit holders with gillnet gear on board to use VMS only in the Southeast U.S. Monitoring Area, pursuant to Atlantic Large Whale Take Reduction Plan requirements – Preferred Alternative*

Under Alternative D2, the preferred alternative, NMFS would modify the VMS requirements for federal directed shark permit holders with gillnet on board. Currently, vessels matching this description are required to use VMS regardless of vessel location. Alternative D2 would limit the VMS requirement to the Southeast U.S. Monitoring area (Figure 2.4), pursuant to ALWTRP requirements at 50 CFR 229.32 (h).

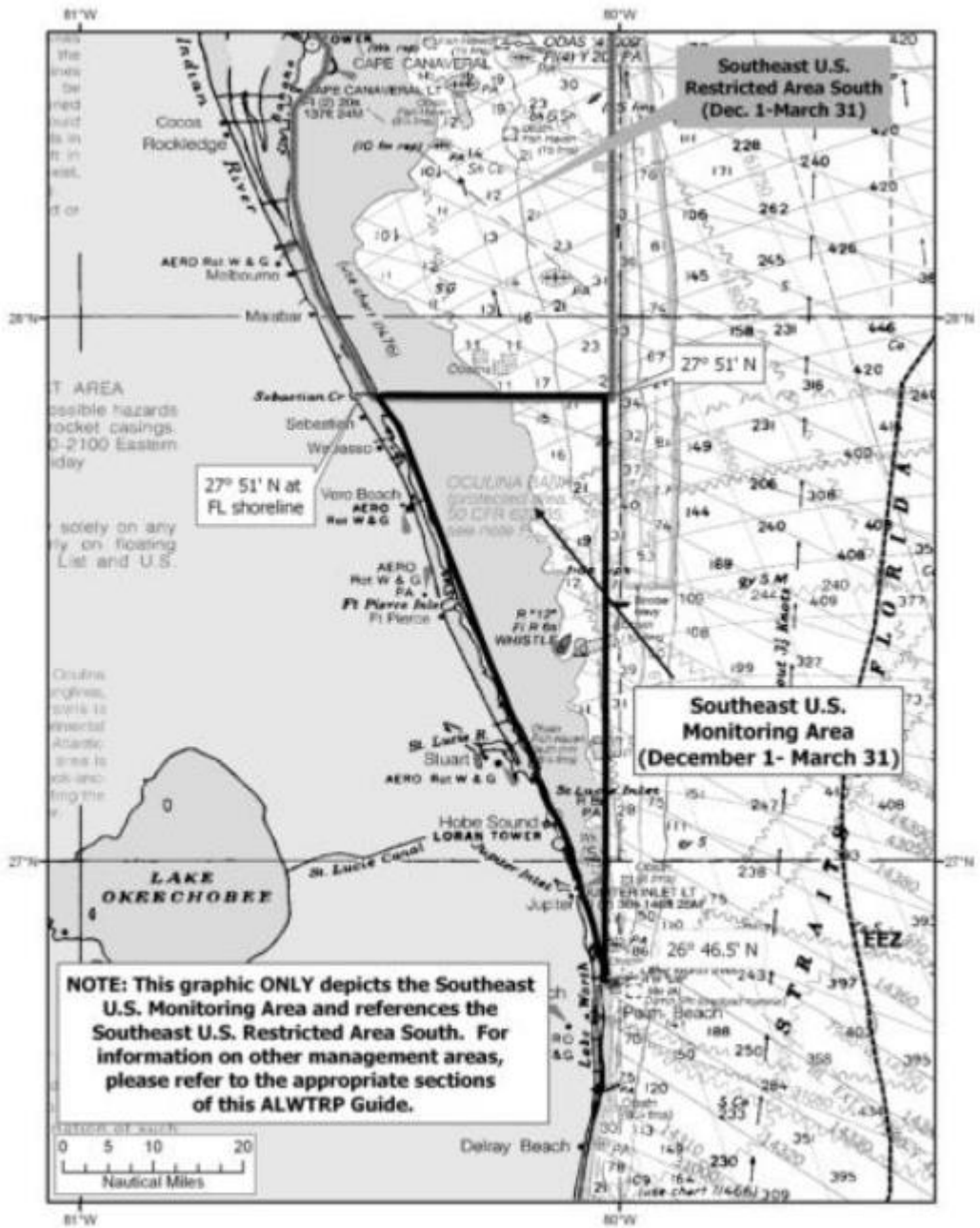


Figure 2.4 Southeast U.S. Monitoring Area; Source: Guide to the Atlantic Large Whale Take Reduction Plan, NOAA Fisheries

2.5 ALTERNATIVES CONSIDERED BUT NOT FURTHER ANALYZED

This section includes alternatives NMFS considered but decided not to further analyze because the alternatives did not meet the screening criteria, as described below.

Alternative E1: Require VMS if removing smooth dogfish fins at sea

Alternative E1 would require fishermen to purchase and install VMS units if they remove smooth dogfish fins while at sea to ensure that they are fishing only within the 50 nm area from Maine through Florida as specified in the smooth dogfish-specific provisions of the SCA. However, most smooth dogfish fishing occurs on the border between state and federal waters in the mid-Atlantic region and very little smooth dogfish fishing occurs outside of 50 nm or in the Gulf of Mexico. VMS units typically cost in excess of \$2,500, not including installation. Due to the low value of smooth dogfish product, profits from smooth dogfish fishing trips are often low; average annual smooth dogfish revenue across the entire fishery is \$9,083 per vessel (Section 3.6.2). The extra expense of VMS units could make the fishery less profitable without any conservation benefit, although some fishermen are required to have a VMS as a condition of other permits and would not be impacted. This is inconsistent with NS7 which requires “conservation and management measures [to], where practicable, minimize costs and avoid unnecessary duplication,” and thus does not meet the screening criteria. Since this alternative would not result in any ecological advantages at this time but would place a burden on smooth dogfish fishermen that are not already required to have VMS per other regulations, it was considered but not further analyzed.

Alternative E2: Require VMS if retaining smooth dogfish

Under Alternative E2, a vessel must carry and operate an approved VMS unit to catch and retain smooth dogfish. A VMS unit would be required regardless of smooth dogfish landing condition. VMS units typically cost in excess of \$2,500, not including installation. Due to the low value of smooth dogfish product, profits from smooth dogfish fishing trips are often low; average annual smooth dogfish revenue across the entire fishery is \$9,083 per vessel (Section 3.6.2). The extra expense of VMS units could make the fishery less profitable without any conservation benefit, although some fishermen are required to have a VMS as a condition of other permits and wouldn't be impacted. This is inconsistent with NS7 which requires “conservation and management measures [to], where practicable, minimize costs and avoid unnecessary duplication,” and thus does not meet the screening criteria. Since this alternative would not result in any ecological advantages but would place a burden on smooth dogfish fishermen, it was considered but not further analyzed.

Alternative E3: Require vessels to declare intent to embark on a trip where they would remove smooth dogfish fins at sea

Alternative E3 would require fishermen to contact NMFS and declare their intention to embark on a trip where smooth dogfish fins would be removed while at sea. The vessel would

continue to operate under this declaration until the vessel operator calls in to cancel or modify the declaration. This could help target enforcement efforts. If an enforcement agent finds detached fins on board a vessel that has not declared this intent, the violation would be detectable. If enforcement decides to check a vessel that has declared this intent to ensure that only smooth dogfish (and no other sharks) were processed at sea, it would be easier to locate the vessel and meet it at the dock. It is possible that this alternative would likely have minor negative socioeconomic impacts because it would impose an extra burden and require extra planning time that could be spent on other, fishing-related activities. Dock-side and at-sea enforcement would still be effective without this requirement since those fishermen removing smooth dogfish fins at sea must have a federal smoothhound shark permit. Additionally, smooth dogfish shark carcasses can be differentiated from other, non-smoothhound sharks (see Mitigating Measures, Section 5.1) and the smooth dogfish fishery is largely guided by water temperature and the geographic location of the fishery will often be easily identified at any one time. For these reasons, NMFS has determined that the need for fishermen to declare their intent to remove smooth dogfish fins at sea is unnecessary and therefore this alternative was considered but not further analyzed.

3.0 AFFECTED ENVIRONMENT

This chapter serves several purposes. It describes the affected environment (the fishery, the gears used, the communities involved, *etc.*) and describes the current condition of the fishery, which serves as a baseline against which to compare potential impacts of the different alternatives. This chapter also provides a summary of information concerning the biological status of shark stocks; the marine ecosystems in the fishery management unit; the social and economic condition of the fishing interests, fishing communities, and fish processing industries; and, the best available scientific information concerning the past, present, and possible future condition of shark stocks, ecosystems, and fisheries.

3.1 BIOLOGY AND LIFE HISTORY OF SMOOTHHOUND SHARKS

As detailed in Section 1.2, smooth dogfish, Florida smoothhound, and Gulf smoothhound would, in most instances, be managed as a single smoothhound shark complex because identification among these species is difficult, and all three species' range overlap in the Gulf of Mexico. At this time, the primary commercial fishery for smoothhound sharks occurs in the Mid-Atlantic area and is composed exclusively of smooth dogfish. For this reason, most information on smoothhound sharks is limited to smooth dogfish. Nevertheless, available information for all three smoothhound shark species is provided separately in this chapter.

3.1.1 SMOOTH DOGFISH

Smooth dogfish are a common coastal shark species found in the Atlantic Ocean from Massachusetts to northern Argentina. They are primarily demersal sharks that inhabit continental shelves and are typically found in inshore waters down to 200m depth (Compagno, 1984). Early studies on movement patterns found that smooth dogfish are nocturnal (Casterlin and Reynolds, 1979). Smooth dogfish is a migratory species that responds to changes in water temperature. They primarily congregate between southern North Carolina and the Chesapeake Bay in the winter. In the spring, smooth dogfish move along the coast when bottom water warms up to at least 6 to 7°C. As temperatures get colder, they move offshore to their wintering areas (Compagno, 1984). Figure 3.1 and Figure 3.2 show the distribution of smooth dogfish along the Atlantic Coast by month and season, respectively. These figures were taken directly from a SEDAR 39 Data Workshop Working Paper (S39-DW-28) and original references can be found in the caption under Figure 3.1.

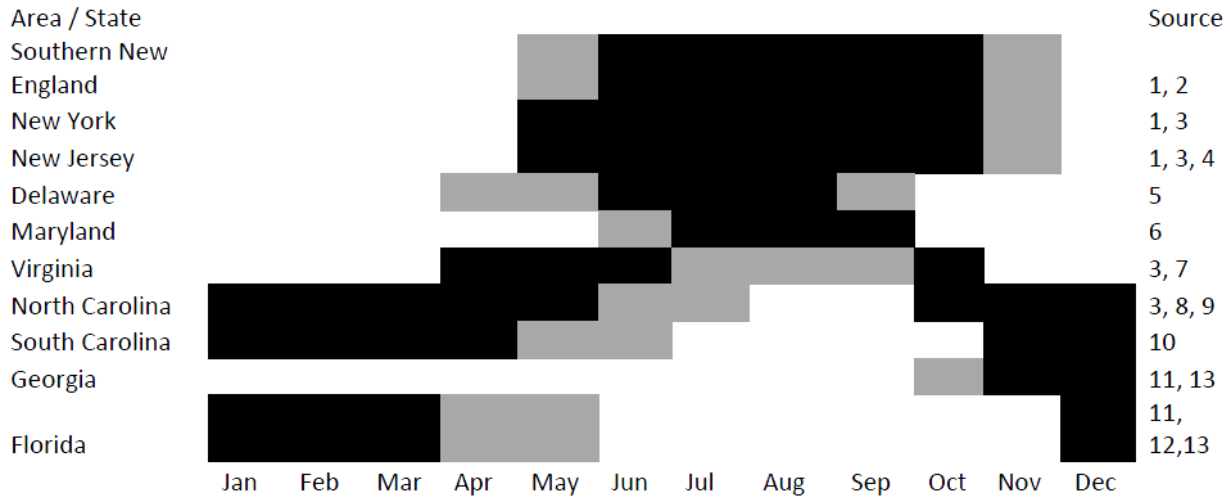


Figure 3.1 Seasonal distribution of *Mustelus canis* along the East coast of the United States. Months highlighted indicate presence while those in black represent peak abundance. References: 1. Bigelow and Schroeder (1948), 2. Skomal (2007), 3. NMFS Commercial Landings Database, 4. Rountree and Able (1996), 5. C. McCandless, personal communication, 6. Schwartz (1964), 7. Grubbs and Musick (2007), 8. UNC Longline Shark Database, 9. Jensen and Hopkins (2001), 10. Ulrich et al. (2007), 11. C. Belcher, personal communication, 12. Gelsleichter, personal communication. 13. Kohler et al. (2014)

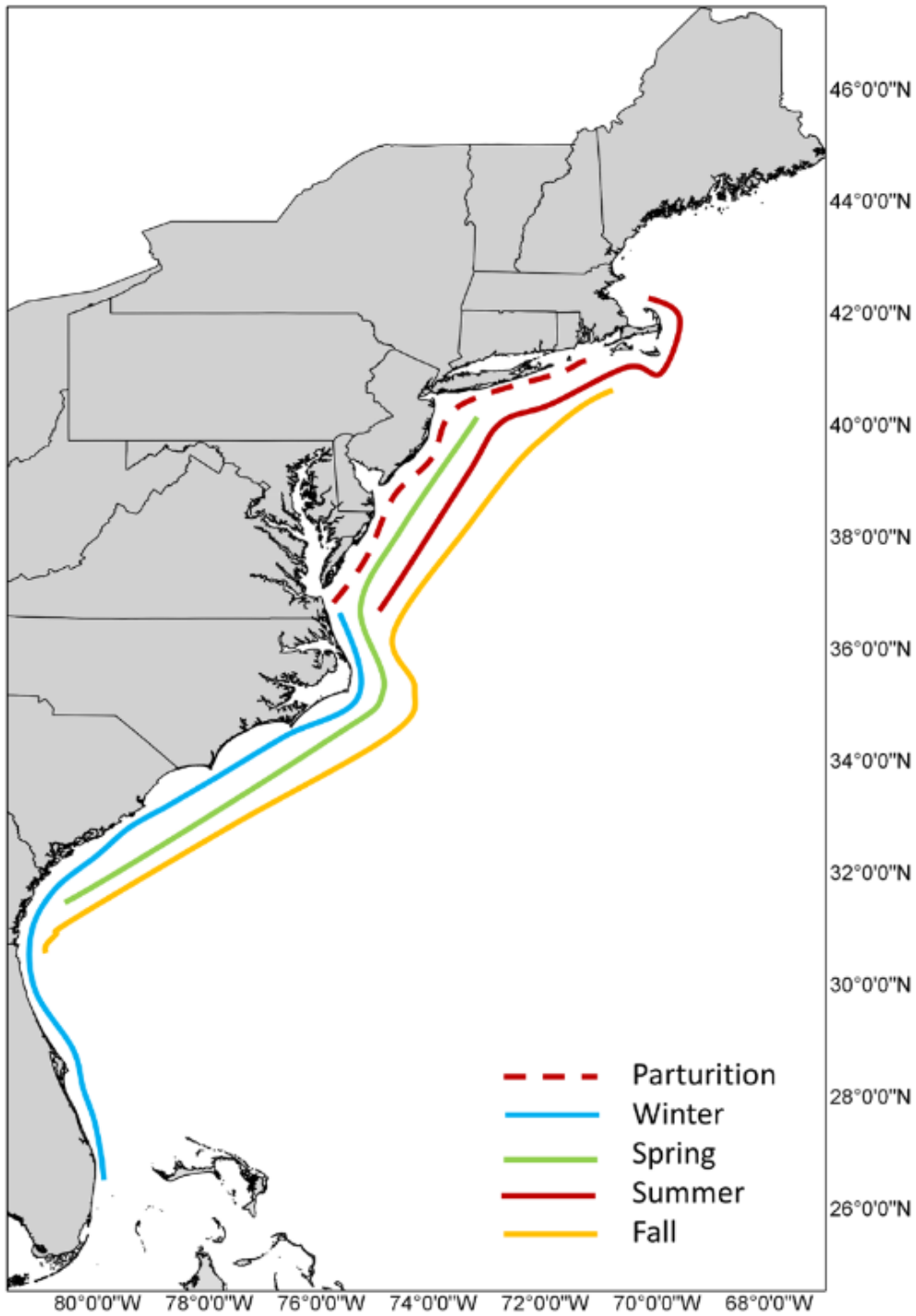


Figure 3.2 Seasonal distribution pattern of smooth dogfish along the East coast of the United States. Winter (Blue) is the distribution from December to February. Spring (Green) is the distribution from March through May. Summer (Red) is the distribution from June through August. Fall (Orange) is the distribution from September through November.

Smooth dogfish have diets that are dominated by invertebrates (Figure 3.3; Scharf *et al.*, 2000). They primarily feed on large crustaceans, consisting mostly of crabs (Gelsleichter *et al.*, 1999), but also rely heavily on American lobsters (Boudreau and Worm, 2010). In the New England waters during the spring, smooth dogfish feed on small bony fish, including menhaden, stickleback, wrasses, porgies, sculpins, and puffers (Compagno, 1984). In shallow, coastal mid-Atlantic waters smooth dogfish primarily feed on invertebrates (brachyuran and anomuran crabs, polychaetes and bivalves), although teleost fish (anchovies, Sciaenids, and *Paralichthys* spp) may also constitute a small part of the diet (Woodland *et al.*, 2011).

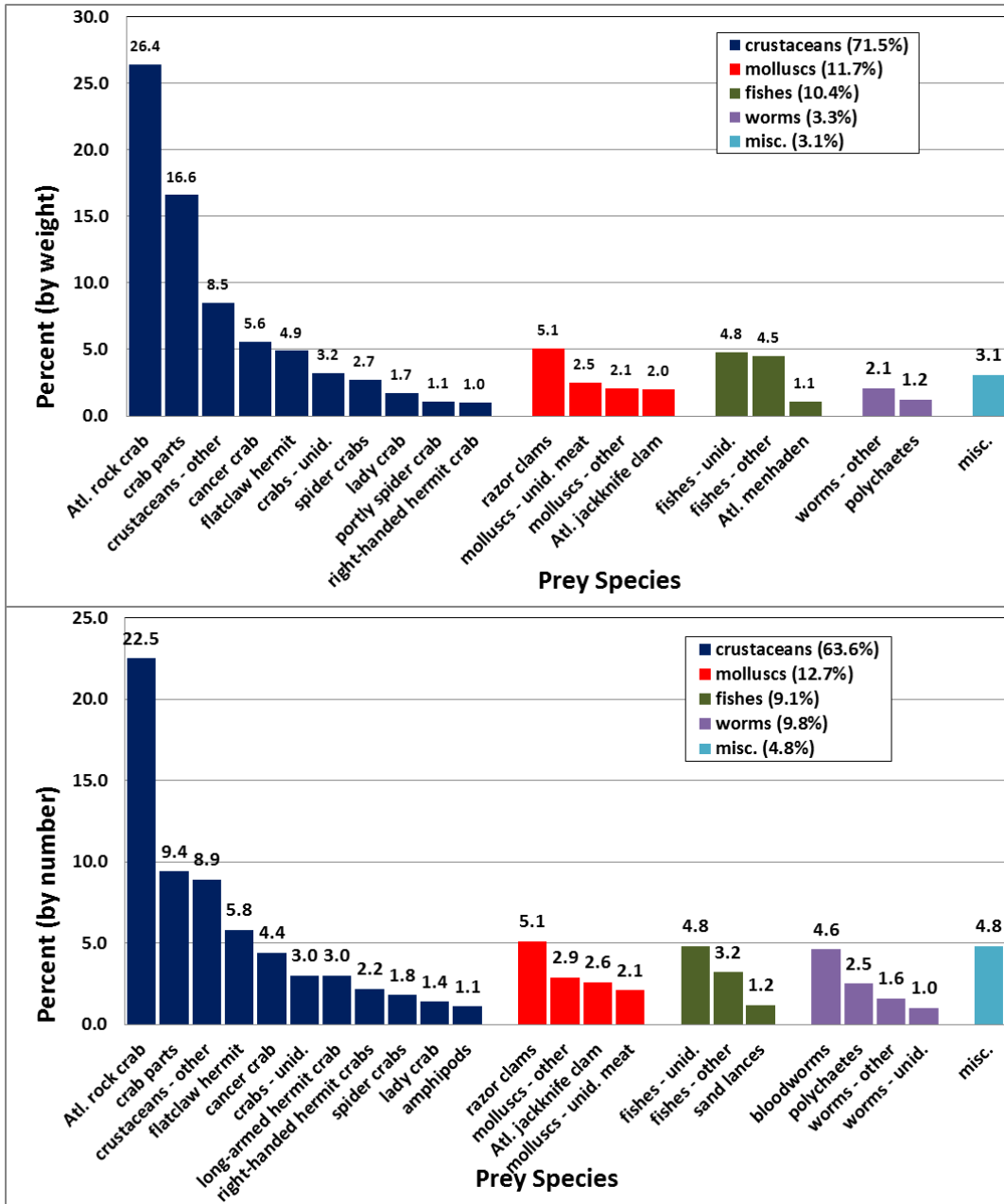


Figure 3.3 Diet analysis of coastal populations of smooth dogfish sampled in spring and fall NEAMAP trawl surveys; Source: C. Bonzak, NEAMAP, VIMS

The maximum size smooth dogfish can reach is approximately 150 cm total length (TL). Males mature at 2-3 years old (about 82 cm TL) and females mature between 4-7 years old, which is about 90 cm TL (Compagno, 1984; Conrath *et al.*, 2002). The length at 50 percent maturity for females is 102 cm TL, while males reach 50 percent maturity at 86 cm TL. NEAMAP spring and fall trawl survey data imply that coastal populations are primarily made up of large numbers of immature

and mature males (Figure 3.4). Fall surveys imply a more even ratio of immature males:females and mature males:near mature females. In both years, most of the largest number of smooth dogfish sampled was female. Female smooth dogfish have an 11–12 month gestation period with mating occurring between May and September. The fecundity of smooth dogfish ranges between 3 and 18 pups per litter (Conrath and Musick, 2002). The size range at birth is between 28 and 39 cm (Rountree and Able, 1996). Marsh creeks may be particularly important to newborn smooth dogfish during June and July. Young-of-year (YOY) pups grow rapidly in these areas to a size of 55-70 cm TL, prior to migration from the estuaries by the end of October. The abundance of YOY within estuaries strongly suggests that estuaries are critically important nursery habitats for smooth dogfish within the Mid-Atlantic Bight (Rountree and Able, 1996). The works cited in this paragraph were also used in the SEDAR 39 smoothhound shark stock assessments.

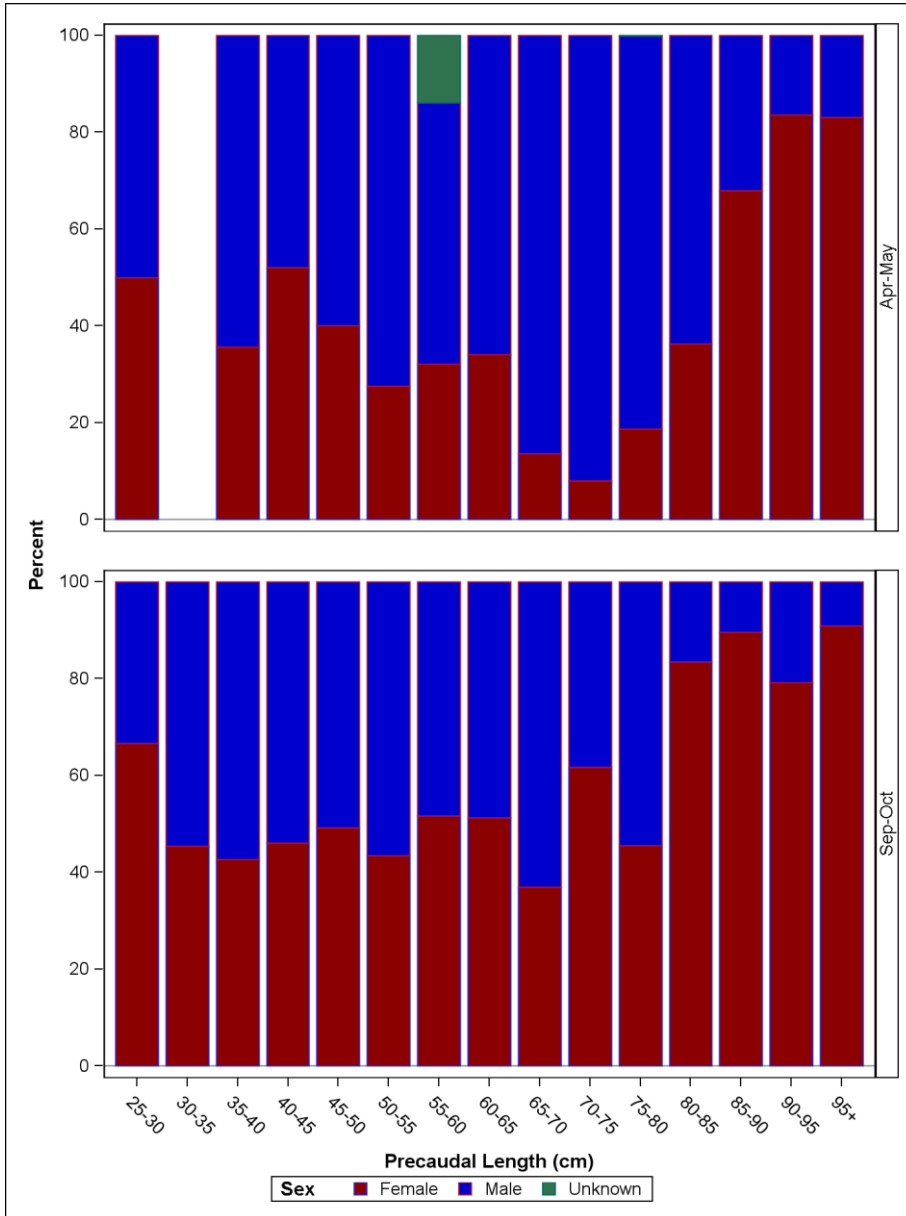


Figure 3.4 Sex ratios of coastal smooth dogfish by length category sampled in spring and fall NEAMAP trawl surveys. Source: C.Bonzak, NEAMAP, VIMS

3.1.2 FLORIDA SMOOTHHOUND AND GULF SMOOTHHOUND

Life history information about Florida smoothhound and Gulf smoothhound are not as readily available as that for smooth dogfish. It is likely that all three share some life history traits, though some differences in specific habitat and prey preference exist. Gulf smoothhound can be found

throughout the Gulf of Mexico from South Florida to South Texas. Florida smoothhound is primarily found in the eastern Gulf of Mexico (Jones, et al. 2014).

During the SEDAR 39 Data Workshop, available data for Florida smoothhound and Gulf smoothhound were gathered and summarized. Data sources included NMFS Mississippi Laboratories Longline Surveys, Florida State University Coastal and Marine Lab Shark Survey (FSUCML), Texas A&M Department of Biology, Texas Parks and Wildlife, University of North Florida, published literature, and museum specimens. It was found that the oldest observed female Florida smoothhounds and Gulf smoothhounds were 6 years and 14 years old, respectively. For males, the oldest observed Florida smoothhounds and Gulf smoothhounds were 9 years and 13 years old, respectively. Brood size for Florida smoothhound ranged from 6-14 individuals, with a mean of 11.3. Brood size for Gulf smoothhound ranged from 3-10 individuals with a mean of 5.

3.2 SMOOTHHOUND HABITAT

When finalizing Amendment 3, available information was insufficient for the identification of essential fish habitat (EFH) for smoothhound neonates, juveniles and adults; therefore all life stages were combined in the EFH designation. Similarly, due to misidentification, particularly in the Gulf of Mexico, separate EFH designations for each of the three smoothhound shark species are not possible at this time. On June 29, 2015, NMFS published a final 5-year review of EFH for Atlantic HMS (80 FR 36974). The purpose of the review was to gather all new information and determine whether modifications to existing EFH descriptions and delineations are warranted. Based on the review and public comment, NMFS determined that new information warrants the initiation of an amendment to revise EFH components found in Amendments 1 and 3 to the 2006 Consolidated HMS FMP, and the 2010 White Marlin/Roundscale Spearfish Interpretive Rule and Final Action. During the FMP amendment process, NMFS will apply any new and appropriate information including, but not limited to, observer data, survey data, logbook information, and tag/recapture data that are available for all HMS. Specifically for smoothhound sharks, the review found that recent studies do not support updating EFH boundaries. However, NMFS will update smoothhound shark EFH boundaries based on new observer, survey, and tag/recapture data since 2009. If any changes to the regulations are also needed, NMFS will issue proposed and final rules with public comment.

Refer to Amendment 3 for a full description of the EFP designations for smoothhound sharks. During Amendment 3, NMFS used smoothhound shark encounter data from a variety of fishery independent surveys conducted along the U.S. east and gulf coasts (Figure 3.5) to generate EFH boundaries. The EFH boundaries are based on the 95 percent probability boundary using ESRI ArcGIS and Hawth's Analysis Tools (www.spatial ecology.com) (Figure 3.6). The probability boundary was created by taking all of the available distribution points for the species at all life stage and creating a percent volume contour (PVC or probability boundary). A detailed description of the tool and the analytical approach used to create the boundary is provided in Amendment 1 to the 2006 Consolidated Atlantic HMS FMP. The probability boundary takes into account the distance between each point and the next nearest point, thereby excluding the least dense points (outliers) where the

species occurred in relatively low numbers. The 95 percent probability boundary would include, on average, 95 percent of the points used to generate the probability boundary. Note that the specific EFH boundaries are the edited (i.e., clipped) 95 percent probability boundaries. In some areas the 95 percent probability boundary overlapped with the shoreline due to buffers that are created while generating the probability boundaries. The EFH was further adjusted by including specific areas deemed important through a primary literature review.

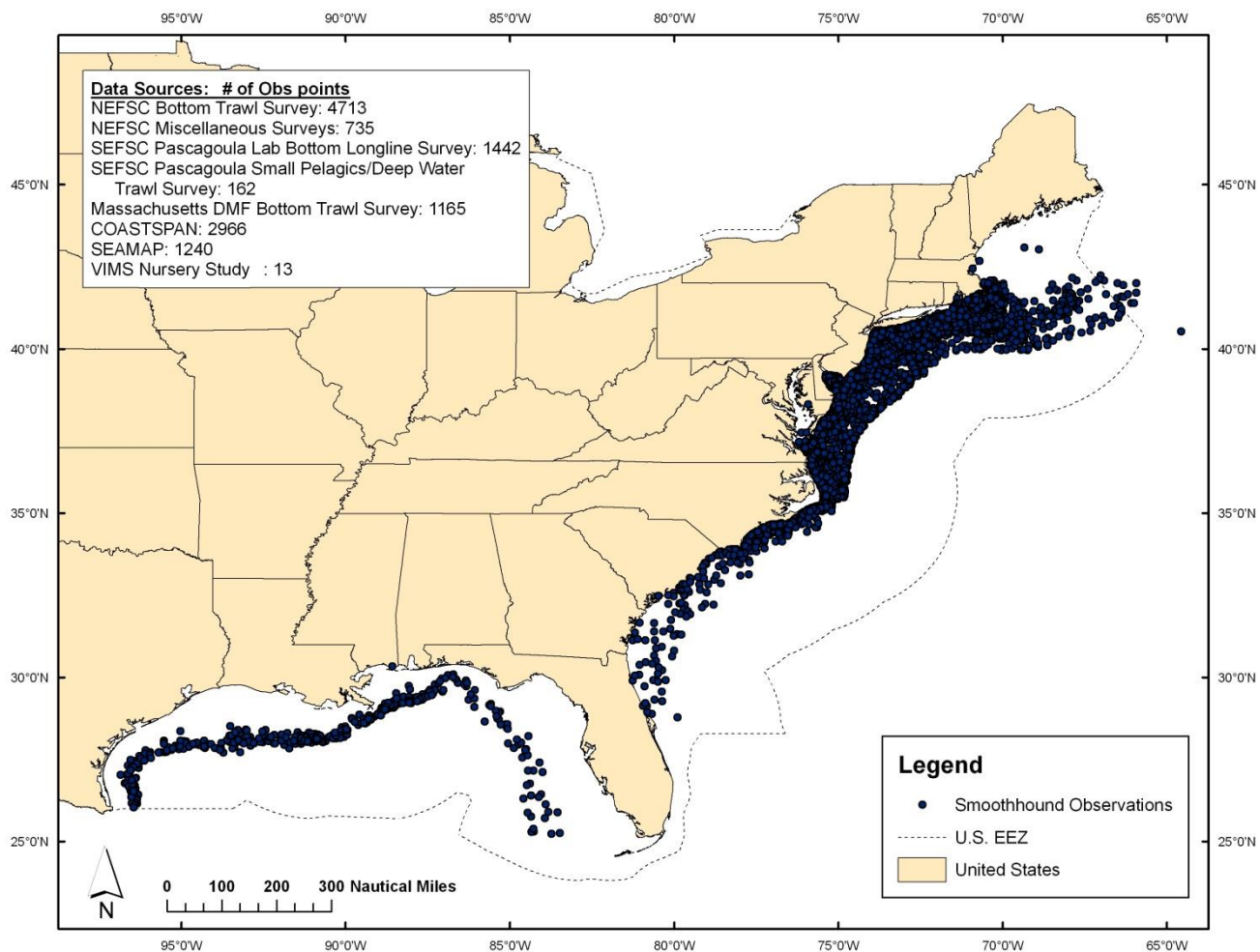


Figure 3.5 Smoothhound shark observations from fishery-independent surveys; Data sources: SEFSC, COASTSPAN, SEAMAP, VIMS Nursery Study

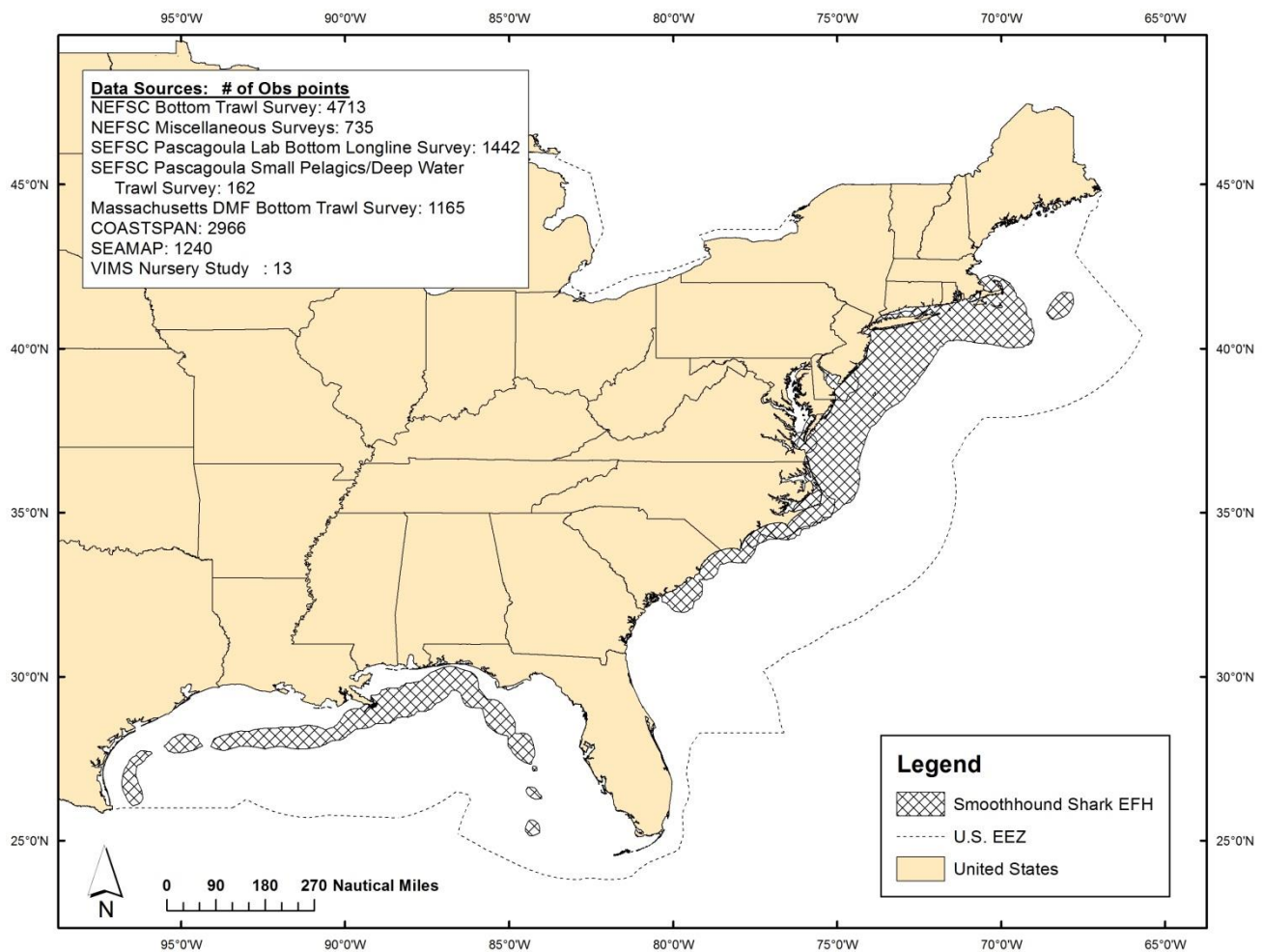


Figure 3.6 Smoothhound shark EFH designation based on fisheries independent surveys. Note: all life stages combined. EFH identified in the Atlantic is primarily that of smooth dogfish. EFH identified in the Gulf of Mexico is for all three smoothhound shark species.

3.3 STOCK STATUS OF SMOOTHHOUND SHARKS

Before publication of the Draft EA, a stock assessment for smoothhound sharks was not available. For this reason, the stock status discussion in the Draft EA focused on comparing available abundance indices with landings data. Since then, the SEDAR 39 smoothhound shark stock assessments have been finalized, thus, the stock status discussion in this Final EA summarizes those results.

The SEDAR 39 smoothhound shark stock assessments were conducted as benchmark assessments and included data through 2012. Data from tagging and genetic research in the SEDAR

39 assessment support the existence of two distinct Atlantic and Gulf of Mexico stocks of smooth dogfish separated by peninsular Florida. Therefore, the assessment recommended, and the peer reviewers agreed, that smooth dogfish be treated as two separate stocks, one in the Atlantic region and one in the Gulf of Mexico region. Because smooth dogfish are the only species of smoothhound sharks occurring in the Atlantic region, the scientists recommended, and the peer reviewers agreed, conducting a stock assessment for only this species in the Atlantic region. However, given the difficulty with identifying the individual species of smoothhound sharks occurring in the Gulf of Mexico region, the scientists recommended, and the peer reviewers agreed, that all three smoothhound species (smooth dogfish, Florida smoothhound, and Gulf smoothhound) be treated as a single smoothhound shark complex within the Gulf of Mexico region.

These stocks had not been previously assessed, so status is unknown. Under the 2006 Consolidated HMS FMP, a species is considered “overfished” when the current biomass (B), or proxy, is less than the minimum stock size threshold ($B < B_{MSST}$). The minimum stock size threshold (MSST) is determined based on the natural mortality of the stock and the biomass at maximum sustainable yield (B_{MSY}). Maximum sustainable yield (MSY) is the maximum long-term average yield can be produced by a stock on a continuing basis. The biomass can be lower than B_{MSY} and the stock not be declared overfished as long as the biomass is above B_{MSST} . “Overfishing” is occurring when the current fishing mortality (F), or proxy, exceeds the fishing mortality at MSY (F_{MSY}) ($F > F_{MSY}$).

Atlantic region

For Atlantic smooth dogfish, the scientists used a length-based age-structured stock assessment model (stock synthesis). This was the first HMS shark stock assessment conducted within the SEDAR process to utilize this type of modeling framework. The Atlantic smooth dogfish assessment implemented spawning stock fecundity (SSF) (which was used as a proxy for biomass), natural mortality (M), steepness of the Beverton-Holt stock-recruitment relationship, and the selectivity patterns using the same methods as in previous HMS shark assessment.

Two selectivity patterns were explored for the main targeted gillnet fishery (dome-shaped and asymptotic). The use of these two selectivity patterns resulted in two alternative base model configurations being evaluated. Based on diagnostic results, the scientists recommended that the dome-shaped functional form be selected as the base model. The peer reviewers found this base model to be an appropriate methodology.

For this base model, the stock assessment scientists explored seven sensitivity scenarios. All seven model runs found that SSF in 2012 (SSF_{2012}) was greater than SSF_{MSY} (SSF_{2012}/SSF_{MSY} ranged from 1.96 to 2.81 vs. 2.29 in the base model) and that F_{2012} was less than F_{MSY} (F_{2012}/F_{MSY} ranged from 0.61 to 0.99 vs. 0.79 in the base model). Projection results for the base model configuration indicated that levels of fixed removals less than or equal to 550 (1000s of sharks) resulted in at least a 70 percent probability of maintaining SSF above SSF_{MSY} during the years 2013 – 2022. Projections for the seven sensitivity scenarios resulted in a range of fixed removals from 350 to 850 (1000s of

sharks) with at least a 70 percent probability of maintaining SSF above SSF_{MSY} during the years 2013 – 2022.

For the Atlantic smooth dogfish stock, the peer reviewers found it is likely that the stock is not overfished, and overfishing is not occurring based on the base model and range of associated sensitivities. The peer reviewers indicated that the range of sensitivities appropriately captured the uncertainty regarding the states of nature and the potential implications for the reference points. However, they cautioned about inferences drawn about stock status because of the level of uncertainty associated with the stock-recruitment relationship and uncertainty in the catches, and noted that the fishing level for the most recent year is close to F_{MSY} for some sensitivity runs. Overall, the peer reviewers determined the stock assessment to be based on the best scientific information available.

Gulf of Mexico region

The model structure for the Gulf of Mexico smoothhound shark complex was different than the Atlantic stock of smooth dogfish because of the need to combine life history data for all three species. The scientists combined these data using a life table to calculate the mid-point biological values between the species. They then used a state-space Bayesian surplus production model that implemented a Schaefer production model in a Bayesian framework. The peer reviewers found this model to be appropriate and robust. The reviewers noted issues could occur if the biology and population dynamics differed significantly but they did not believe this was an issue for the current assessment.

In addition to the base model, the assessment scientists ran a number of sensitivities. All sensitivities found that the number of sharks in 2012 (N_{2012}), which was the proxy used for biomass for this model, was greater than N_{MSY} (N_{2012}/N_{MSY} ranged from 1.68 to 1.83 vs. 1.78 in the base model) and the exploitation rate in 2012 (H_{2012}), which was the proxy used for fishing mortality in this model, was less than H_{MSY} (H_{2012}/H_{MSY} ranged from 0.07 to 0.35 vs. 0.18 in the base model). Projections under varying catch levels conducted with the base model and sensitivities reflecting plausible states of nature, except the low catch scenario which was not deemed plausible, indicated that the 2012 catch could be increased by a factor of 4 and still allow for less than a 30 percent probability of the stock being overfished during any of the 10 years in the projection horizon. Similarly, the projected scenarios indicated that the 2012 catch could be increased by a factor of 2, 3, or 4 and still allow for less than a 30 percent probability of overfishing occurring during any of the 10 years in the projection horizon.

For the Gulf of Mexico smoothhound shark complex, the peer reviewers found the stock is most likely neither overfished, nor undergoing overfishing. The peer reviewers noted that the reliability of the stock status determination is dependent on the accuracy of the shrimp trawl bycatch estimates for these species and suggested that NMFS explore alternative catch streams to help assess this uncertainty. Nonetheless, the review panel believed that the model and associated sensitivities

captured the main uncertainties associated with the assessment. The review panel considered the base model and corresponding sensitivity runs the best scientific information available.

3.4 SMOOTHHOUND SHARK FISHERY DESCRIPTION

The commercial smoothhound shark fishery is composed of both fishermen who focus effort on smoothhound sharks at certain times of the year and fishermen who catch smoothhound sharks incidental to their other operations. At this time, the commercial fishery primarily catches smooth dogfish in the Mid-Atlantic region. Thus, the smoothhound shark fishery discussion in this chapter focuses on smooth dogfish. The species is caught in a variety of gears. Figure 3.7 shows a breakdown of landings by gear type.

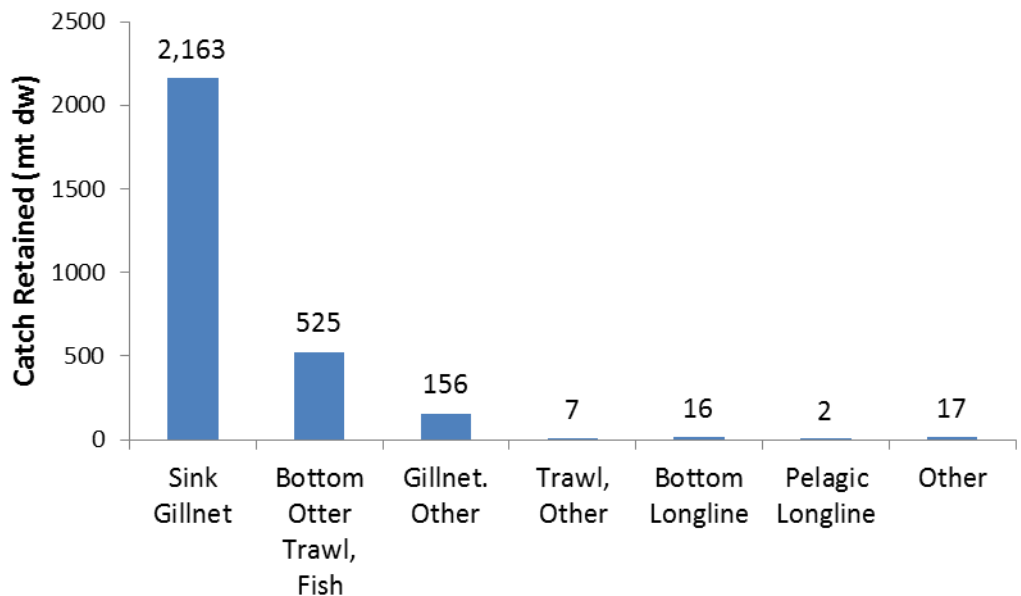


Figure 3.7 Smooth Dogfish Landings by Gear Type (2003-2014). Source: Vessel Trip Report (VTR) Data, 2003-2014

Figure 3.7 indicates that there are two primary gear types used to land smooth dogfish, sink gillnet and bottom otter fish trawl gear. Generally, fishermen use sink gillnet to target smooth dogfish, although the species is often caught incidentally in this gear as well. Bottom trawl catches smooth dogfish incidentally while directing effort on other species (as noted in Section 1.1, it will be illegal for trawl fishermen to target smooth dogfish once management measures go into effect, although limited retention will be allowed). The specifics of the sink gillnet and bottom trawl smooth dogfish fisheries are discussed in the following sections.

3.4.1 SINK GILLNET GEAR SMOOTH DOGFISH FISHERY

Figure 3.8 presents a trip-level analysis of sink gillnet trips that retained smooth dogfish. Each bar on the graph represents a range of values of percent smooth dogfish catch relative to total catch. Other species caught in sink gillnets include bluefish, croaker, spiny dogfish, monkfish, and skate (all species).

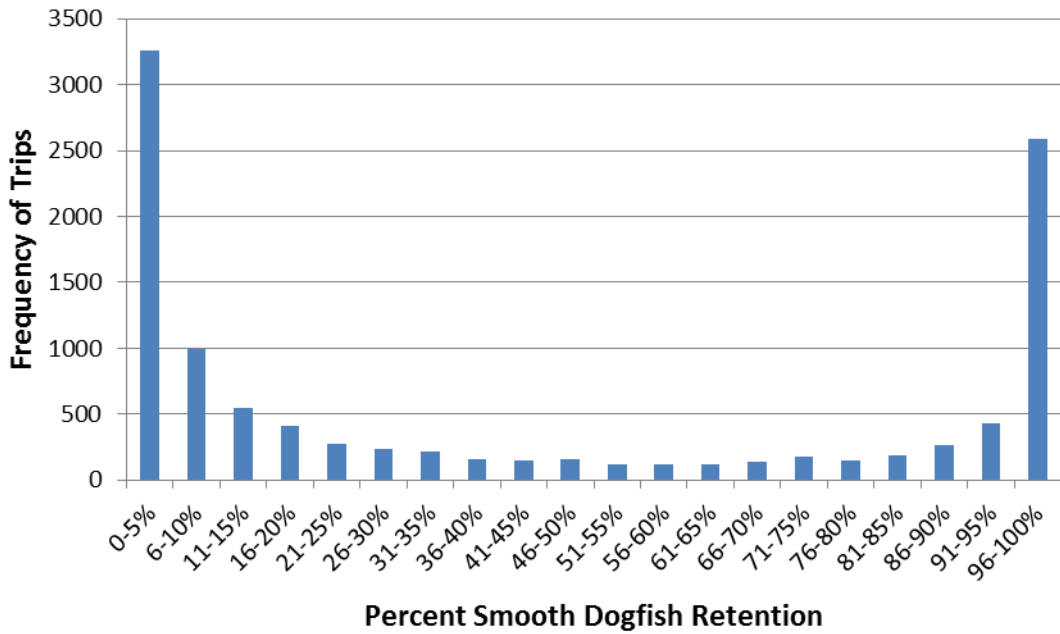


Figure 3.8 Frequency of sink gillnet trips retaining varying percentages smooth dogfish relative to total catch; Source: VTR Database 2003-2014

Trips that retain smooth dogfish caught in incidentally in gillnet gear can be seen toward the left-hand side of Figure 3.8, becoming more directed as you move to the right. As described in Section 4.1, NMFS believes that directed trips likely begin around 25 percent retained smooth dogfish catch. However, in the proposed rule, NMFS proposed that trips with greater than 75 percent smooth dogfish were directed trips as those trips account for the vast majority of landings, despite having a fewer number of trips. These “highliner” trips with at least 75 percent smooth dogfish relative to total catch are responsible for 81 percent of the total smooth dogfish retained catch between 2003 and 2014. Figure 3.9 shows the proportion of the total sink gillnet smooth dogfish landings attributed to trips with greater than or less than 75 percent retained smooth dogfish catch.

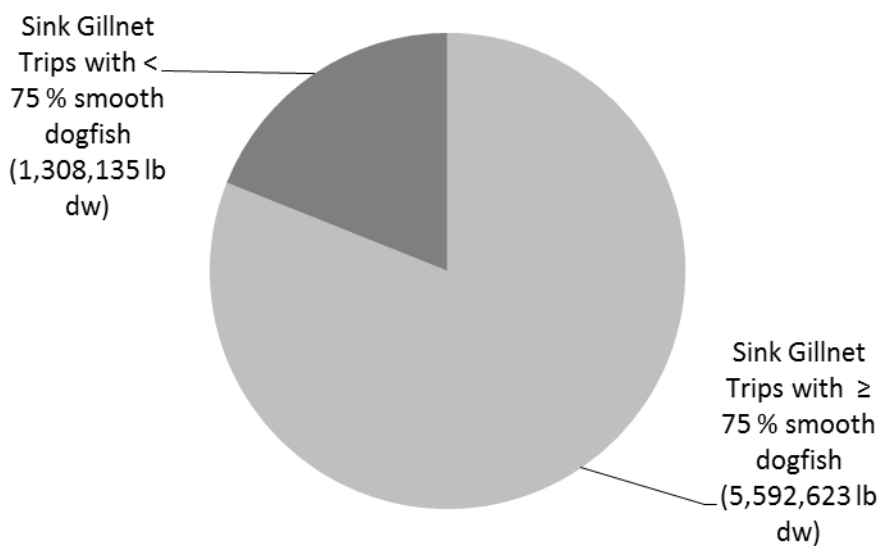


Figure 3.9 Proportion of smooth dogfish caught in trips greater than and less than 75 percent retained smooth dogfish catch in the sink gillnet fishery; Source: VTR Data, 2003-2014

Between 2003 and 2014, 10,707 sink gillnet trips that retained smooth dogfish were reported through vessel trip reports (VTR). These trips occurred aboard 241 different vessels. Of these vessels, only 83 retained an annual average of at least 1,000 lbs of smooth dogfish, and only 20 retained an annual average of at least 10,000 lbs of smooth dogfish between 2003 and 2014. Table 3.1 summarizes the total number of vessels and trips that land smooth dogfish caught in sink gillnet gear each year between 2003 and 2014. The table also lists the number of vessels, by year, with at least one trip landing greater than or equal to 25 percent smooth dogfish, by weight, relative to total catch. Additional landings data can be found in Section 3.5.

Table 3.1 Number of vessels and trips landing smooth dogfish in sink gillnet gear, by year; Source: VTR data, 2003-2014

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Number of Trips	590	633	548	677	626	550	878	1,184	1,207	1,237	1,282	1,295
Number of Vessels	58	58	56	71	69	68	83	95	94	97	91	87
Number of trips that landed \geq 25 % smoothhound	315	364	229	202	264	256	447	710	647	629	606	582
Number of vessels with a trip that landed \geq 25 % smoothhound	34	38	32	41	41	41	63	65	69	59	54	57

The smooth dogfish sink gillnet fishery is a mixed fishery with a large portion of trips catching and retaining a variety of other species. As shown in Figure 3.8, only a small portion of smooth dogfish sink gillnet trips land only smooth dogfish. Most trips land other species in varying amounts. Figure 3.10 shows a breakdown of other species caught on these trips, dominated by bluefish, croaker, and spiny dogfish. This figure also highlight the highly mixed nature of the fishery.

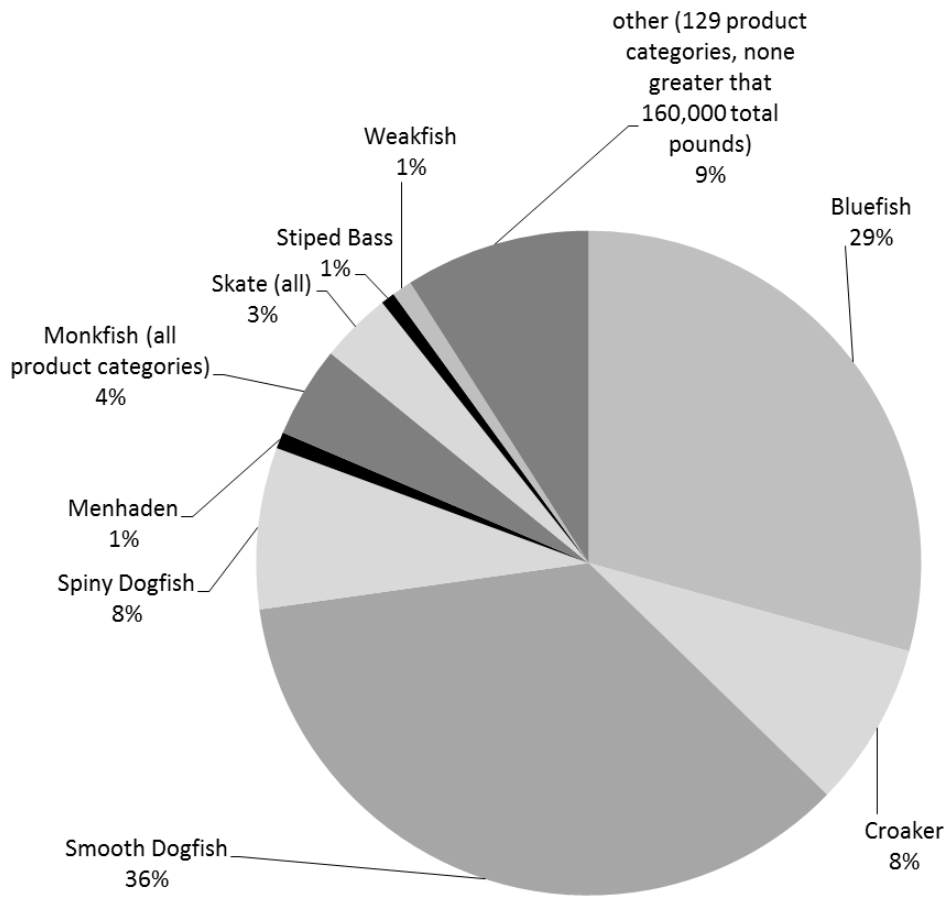


Figure 3.10 Species caught with smooth dogfish in sink gillnet gear, relative levels; Source - VTR data (2003 – 2014)

3.4.2 BOTTOM OTTER FISH TRAWL SMOOTH DOGFISH FISHERY

Bottom otter fish trawl gear typically only interacts with smooth dogfish incidentally. When retained, smooth dogfish usually make up only a fraction of the total retained catch by weight. Figure 3.11 presents a trip-level analysis of otter bottom fish trawl trips that retained smooth dogfish. Each bar on the graph represents a range of values of percent smooth dogfish catch relative to total catch. The line is an additive total of all trawl trips that retained smooth dogfish. The vast majority (80 percent) of trips had total retained catches consisting of 15 percent or less smooth dogfish by weight. As the percent smooth dogfish catch increases, the frequency of trips quickly drops.

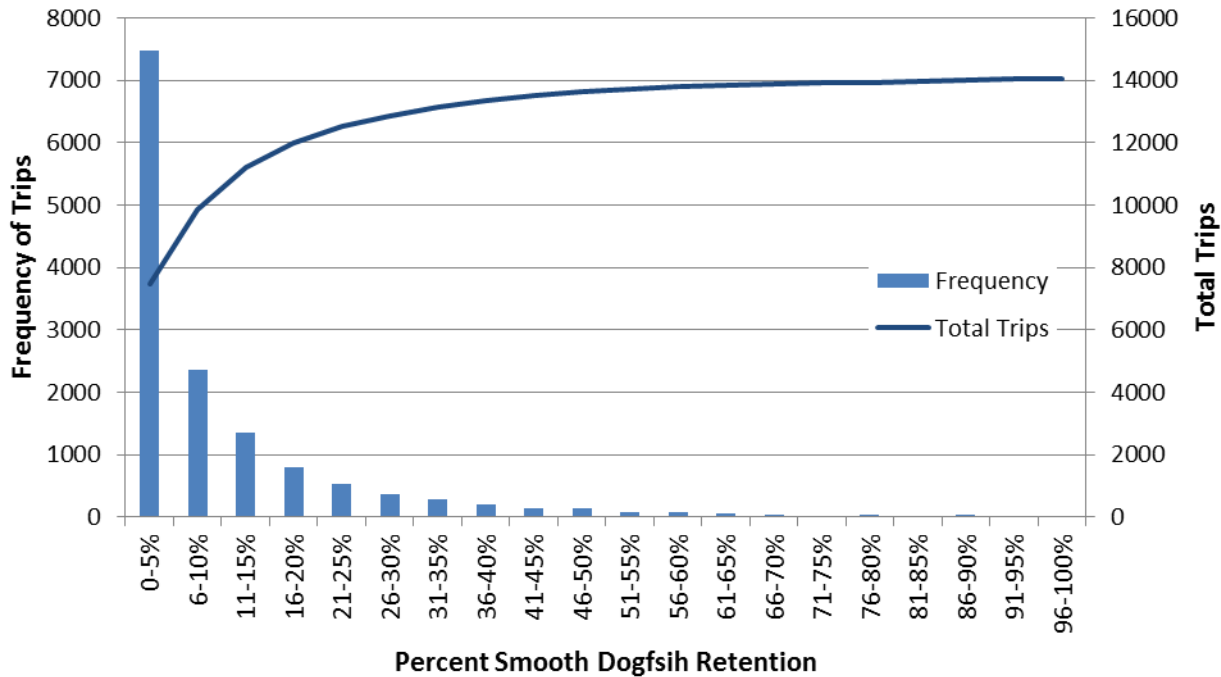


Figure 3.11 Frequency of otter bottom fish trawl trips retaining varying percentages smooth dogfish relative to total catch; Source: VTR Database 2003-2014

Although smooth dogfish are generally only caught incidentally in trawl gear, landings of the species caught in this gear are high due to the large number of trips and vessels involved in the fishery. Table 3.2 lists the number of vessels and trips catching smooth dogfish in bottom otter fish trawl gear per year. A large number of vessels catching the species on a large number of trips results in large annual landings. A few vessels show some consistency in catching smooth dogfish in trawl gear year to year, however, the majority does not appear to land the species consistently, indicative of an incidental fishery. From 2003-2014, a total of 251 vessels landed smooth dogfish that were caught in trawl gear, well above the maximum number of vessels in any one year.

Table 3.2 Number of vessels and trips landing smooth dogfish caught in trawl gear, by year. Source: VTR data, 2003-2014

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Number of Vessels	77	80	80	84	99	75	99	88	82	87	88	87
Number of Trips	1841	1794	1489	1485	1623	1109	1272	1323	1316	1343	1543	1362

Bottom trawl fisheries that are the most likely to incidentally catch smooth dogfish include the squid trawl and Mid-Atlantic bottom trawl fisheries. Figure 3.12 and Figure 3.13 highlight the seven targeted species most often caught along with smooth dogfish in otter bottom fish trawl gear. This graph utilizes VTR data queried to include all otter bottom fish trawl trips that caught smooth dogfish. All of the species caught on these trips were then amassed and the total for each species across all the trips was calculated. *Loligo* squid is the dominant target species with 32 percent of the trawl catch, followed by several other species routinely caught in the Mid-Atlantic bottom trawl fishery, including fluke (summer flounder), whiting (silver hake), croaker, scup, and skate. The “Other” category includes 100 species caught along with smooth dogfish, each of which separately constitutes less than three percent of the total catch from 2003 through 2014.

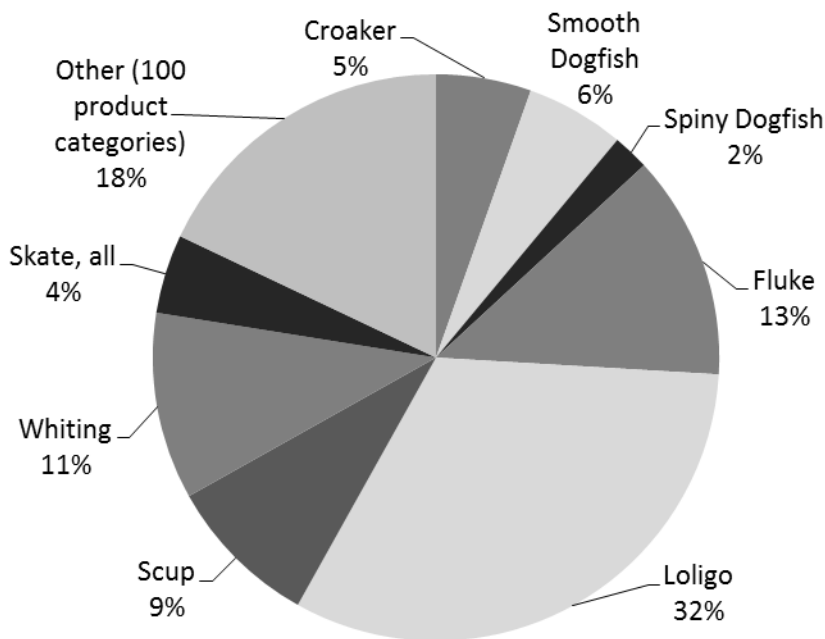


Figure 3.12 Species caught with smooth dogfish in otter bottom fish trawl gear, relative levels; Source - VTR data (2003 – 2014)

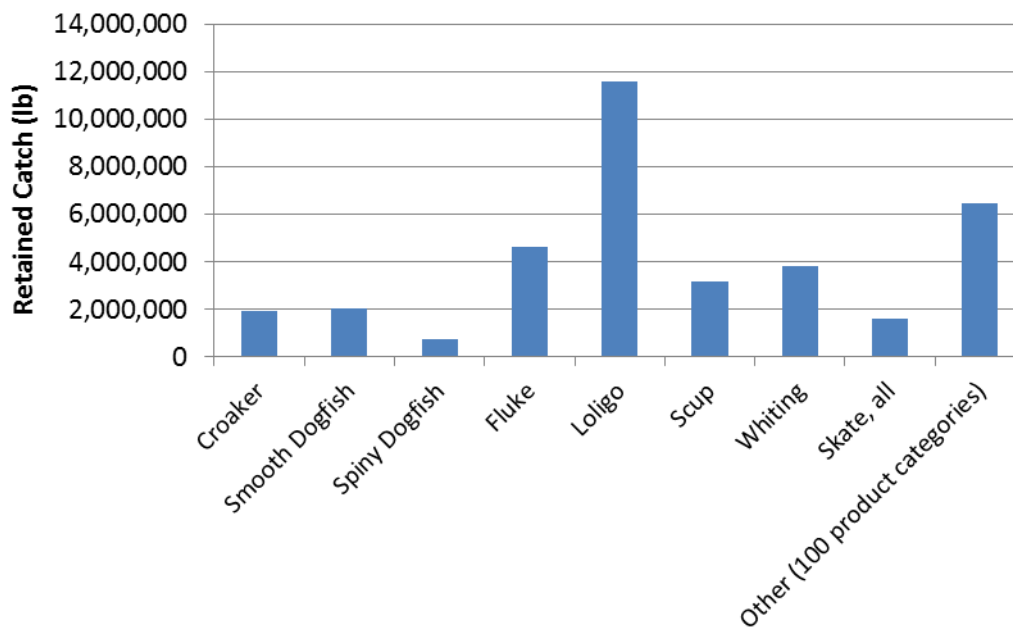


Figure 3.13 Species caught with smooth dogfish in otter bottom fish trawl gear, absolute levels;
Source - VTR data (2003-2014)

As indicated in Figure 3.13, smooth dogfish are most frequently caught with trawl gear in the directed fisheries for *Loligo* squid, fluke, whiting (silver hake), scup, croaker, and skate.

3.5 CATCH AND LANDINGS OF SMOOTHHOUND SHARKS

Reported commercial landings of smoothhound sharks primarily come from smooth dogfish in the Mid-Atlantic States and few commercial landings have been reported in the Gulf of Mexico. Marine Recreational Information Program (MRIP) data shows that smoothhound sharks have been caught in the Gulf of Mexico over the past 10 years by recreational anglers, although estimated levels are not very precise. However, because the majority of available landings data is from smooth dogfish in the Atlantic, this discussion focuses on that region.

3.5.1 ANNUAL LANDINGS TRENDS

Annual landings of smooth dogfish are shown in Table 3.3 for 1998 – 2014. These data were obtained from the Atlantic Coastal Cooperative Statistics Program (ACCSP) Data Warehouse. Reported landings increased between 1998 and 2004, declined slightly in 2004 through 2006, and then increasing to a peak in 2010. In 2011 - 2014, total landings decreased (Figure 3.14).

Table 3.3 Annual landings for smooth dogfish, dressed weight (1998-2014); Source: ACCSP Data Warehouse

Year	Landings (lb dw)
1998	763,717
1999	927,970
2000	754,727
2001	855,798
2002	1,008,420
2003	1,038,397
2004	1,234,606
2005	864,552
2006	798,325
2007	1,159,167
2008	1,269,300
2009	1,898,301
2010	2,688,249
2011	1,951,062
2012	1,554,784
2013	1,462,274
2014	1,273,770

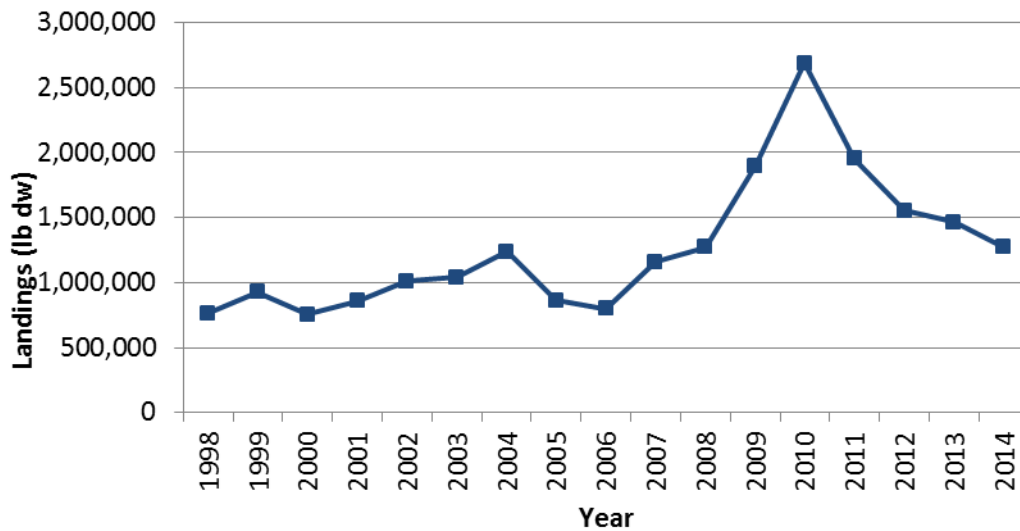


Figure 3.14 Graphical representation of ACCSP smooth dogfish landings data; Source: ACCSP Data Warehouse

3.5.2 GEOGRAPHIC DISTRIBUTION OF LANDINGS

A state-by-state breakdown of recent landings shows that four states, North Carolina, Virginia, New Jersey, and New York, are responsible for most of the landings (Figure 3.15). Of these states, New Jersey and North Carolina appear to be responsible for the increase in annual landings between 2008 and 2010.

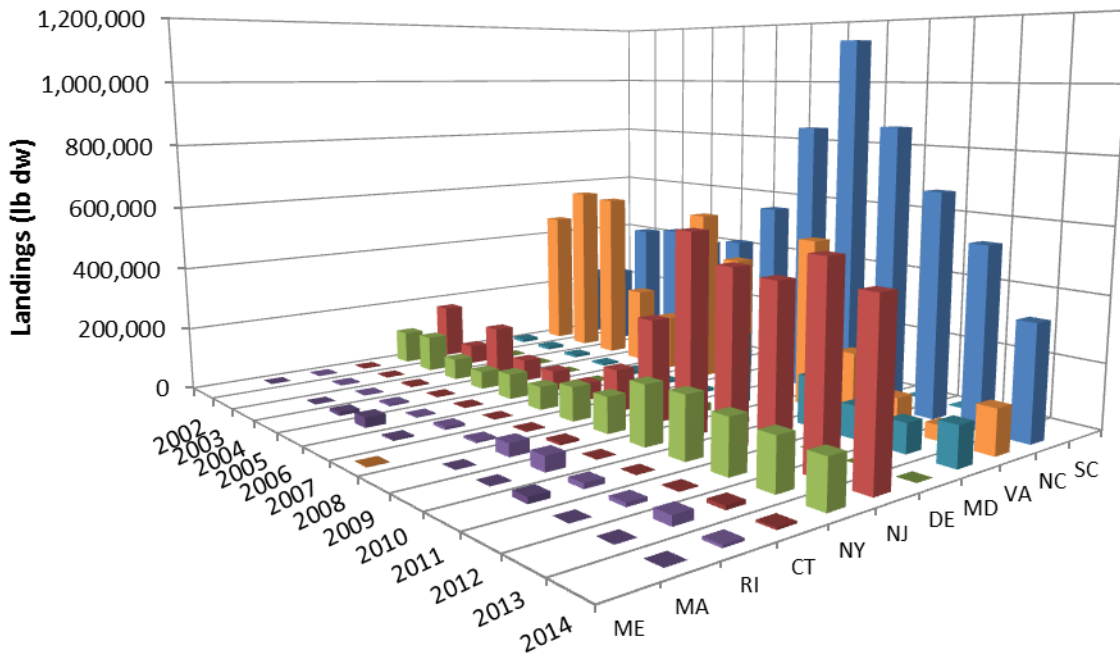


Figure 3.15 State landings of smooth dogfish, 2002-2014; Source: ACCSP Data Warehouse

The fishery in each of these four primary states occurs during distinct seasons as smooth dogfish migrate north from North Carolina as the water warms, then back south as the water cools. Figure 3.16 shows the fishery beginning in North Carolina in late winter/early spring and then moving to Virginia in late spring and early summer. Landings then pick up in New Jersey and New York during the summer months, before returning back to North Carolina for a small late-season fishery.

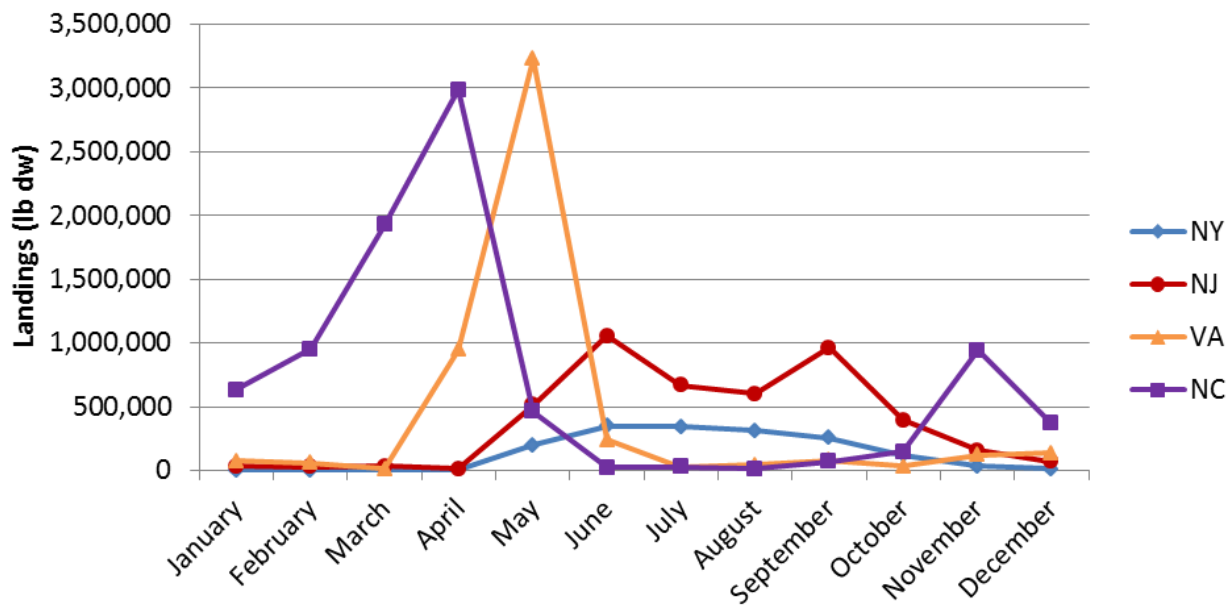


Figure 3.16 Monthly smooth dogfish landings in the four primary states, aggregated from 1998-2014;
Source: ACCSP Data Warehouse

3.5.3 LANDINGS COMPARISON BY GEAR

ACCSP data is a particularly useful source of coast-wide landings data, providing the best available estimate of absolute harvest levels. However, due to the confidential nature of portions of that data, ACCSP is not particularly useful for analyzing major gear types in the fishery. VTR data is more useful in analyzing gear types used in the smooth dogfish fishery. The VTR database is maintained by the NMFS Northeast Regional Office (NERO). Federally permitted vessels in New England and the Mid-Atlantic are required to report landings in the VTR dataset, as are vessels fishing a Federal Northeast Multispecies Permit. The VTR database was queried for trips in which smooth dogfish were landed (2003-2014). These data represented 23 different gear types across a 12-year time period; however the most dominant gear types were sink gillnet and bottom otter trawl (Table 3.4).

Table 3.4 Smooth dogfish landings by gear type; Source: VTR Data, 2003-2014

Gear Type	Landings (mt dw)
Sink Gillnet	2,163.4
Bottom Otter Trawl, Fish	525.1
Gillnet, Other (3 types)	155.7
Trawl, Other (7 types)	7.0
Bottom Longline	16.1

Pelagic Longline	1.8
Other (9 gear types)	16.5

Landings trends by gear type suggest that landings of smooth dogfish from sink gillnets increased between 2008 and 2010, before decreasing in 2011 and 2012 until landings stabilized. Otter trawl and runaround gillnet landings were much lower (Figure 3.17).

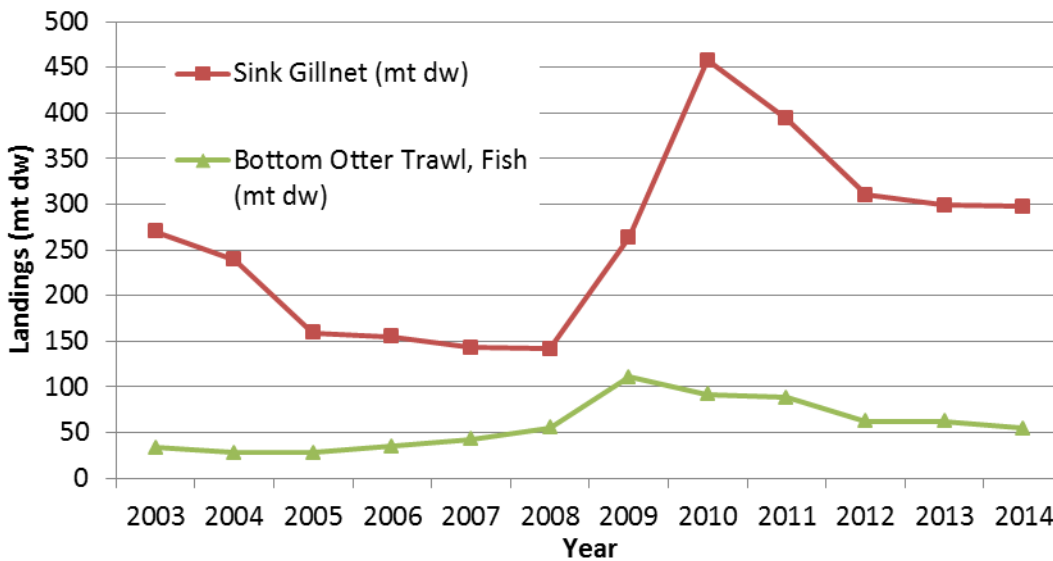


Figure 3.17 Pounds of smooth dogfish landed from dominant gear types; Source: VTR data, 2003-2014

Although sink gillnet gear is responsible for the greatest portion of landings, bottom otter trawl gear is used in a greater number of trips than sink gillnet gear (Figure 3.18). This is likely because the otter trawls typically catch smooth dogfish incidentally while sink gillnets are more often used to directly target the species. Interestingly, although landings have been decreasing since 2010, sink gillnet and otter bottom trawl trips that retain smooth dogfish are increasing somewhat.

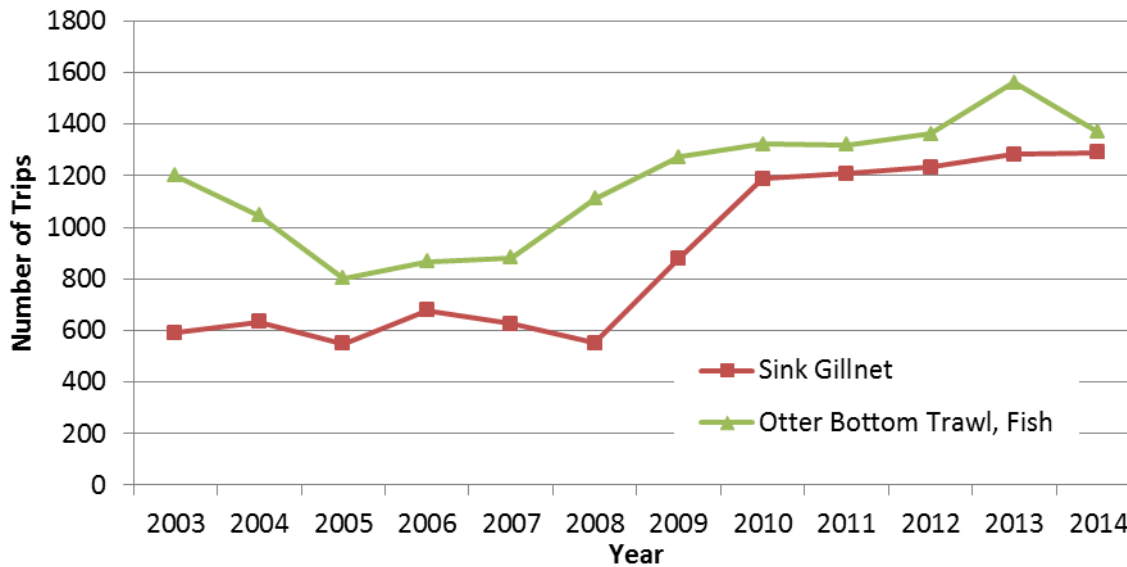


Figure 3.18 Number of trips of each dominant gear type that landed smooth dogfish; Source: VTR data, 2003-2014

3.6 SOCIAL AND ECONOMIC ASPECTS OF THE SMOOTHHOUND FISHERY

3.6.1 SOCIAL

The smoothhound fishery, which at this time only includes smooth dogfish, is a high-volume, low-value fishery that requires high throughput to cover trip expenses. Accordingly, smooth dogfish trips are labor-intensive. A large number of smooth dogfish must be caught and processed on board to provide a product that will get a high enough price to make a trip worthwhile. Community knowledge from smooth dogfish fishery participants indicate that smooth dogfish are difficult to handle and require fishermen to quickly subdue the fish to minimize danger to the crew from swinging tails and rough skin. Immediately after being subdued, the fish must be quickly processed to ensure it is edible. For all these reasons, the fishery is highly specialized, and although the barriers to entry are not much different than other gillnet fisheries, incentives to remain in the fishery do not always outweigh the labor costs. Regular participants in the fishery note that as some fisheries become more tightly regulated, several fishermen attempt to enter the smooth dogfish fishery each year. However, few stay in it for multiple seasons due to its labor-intensive nature. The result is a highly specialized core group of fishermen that have found ways to maximize efficiency to increase the probability of profitable fishing. The highly specialized nature of the fishery could be one reason

why it has not extensively spread outside of the Mid-Atlantic region to other places such as the Gulf of Mexico.

Furthermore, based on information obtained from smooth dogfish fishermen and dealers, some of the smooth dogfish product that is landed enters local markets in the mid-Atlantic region. These markets are sometimes targeted toward low-income consumers therefore this smooth dogfish product provides an inexpensive source of protein and seafood in some communities.

In addition to those fishermen who land high volumes of smoothhound sharks, there are also fishermen who land smoothhound sharks at lower a relatively volume compared to other species. These fishermen use a variety of gears including trawl nets and gillnets and land smoothhound sharks in a range of conditions including dressed and whole with fins still attached to the carcass. Characterizing the social aspects of this incidental fishery is difficult without more information. Once federal smoothhound shark management measures are in place, NMFS will begin to collect more information about the fishery and participants and will be able to fully characterize the incidental fishery.

3.6.2 ECONOMIC

Sink Gillnet Fishery

Average annual landings of smooth dogfish caught in sink gillnet gear between 2003 and 2014 based on VTR data were 764,834 lb dw. Using an average ex-vessel price of \$0.72 for smoothhound shark meat and \$1.62 for smooth dogfish fins (2014 dealer data), and assuming a fin-to-carcass ratio of 12 percent (per the Shark Conservation Act of 2010, Public Law 111-348), revenues from the entire smooth dogfish sink gillnet fishery averages \$699,364 per year ($764,834 \text{ lb} * \$0.72 + 91,780 \text{ lb} * \1.62). This total was caught by an annual average of 77 vessels (Table 3.2).

Calculating average per vessel revenue across the entire sink gillnet smooth dogfish fishery is problematic because many vessels catch the species incidentally at low levels. As described in Figure 3.8 and Figure 3.9, a large number of highliner vessels make a large number of trips catch and land primarily smooth dogfish caught in this gear. This subset of active highliner vessels are responsible for the vast majority of smooth dogfish landings. The potential revenues for these highliner smooth dogfish fishermen would not be shown using this general approach of spreading the revenues equally across all active fishermen.

Thus, to show the potential differences in revenues between vessels that incidentally land smoothhound sharks (landings less than 25 percent smooth dogfish) and vessels that retain a large amount of smooth dogfish, NMFS also calculated the revenues from vessels that retained greater than or equal to 25 percent smooth dogfish, by weight, relative to total catch. NMFS chose 25 percent in this analysis since those vessels are not retaining low amounts of smooth dogfish and are likely directing effort on the species. For these vessels that retain greater than 25 percent smooth dogfish,

average annual smooth dogfish landings were 717,250 lb dw between 2003 and 2014. Using an average ex-vessel price of \$0.72 for smooth dogfish meat and \$1.62 for smooth dogfish fins (2014 dealer data), and assuming a fin-to-carcass ratio of 12 percent (per the Shark Conservation Act of 2010, Public Law 111-348), revenue from smooth dogfish trawl revenue averages \$655,813 per year (717,205 lb * \$0.72 + 86,065 lb * \$1.62). This average annual total was caught on an average of 438 trips, by an average of 50 vessels (Table 3.1). Average annual per vessel revenues from smooth dogfish caught in this portion of the fishery was \$13,116. Note, however, that this is an average and some vessels that heavily target the species could have substantially higher revenues.

Table 3.5 Summary of revenues from the sink gillnet smooth dogfish fishery; Source: VTR data, 2003-2014

	Average Annual Landings (lbs dw)	Average Total Annual Revenue (fins and meat)	Average Annual Number of Vessels (# of trips)	Average Annual per Vessel Revenue
Entire fishery	764,834	\$699,364	77 (892)	\$9,083
Portion of fishery that retains a large amount of smooth dogfish (75 percent of retained catch)	466,052	\$655,813	50 (438)	\$13,116

Incidental Trawl Fishery

Although fishermen do not target smooth dogfish with trawl gear, and incidental smooth dogfish catch is usually a small percentage of total catch, trawl fishermen often retain and sell the species. Smooth dogfish are usually caught incidentally while trawl fishing for other species such as summer flounder, scup, croaker, whiting (silver hake), and *Loligo* squid. Based on VTR data from 2003-2014, an average of 169,241 lb dw of smooth dogfish per year were caught and retained in otter bottom trawl gear. Using an average ex-vessel price of \$0.72 for smooth dogfish meat and \$1.62 for smooth dogfish fins (2014 dealer data), and assuming a fin-to-carcass ratio of 12 percent (per the Shark Conservation Act of 2010, Public Law 111-348), revenue from smooth dogfish trawl revenue averages \$154,755 per year (169,241 lb * \$0.72 + 20,309 lb * \$1.62). Annually, an average of 86 vessels incidentally catch and retain smooth dogfish, resulting in per vessel revenue of \$1,799 annually.

3.7 GILLNET FISHERY FOR SHARKS OTHER THAN SMOOTHHOUND SHARKS

Gillnet gear is the primary gear for vessels directing on small coastal sharks (SCS), although vessels directing on other species can also catch shark species. Vessels participating in the shark gillnet fishery typically possess permits for other Council and/or state managed fisheries and will deploy nets in several configurations based on target species including drift, strike, and sink gillnets.

3.7.1 CURRENT MANAGEMENT

Many of the current commercial regulations for the non-smoothhound Atlantic shark fishery are the same for both the bottom longline and gillnet fishery, including, but not limited to: seasons, quotas, species complexes, permit requirements, authorized/prohibited species, and retention limits. Examples of regulations that are specific to shark gillnet fishing include: gillnet mesh size, requiring that gillnets remain attached to the vessel, and the requirement to conduct net checks every two hours when gear is deployed.

3.7.2 RECENT CATCH, LANDINGS, AND DISCARDS

In 2014, a total of 237 sets comprising of various gillnet fisheries were observed. A total of 2 drift gillnet vessels were observed making 6 sets in 2014. A total of 3 strike gillnet fishery vessels were observed making 11 strike sets on 7 trips in 2014. A total of 48 trips making 220 sink net sets on 16 vessels were observed in 2014 (Mathers et al., 2015). Chapter 4 of the 2013 Atlantic HMS Stock Assessment and Fishery Evaluation (SAFE) Report summarizes shark species composition, disposition, and summary information for sharks caught during observed gillnet trips with observers onboard.

3.8 PROTECTED SPECIES INTERACTIONS IN HMS FISHERIES

This section examines the interaction between protected species and Atlantic HMS fisheries managed under the 2006 Consolidated HMS FMP. As a point of clarification, interactions are different than bycatch. Interactions take place between fishing gears and marine mammals, and seabirds while bycatch consists of the incidental take and discard of non-targeted finfish, shellfish, mollusks, crustaceans, sea turtles, and any other marine life other than marine mammals and seabirds. Following a brief review of the three acts (Marine Mammal Protection Act, Endangered Species Act, and Migratory Bird Treaty Act) affecting protected species, the interactions between HMS gears and each species is examined. Additionally, the interaction of seabirds and longline fisheries are considered under the auspices of the United States “National Plan of Action for Reducing the Incidental Catch of Seabirds in Longline Fisheries” (NPOA – Seabirds).

3.8.1 INTERACTIONS AND THE MARINE MAMMAL PROTECTION ACT

NMFS relies on both fishery-dependent and fishery-independent data to produce stock assessments for marine mammals in the Atlantic Ocean, Gulf of Mexico, and the Caribbean Sea. Draft stock assessment reports are typically published in January and final reports are typically published in the fall. Final 2013 stock assessment reports can be obtained on the web at: <http://www.nmfs.noaa.gov/pr/sars/region.htm>.

The following list of species outlines the marine mammal species that occur off the Atlantic and Gulf Coasts that are or could be of concern with respect to potential interactions with HMS fisheries.

Common Name

Atlantic spotted dolphin
Blue whale
Bottlenose dolphin
Common dolphin
Fin whale
Harbor porpoise
Humpback whale
Killer whale
Long-finned pilot whale
Minke whale
Northern bottlenose whale
Northern right whale
Pantropical spotted dolphin
Pygmy sperm whale
Risso's dolphin
Sei whale
Short-beaked spinner dolphin
Short-finned pilot whale
Sperm whale
Spinner dolphin
Striped dolphin
White-sided dolphin

Scientific Name

Stenella frontalis
Balaenoptera musculus
Tursiops truncatus
Delphinis delphis
Balaenoptera physalus
Phocoena phocoena
Megaptera novaeangliae
Orcinus orca
Globicephela melas
Balaenoptera acutorostrata
Hyperoodon ampullatus
Eubalaena glacialis
Stenella attenuata
Kogia breviceps
Grampus griseus
Balaenoptera borealis
Stenella clymene
Globicephela macrorhynchus
Physeter macrocephalus
Stenella longirostris
Stenella coeruleoalba
Lagenorhynchus acutus

Under MMPA requirements, NMFS produces an annual List of Fisheries (LOF) that classifies domestic commercial fisheries, by gear type, relative to their rates of incidental mortality or serious injury of marine mammals. The LOF includes three classifications:

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

The final 2015 MMPA LOF was published on December 29, 2015 (79 FR 77919). The Atlantic Ocean, Caribbean, and Gulf of Mexico large PLL fishery is classified as Category I (frequent serious injuries and mortalities incidental to commercial fishing) and the southeastern Atlantic shark gillnet fishery is classified as Category II (occasional serious injuries and mortalities). The following Atlantic HMS fisheries are classified as Category III (remote likelihood or no known serious injuries or mortalities): Atlantic tuna purse seine; Gulf of Maine and Mid-Atlantic tuna, shark and swordfish, hook-and-line/harpoon; southeastern Mid-Atlantic and Gulf of Mexico shark BLL; and Mid-Atlantic,

southeastern Atlantic, and Gulf of Mexico pelagic hook-and-line/harpoon fisheries. Commercial passenger fishing vessel (charter/headboat) fisheries are subject to Section 118 and are listed as a Category III fishery. Recreational vessels are not categorized since they are not considered commercial fishing vessels.

Fishermen participating in Category I or II fisheries are required to register under the MMPA and to accommodate an observer aboard their vessels if requested. Vessel owners or operators, or fishermen, in Category I, II, or III fisheries must report all incidental mortalities and serious injuries of marine mammals during the course of commercial fishing operations to NMFS. There are currently no regulations requiring recreational fishermen to report takes, nor are they authorized to have incidental takes (i.e., they are illegal)

3.8.2 INTERACTIONS AND THE ENDANGERED SPECIES ACT

Sea Turtles

NMFS has taken several significant steps to reduce sea turtle bycatch and bycatch mortality in domestic longline fisheries. On December 12, 2012, following consultation under section 7(a)(2) of the Endangered Species Act (ESA), NMFS determined that the continued authorization of the Atlantic shark and smoothhound shark fisheries is not likely to jeopardize the continued existence of hawksbill, green, Kemp's ridley, leatherback, and loggerhead sea turtles. 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).

The Central and Southwest Atlantic DPS of scalloped hammerhead and the listed Caribbean coral species occur within the management area of Atlantic HMS commercial and recreational fisheries, including the bottom longline and rod and reel fisheries. Following these listings and based on the information included in an October 2014 biological evaluation, the HMS Management Division determined that certain authorized Atlantic HMS gear types may affect and are likely to adversely affect scalloped hammerhead sharks within the Central and Southwest Atlantic DPS. Additionally, certain authorized Atlantic HMS gear types may affect but are not likely to adversely affect threatened Caribbean coral species. Thus, on October 30, 2014, the HMS Management Division requested reinitiation of ESA section 7 consultation for the 2006 Consolidated Atlantic HMS Fishery Management Plan activities, as amended and as previously consulted on in the 2001 Atlantic HMS biological opinion and the 2012 Shark and Smoothhound biological opinion, and also to provide supplemental information for the separate reinitiation of consultation requested on March 31, 2014, for the pelagic longline fishery.

NMFS is still operating under the terms and conditions and RPMs in 2012 Biological Opinion, although it is currently undergoing reinitiation of consultation for the bottom longline and

rod and reel shark fisheries. This specific action is not anticipated to affect species listed as endangered or threatened under the ESA in any way not previously, analyzed, including the provision for exempted fishing activities. On October 30, 2014, NMFS determined that ongoing operation of this fishery consistent with the reasonable and prudent alternative and reasonable and prudent measures in the existing biological opinion 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 fisheries in the future.

Smalltooth sawfish

NMFS designated critical habitat for smalltooth sawfish in September 2009 (74 FR 45353). NMFS believes that smalltooth sawfish takes in the shark gillnet fishery are rare given the low reported number of takes and high rate of observer coverage. The fact that there were no smalltooth sawfish caught during 2001, when 100 percent of the fishing effort was observed, indicates that smalltooth sawfish takes (observed or total) most likely do not occur on an annual basis. The 2012 Shark BiOp determined that the continued operation of the Atlantic shark and smoothhound fisheries may result in up to 12 smalltooth sawfish takes (9 non-lethal, 3 lethal), annually. The non-lethal takes of up to nine smalltooth sawfish annually is not expected to have any measurable impact on the reproduction, numbers, or distribution of this species and is not expected to appreciably reduce the likelihood of survival and recovery of smalltooth sawfish. Therefore, NMFS determined that the continued authorization of the Atlantic shark fisheries, including the new smoothhound fishery, was not likely to jeopardize the continued existence of the United States distinct populations segment (DPS) of smalltooth sawfish. No smalltooth sawfish were observed in shark gillnet fisheries in 2012, 2013, or 2014. In the shark bottom longline research fishery there was one interaction with a smalltooth sawfish in 2012, two interactions in 2013, and five interactions in 2014. No sea turtles were observed in shark gillnet fisheries in 2012, 2013, or 2014. In the shark bottom longline research fishery, there were two interactions with loggerhead sea turtles in 2012, three interactions with loggerhead sea turtles in 2013, and seven interactions with loggerhead sea turtles in 2014.

Atlantic Sturgeon

Five separate DPS of the Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) were listed under the ESA effective April 6, 2012 (77 FR 5914; February 12, 2012). From north to south, the DPSs are Gulf of Maine, New York Bight, Chesapeake Bay, Carolina, and South Atlantic. The New York Bight, Chesapeake Bay, Carolina, and South Atlantic DPSs are listed as endangered, and the Gulf of Maine DPS is listed as threatened. NMFS determined that each of the DPSs was significant based on their persistence in a unique ecological setting and the loss of a DPS would result in a significant gap in the range of the species and constitute an important loss of genetic diversity. The 2012 Shark BiOp determined that the continued operation of the Atlantic shark and smoothhound shark fisheries were not expected to appreciably reduce the likelihood of survival and recovery of the

5 DPSs of Atlantic sturgeon. Therefore, NMFS determined that the continued authorization of the Atlantic shark fisheries, including the new smoothhound fishery, is also not likely to jeopardize the continued existence of the Gulf of Maine, New York Bight, Chesapeake Bay, Carolina, and South Atlantic DPSs of Atlantic sturgeon.

Interactions with Seabirds

The NPOA-Seabirds was released in February 2001, and calls for detailed assessments of longline fisheries, and, if a problem is found to exist within a longline fishery, for measures to reduce seabird bycatch within two years. Because interactions appear to be relatively low in Atlantic HMS fisheries, the adoption of immediate measures is unlikely.

Gannets, gulls, greater shearwaters, and storm petrels are occasionally hooked by Atlantic PLLs. These species and all other seabirds are protected under the MBTA. The majority of longline interactions with seabirds occur as the gear is being set. The birds eat the bait and become hooked on the line. The line then sinks and the birds are subsequently drowned.

Bycatch of seabirds in the shark BLL fishery has been virtually non-existent. A single pelican has been observed killed from 1994 through 2014. No expanded estimates of seabird bycatch or catch rates for the BLL fishery have been made due to the rarity of seabird takes

4.0 ENVIRONMENTAL CONSEQUENCES OF THE ALTERNATIVES

This chapter considers and describes probable and potential impacts of each of the considered alternatives. The alternatives that are preferred by NMFS at this time are identified, and justification for this preference is explained.

4.1 SMOOTH DOGFISH PROVISIONS OF THE SHARK CONSERVATION ACT OF 2010

As described in Section 2.1, the following two alternatives and eight sub-alternatives consider the smooth dogfish provisions of the 2010 Shark Conservation Act. At this time, NMFS prefers Sub-Alternatives A2-1e, A2-2b, and A2-3b. As described in Chapter 2, if finalized, the preferred sub-alternatives would be implemented and required as a group. In other words, a fisherman who intends to remove the fins of smooth dogfish at sea would need to meet the requirements of all three of the preferred sub-alternatives, ensure retained smooth dogfish catch does not exceed the 12 percent fin-to-carcass ratio, and be fishing in federal waters within 50 nautical miles of shore. Meeting the requirements of only one or two of the sub-alternatives would not allow fishermen to remove the fins of a smooth dogfish at sea; rather, the fisherman would need to keep the fins naturally attached through offloading.

Alternative A1: Do not implement the smooth dogfish-specific measures in the Shark Conservation Act of 2010. By default, Amendment 3's fins-attached requirement would apply to the smooth dogfish fishery (i.e., fins and tail of all smooth dogfish must remain naturally attached to the shark carcass through offloading)

Alternative A2: *Implement the smooth dogfish-specific measures in the Shark Conservation Act of 2010 to establish an allowance for the removal of smooth dogfish fins while at sea, considering eight sub-alternatives - Preferred Alternative*

Issue 1: Catch Composition

Sub -Alternative A2-1a: Smooth dogfish can make up any portion of the retained catch (no other sharks can be retained)

Sub -Alternative A2-1b: Smooth dogfish must make up at least 25 percent of the retained catch (no other sharks can be retained)

Sub -Alternative A2-1c: Smooth dogfish must make up at least 75 percent of the retained catch (no other sharks can be retained)

Sub -Alternative A2-1d: Smooth dogfish must make up at 100 percent of the retained catch

Sub -Alternative A2-1e: *Smooth dogfish must make up at least 25 percent of the retained catch and other sharks may be retained provided their fins remain naturally attached to the carcass – Preferred Alternative*

Issue 2: State Fishing Permit

Sub -Alternative A2-2a: *Require smooth dogfish-specific state commercial fishing permit in conjunction with the federal smoothhound permit - Preferred Alternative*

Sub -Alternative A2-2b: Require any state commercial fishing permit that allows smooth dogfish retention in conjunction with the federal smoothhound permit

Issue 3: Geographic Applicability of Exception

Sub-Alternative A2-3a: Apply the exception for smooth dogfish along the Atlantic Coast and to Florida's coast in the Gulf of Mexico

Sub-Alternative A2-3b: *Apply the exception for smooth dogfish along the Atlantic Coast but not to Florida's coast in the Gulf of Mexico - Preferred Alternative*

4.1.1 ECOLOGICAL IMPACTS

Alternative A1 would not implement the smooth dogfish-specific provisions in the SCA, and instead, the Amendment 3 requirement that all smooth dogfish be landed with the fins naturally attached to the carcass through offloading would be implemented, which is consistent with the current fins attached requirement for all other federally managed sharks in the Atlantic. A full impacts analysis of the smooth dogfish fins attached measure that was finalized in Amendment 3 can be found in Section 4.3 of the Final EIS for Amendment 3 (NMFS 2009) and is hereby incorporated into this document by reference. As a summary, the Final EIS for Amendment 3 concluded that ecological impacts of the fins attached requirement were beneficial since this requirement would prevent shark finning at sea, would aid in the enforcement of shark finning regulations and greatly enhance species-specific data collection that would allow for more robust stock assessments and sustainable management of the fishery. For additional details, please see Section 4.3 of the Final EIS for Amendment 3 to the 2006 Consolidated HMS FMP.

Under Alternative A2, the fins of smooth dogfish could be legally removed while at sea provided that the catch occurred within 50 nm of shore, the ratio of fin-to-carcass weight remained less than or equal to 12 percent, and the requirements under the three preferred sub-alternatives were met. Smooth dogfish caught outside of 50 nm from shore would have to be landed with fins attached; however, it is unlikely that a large portion of the fishery occurs in that area. For fishermen operating outside of 50 nm from shore or in parts of the Gulf of Mexico, Alternative A2 would have the same impacts as Alternative A1 since the fins could not be removed at sea.

In the short-term, Alternative A2 would likely have direct neutral ecological impacts relative to the status quo. Currently, fishermen in the directed smooth dogfish fishery remove smooth dogfish fins at sea and that practice would continue under Alternative A2 provided certain criteria are met. Thus, total effort and fishing mortality are unlikely to be affected. Since there would be additional restrictions on the removal of smooth dogfish fins at sea, including those outlined in the sub-alternatives, fishing mortality might decrease slightly since some fishermen may not meet all the criteria that would allow them to remove the fins at sea, but direct impacts to the smooth dogfish stocks would likely still be neutral because the reduction in mortality would not be large. When compared to Alternative A1, fishing mortality could be higher under Alternative A2 because Alternative A1 would be expected to significantly reduce directed smooth dogfish trips since fishermen would have to leave the smooth dogfish fins attached though offloading. Similarly, in the long-term, direct ecological impacts of Alternative A2 would likely be neutral. Both short-term and long-term indirect neutral ecological impacts would be expected under Alternative A2 because effort is likely to remain largely the same nor would impacts to incidentally-caught species. Indirect impacts to other shark species are explored under the catch composition sub-alternatives below.

Catch Composition Sub-Alternatives

Under Sub-Alternative A2-1a, smooth dogfish fins could be removed at sea regardless of the catch composition on board provided that no other shark species are retained. This sub-alternative would likely result in neutral direct short and long-term ecological impacts. Smooth dogfish are often caught incidentally in other directed fisheries. Currently, these incidentally caught smooth dogfish are retained and fins removed while at sea. Under this sub-alternative, this practice could continue and current fishing pressure on smooth dogfish would not increase and therefore would not be impacted. Although this sub-alternative would likely result in the highest landings of smooth dogfish relative to the other three catch composition sub-alternatives, landings would still be below the level projected to be sustainable in the SEDAR 39 stock assessments. Indirect short and long-term ecological impacts would likely be neutral since effort is unlikely to be affected by this sub-alternative. Indirect impacts include those on other species caught along with smooth dogfish. Although this sub-alternative would likely have neutral ecological impacts, this measure would not limit the removal of smooth dogfish fins at sea to fishermen fishing for smooth dogfish. The smooth dogfish -specific provisions of the SCA apply specifically to an “individual engaged in commercial fishing for smooth dogfish” and not generally to an “individual engaged in commercial fishing.” Although the catch composition preferred sub-alternative has changed in this Final EA compared to the Draft EA, NMFS still interprets the smooth dogfish exception as applicable to those fishing “for” the species. If smooth dogfish could make up any portion of the retained catch per this sub-alternative, the at-sea fin removal allowance would not be limited to those fishing “for” smooth dogfish and would not be consistent with the smooth dogfish-specific provisions in the SCA. For this reason, NMFS does not prefer this sub-alternative.

Sub-Alternative A2-1b would require smooth dogfish to comprise 25 percent of the retained catch on board in order for fishermen to avail themselves of the limited at-sea fin removal allowance. No sharks other than smooth dogfish could be retained. Since smooth dogfish could be processed at sea under this alternative, Sub-Alternative A2-1b would allow some, but not all, fishermen engaged in commercial fishing for smooth dogfish fishing to avail themselves of the limited at-sea fin removal allowance.

During the public comment period, NMFS received many comments that were supportive of a 25 percent composition limit. These commenters noted that while fishermen may intend to fish for smooth dogfish, because of the vagaries of fishing, those fishermen may end up with significantly fewer smooth dogfish at the end of the trip than they thought they would. Because these fishermen would have started processing smooth dogfish as they were fishing, if the catch ended up totaling less than the catch composition requirement, they would need to decide at the end of the trip whether to discard all the smooth dogfish that had been processed or discard all the other catch. Consequently, the commenters felt that a 25 percent composition threshold would prevent dead discards and encompass trips where fishermen were directing effort on smooth dogfish while the 75 percent catch composition threshold under sub-alternative A2-1c could inadvertently exclude trips where fishermen are directing effort on smooth dogfish.

Based on this public comment, NMFS reconsidered the 75 percent smooth dogfish requirement, and determined that it does not properly reflect fishing “for” smooth dogfish. According to public comment, fishermen that fish for smooth dogfish often encounter and retain other species of fish. NMFS verified this by evaluating data from vessel trip reports (VTR). On trips that landed smooth dogfish caught in sink gillnet gear between 2003 and 2014, smooth dogfish only made up 36 percent of the total retained catch while other species such as croaker, bluefish, monkfish, and spiny dogfish made up the remainder. See Section 3.4.1 for more details. If NMFS retained the 75 percent requirement, then this could result in dead discards as well as lost revenues from those species. The 25 percent requirement adopted in the final rule better reflects fishing “for” smooth dogfish, and is within the range of alternatives considered and analyzed in the proposed rule. The reasons for the change are also based partly on the four following factors:

- When fishermen decide to remove fins from smooth dogfish while at sea, the fins are not removed at the end of the trip. Rather, the fins are removed shortly after the smooth dogfish is brought on board in order to maintain the highest quality product. This processing method negates the benefits of a high catch composition requirement. For example, if a fishermen is directing effort on smooth dogfish and removing the fins as the smooth dogfish is brought on board, that fishermen does not know what the final catch composition will be. The first part of the trip could be 100 percent smooth dogfish, but if the catch transitions to predominantly other species, the fishermen may find that he no longer meets the high catch composition requirement. In that case, the fisherman has two options: to either discard all the smooth dogfish carcasses and fins that have been processed or discard the non-smooth dogfish catch in an amount that will meet the catch composition requirement. Either way, a

high catch composition could lead to unnecessary regulatory discards. Although this last example could also pertain to the preferred 25 percent catch composition, the lower threshold provides a greater amount of flexibility and reduces the likelihood of regulatory discards, consistent with National Standard 5.

- Smooth dogfish, and the fishery that targets them, closely follow specific water temperature gradients, as detailed in Chapter 3. Fisherman intending to land primarily smooth dogfish may find their gear in sub-optimal water temperatures leading to lower smooth dogfish catch despite the intention to directly target the species, thereby resulting in a lower catch composition than expected.
- Sink gillnet gear, the predominant gear used in the directed smooth dogfish fishery, often catches other species along with the targeted species. If a fisherman retains other legal species in an amount greater than 25 percent of the total retained catch, it does not necessarily mean that effort was not being directed on smooth dogfish, it could simply mean that other species were encountered in a greater amount than anticipated.
- Although a 75 percent catch composition is an appropriate indicator of target species in other HMS fisheries, such as the squid trawl fishery the smooth dogfish fishery is a more mixed fishery. In the squid trawl fishery, swordfish caught in squid trawls can only be retained if at least 75 percent of the retained catch is squid, indicating that squid is the targeted fishery. In that fishery, the catch is predominantly squid but swordfish that are feeding on the squid are sometimes inadvertently caught. The smooth dogfish fishery is a more mixed fishery and the target species is often co-located with other species, resulting in less certainty of target species catch levels.

Under this sub-alternative, smooth dogfish fins could be removed while at sea provided the retained catch is made up of at least 25 percent smooth dogfish. Since some trips would not qualify for the at-sea fin removal allowance, specifically those with less than 25 percent retained smooth dogfish catch, landings would likely be slightly lower than those under Sub-Alternative A2-1a, under which there is no catch composition requirement. However, effort would be unlikely to change to a great extent and landings would likely remain near pre-SCA levels. Indirect short and long-term ecological impacts would also be expected to be neutral. Indirect impacts include those on other species caught along with smooth dogfish. Since effort is unlikely to be greatly affected by this sub-alternative, indirect impacts are likely neutral. As outlined in Sub-Alternative A2-1e below, NMFS now prefers the 25 percent catch composition threshold. However, Sub-Alternative A2-1b also prohibits the retention of other sharks when removing smooth dogfish fins at sea, which is no longer the preferred management measure. For this reason, NMFS does not prefer this sub-alternative.

Sub-Alternative A2-1c would require smooth dogfish to comprise 75 percent of the retained catch on board in order for fishermen to avail themselves of the limited at-sea fin removal allowance. No sharks other than smooth dogfish could be retained. This sub-alternative would likely have direct

short and long-term minor beneficial impacts. Since this sub-alternative would preclude at-sea fin removal in trips with less than 75 percent retained smooth dogfish catch, landings of smooth dogfish could decrease. As detailed in Section 3.5, smooth dogfish caught on trips that retain less than 75 percent smooth dogfish make up 39 percent of total landings. Since these smooth dogfish could no longer have fins removed at sea, some portion of the catch would likely be discarded, potentially reducing total landings and fishing mortality, and providing minor direct, beneficial ecological impacts. Indirect ecological impacts to species caught with smooth dogfish would likely both be neutral in the short and long-term because fishing effort or rates are not expected to change under this sub-alternative. In the Draft EA, NMFS preferred this sub-alternative. This catch composition threshold of 75 percent is used in other fisheries that interact with HMS (e.g., incidental swordfish catch in the squid trawl fishery). Similarly, in the LCS shark fisheries, the observer program decides to observe “directed” trips based on past vessel logbook reports where vessels report at least two-thirds of the landings as LCS. Thus, in the Draft EA, NMFS felt a high threshold of retention, such as 75 percent, was an appropriate way to identify those directing effort on smooth dogfish while also remaining consistent with other fisheries that interact with HMS. However, as described above, based on new analyses and public comment, NMFS feels that this threshold may be too high to characterize directed effort in the smooth dogfish fishery, given the mixed nature of the fishery, and it would not necessarily be appropriate for the smooth dogfish fishery.

Sub-Alternative A2-1d would require smooth dogfish to comprise 100 percent of the retained catch on board the vessel in order for fishermen to avail themselves of the at-sea fin removal allowance for smooth dogfish. This sub-alternative would likely have direct short and long-term minor beneficial ecological impacts on smooth dogfish. This sub-alternative would preclude at-sea fin removal in most trips that land smooth dogfish and could result in decreased landings of smooth dogfish and increased dead discards of either smooth dogfish or other species, depending on which species caught the vessel operator decides to land. This sub-alternative would impact all fishermen that retain other species in addition to smooth dogfish. As detailed in the analyses in Section 3.4.1, the smooth dogfish fishery often retains other species and is highly mixed. Although a few trips each year land 100 percent smooth dogfish, the majority land other species as well. Since some trips could no longer remove smooth dogfish fins at sea, some smooth dogfish would likely be discarded, potentially reducing total landings and fishing mortality (if discarded alive), and providing minor beneficial direct impacts. Indirect impacts to species caught with smooth dogfish would likely be minor beneficial in both the short and long-term. A prohibition on at-sea fin removal for smooth dogfish would likely reduce effort in the mixed fishery where other species are landed. Indirect impacts are generally positively correlated with effort. Since effort would likely decrease, indirect impacts are expected to be minor beneficial. This sub-alternative would remove all flexibility with regards to what species can be retained on board those vessels that remove smooth dogfish fins at sea possibly increasing dead discards, which would be inconsistent with National Standard 9, without providing any clear benefits beyond those described for the preferred Sub-Alternative A2-1e. This, NMFS does not prefer this sub-alternative.

Sub-Alternative A2-1e, the preferred sub-alternative, is a new alternative that was added after the Draft EA stage and is based on updated data, public comment, and additional analyses. This sub-alternative is similar to Sub-Alternative A2-1b, except that fishermen removing smooth dogfish fins at sea may also retain other sharks provided those sharks' fins remain naturally to the carcass through offloading. The reasons for the change in preference from a 75 percent catch composition to a 25 percent catch composition are described above under sub-alternative A2-1b. As for the change to allow other sharks on board when removing smooth dogfish fins at sea, during the public comment period, NMFS received many comments requesting this adjustment. Those comments noted that the no-other-sharks-on-board provision would be burdensome for fishermen and would lead to unnecessary waste and discards of other valuable shark species since it is a mixed, variable fishery. This measure is included based on public comment and additional analyses and recognizing that a prohibition on having other sharks on board would likely increase regulatory discards. Specifically, additional analyses indicate that the smooth dogfish fishery is more mixed than previously thought, and that other sharks, particularly spiny dogfish and common thresher sharks, make up a portion of the catch and revenue for fishermen also fishing for smooth dogfish. Given that fishermen process smooth dogfish as they are brought on board, including removing the fins where allowable, fishermen under the proposed rule approach would have been forced to choose whether to land smooth dogfish with the fins removed (and discard the other species) or land the other species of shark with the fins attached and discard the smooth dogfish with their fins removed at sea. As proposed, a fisherman who wanted to remove smooth dogfish fins at sea would not have been able to retain non-smooth dogfish sharks even if those sharks were dead and otherwise legally retainable based on species, size, and permits. In either situation, as proposed, dead discards would likely have increased given the mixed catches in the smooth dogfish fishery. Thus, other sharks will be allowed on board when smooth dogfish fins have been removed at sea as long as the fins of the non-smooth dogfish sharks remain naturally attached through offloading, as is currently required.

Allowing other sharks on board should not raise enforcement concerns or impact the conservation of non-smooth dogfish sharks because smooth dogfish carcasses can be readily differentiated from other shark carcasses by the presence of a pre-dorsal ridge. While other "ridgeback sharks" have an interdorsal ridge, smooth dogfish are the only shark species in the Atlantic that have a pre-dorsal ridge. We will work with the Office of Law Enforcement to ensure that they are aware of this identifying feature and will update outreach information for shark identification including relevant workshops as appropriate to make permitted shark fishermen and dealers aware of the distinction. NMFS will also continue to monitor all shark catches and discards and take additional action, if necessary to address non-compliance.

Ecological impacts resulting from adoption of Sub-Alternative A2-1e are similar to those described for Sub-Alternative A2-1b since both would set the catch composition percentage at 25 percent. As outlined in the four factors above, allowing other sharks on board would not result in any adverse impacts; thus, this allowance would not alter ecological impacts. Since a 25 percent catch composition threshold more appropriately identifies fishermen directing effort on smooth dogfish and

because the retention of non-smooth dogfish sharks would not result in increased regulatory discards, NMFS now prefers this sub-alternative.

State Fishing Permit Requirement Sub-Alternatives

Sub-Alternative A2-2a would require federally permitted smooth dogfish fishermen to obtain a smooth dogfish-specific State commercial fishing license in order to be able to remove smooth dogfish fins at sea. This sub-alternative would narrowly interpret the language in the smooth dogfish-specific provisions of the SCA that states an “individual engaged in commercial fishing for smooth dogfish ... if the individual holds a valid State commercial fishing license,” to mean a smooth dogfish-specific State commercial fishing license and not a general state commercial license. Requiring a smoothhound shark-specific State fishing permit would likely lead to direct and indirect short and long-term neutral ecological impacts since this sub-alternative is unlikely to affect fishing effort since fishermen that currently target smoothhound sharks without a state permit would likely obtain this State permit. Because not all states have smooth dogfish-specific permits, NMFS does not prefer this alternative.

Under Sub-Alternative A2-2b, the preferred alternative, fishermen would require federally-permitted smooth dogfish fishermen to possess a State commercial fishing license that allows fishing for smooth dogfish in order to be able to remove smooth dogfish fins at sea. A “valid state commercial fishing license,” would be any state license that allows the individual to engage in commercial fishing for smooth dogfish, whether it is smooth dogfish-specific, a general shark permit, or a general commercial fishing permit. This sub-alternative recognizes variations in state fishing permit processes that allow commercial fishing for smooth dogfish. It is likely that most smoothhound shark fishermen already hold this type of state permit and would be unaffected by this requirement. Therefore, this sub-alternative would be expected to have neutral direct and indirect short and long-term ecological impacts since fishing effort is not expected to change under this sub-alternative, thus, NMFS prefers this sub-alternative.

Geographic Applicability of Exception Sub-Alternatives

NMFS considered two alternatives for Geographic Application of the SCA exception. Under Sub-Alternative A2-3a, the exception would apply along the Atlantic Coast and the Florida west coast in the Gulf of Mexico. As explained earlier, as a practical matter, smooth dogfish and other smoothhound species are indistinguishable in the field (Section 1.2). The best available scientific information indicates that smooth dogfish are the predominant smoothhound species along the Atlantic coast (only a handful of Florida smoothhound have ever been recorded in the Atlantic and those have been near southern Florida). In the Gulf of Mexico, however, there are at least three different smoothhound species, possibly four, with no practical way to readily distinguish among them (Jones et al 2014). This sub-alternative would apply the smooth dogfish exception 50 nautical miles from the baseline of all the States that fall under the SCA definition of “State,” including the west coast of Florida in the Gulf of Mexico. This sub-alternative could result in smoothhound sharks

other than smooth dogfish indirectly falling under the exception, because they cannot be distinguished from smooth dogfish. NMFS expects neutral direct and indirect short and long-term ecological impacts because, at this time, there is no commercial fishery for smooth dogfish in the Gulf of Mexico. However, NMFS does not prefer this sub-alternative.

Under Sub-Alternative 3b, the preferred sub-alternative, the exception would only apply along the Atlantic coast and not the Florida west coast in the Gulf of Mexico. By limiting the exception to the Atlantic region, as specified at § 635.27 (b)(1), this sub-alternative would ensure that the exception would only apply where the population is almost entirely smooth dogfish, reducing identification problems and inadvertent finning violations. NMFS expects neutral direct and indirect short and long-term ecological impacts because, at this time, there is no commercial fishery for smooth dogfish in the Gulf of Mexico. NMFS prefers this sub-alternative because it simplifies enforcement and compliance without adverse impacts.

4.1.2 SOCIAL AND ECONOMIC IMPACTS

Alternative A1 would not implement the smooth dogfish-specific provisions in the SCA. As such, the Amendment 3 requirement that smooth dogfish be landed with their fins naturally attached to the carcass would be implemented. A full analysis of the impacts of the Amendment 3 smooth dogfish management measures relative to status quo (no active federal smoothhound shark management measures) can be found in Section 4.3 of the Final Environmental Impact Statement (EIS) for Amendment 3 (NMFS 2009) and is hereby incorporated into this document by reference. As a summary, the Final EIS for Amendment 3 concluded that socioeconomic impacts of the fins attached requirement for smooth dogfish were generally adverse since federal management of this species would establish restrictions in what is now a largely unregulated fishery. For details, please see Section 4.3 of the Final EIS for Amendment 3 to the 2006 Consolidated HMS FMP.

Under Alternative A2, the preferred alternative, smooth dogfish fishermen would likely experience direct short and long-term neutral socioeconomic impacts. An allowance for the removal of fins at sea for fishermen fishing from Maine through Florida could maintain current efficiency in the fishery and provide a highly processed product for fishermen to sell to dealers. For fishermen who fish outside of 50 nm or in the parts of Gulf of Mexico, socioeconomic impacts would be the same as those in Alternative A1. Total ex-vessel revenues for the entire sink gillnet fishery are currently \$699,364 (Section 3.6.2). This value is unlikely to change substantially under Alternative A2. Indirect short and long-term neutral socioeconomic impacts would be expected under Alternative A2 compared to Alternative A1. Indirect impacts are those experienced by entities supporting the smooth dogfish fishery, but not necessarily directly involved in the capture of the species. Supporting entities include bait and tackle suppliers, ice suppliers, dealers, and other similar businesses. Maintaining the profitability of the smooth dogfish fishery would maintain revenue to the supporting businesses, although they do not solely rely on the smooth dogfish fishery for income.

Catch Composition Sub-Alternatives

Sub-Alternative A2-1a would likely result in direct short and long-term minor beneficial socioeconomic impacts. Under this sub-alternative, smooth dogfish could make up any portion of the retained catch on board provided that no other shark species are retained. This sub-alternative would authorize fishermen to retain any non-shark species of fish while still availing themselves of the limited fins-attached exception for smooth dogfish. Smooth dogfish are often caught during other fishing operations, thus this sub-alternative would allow fishermen to maximize the profitability of each trip and allow individual operators the flexibility to make decisions, before the trip and while on the water, as to the retained catch composition that would maximize ex-vessel revenues. All trips would be able to process smooth dogfish at sea when directing on other non-shark species. This would result in a larger number of trips able to legally process smooth dogfish at sea compared to preferred Sub-Alternative A2-1e. However, the Saving Clause of the SCA applies specifically to an “individual engaged in commercial fishing for smooth dogfish” and not generally to an “individual engaged in commercial fishing.” Therefore, NMFS does not prefer this sub-alternative because it could be inconsistent with the smooth dogfish-specific provisions of the SCA.

Sub-Alternative A2-1b would require smooth dogfish to comprise 25 percent of the retained catch on board in order for fishermen to avail themselves of the limited fins-attached exception, likely resulting in direct short and long-term minor beneficial socioeconomic impact. As described above, based on public comments, NMFS undertook additional data analyses with updated data to investigate the mixed nature of the smoothhound shark fishery and how well catch composition reflects target species. The analyses indicated that only a small portion of smooth dogfish sink gillnet trips land only smooth dogfish. Most trips land other species in varying amounts. Figure 3.14 shows a breakdown of other species caught on these trips, dominated by bluefish, croaker, and spiny dogfish, highlighting the mixed nature of the fishery. Since smooth dogfish could be processed at sea when they make up at least 25 percent of the catch, Sub-Alternative A2-1b would allow some, but not all, fishermen that catch smooth dogfish to avail themselves of the limited fins-attached exception. Thus, this sub-alternative would allow fishermen the flexibility to increase the profitability of each trip and allow individual operators the flexibility to make decisions, before the trip and while on the water, as to the retained catch composition that would maximize ex-vessel revenues. As outlined in Sub-Alternative A2-1e, NMFS now prefers the 25 percent catch composition threshold. However, Sub-Alternative A2-1b also prohibits the retention of other sharks when removing smooth dogfish fins at sea, which is no longer a preferred management measure. Therefore, NMFS does not prefer this sub-alternative.

Sub-Alternative A2-1c would require smooth dogfish to comprise 75 percent of the retained catch on board in order for fishermen to avail themselves of the limited fins-attached exception. Because some fishermen catch smooth dogfish while fishing for other species, this sub-alternative is likely to have short and long-term direct, minor, adverse socioeconomic impacts since it would reduce flexibility, though not to the extent that Sub-Alternative A2-1d would. The number of mixed species trips where fishermen could take advantage of the fins-attached exception would decrease.

Although this sub-alternative was preferred in the Draft EA, based on public comment, new information, and updated analyses, NMFS no longer prefers this alternative. These new updated analyses showed that the smooth dogfish fishery is more mixed than considered in the Draft EA and highlighted that considerable dead discards could occur and revenue be lost by fishermen directing effort on smooth dogfish, but retaining less than 75 percent smooth dogfish. Based on new analyses and public comment, NMFS has found that a 75 percent catch composition requirement may be too high of a threshold to characterize directed effort in the smooth dogfish fishery, given the mixed nature of the fishery. Additionally, this sub-alternative would prohibit the retention of other sharks when removing smooth dogfish fins at sea; a measure that is no longer preferred. For these reasons, NMFS no longer prefers Sub-Alternative A2-1c.

Sub-Alternative A2-1d would require smooth dogfish to comprise 100 percent of the retained catch on board the vessel in order for fishermen to avail themselves of the fins-attached exception for smooth dogfish. This sub-alternative would likely have short and long-term direct, minor negative socioeconomic impacts to those fishermen that catch smooth dogfish in conjunction with other species because it would reduce the number of mixed trips able to take advantage of the fins-attached exception, reducing flexibility in deciding which species to retain on each fishing trip and possibly reducing profitability. This sub-alternative could enhance enforcement efforts since catch would not need to be weighed; however, the enforcement benefits are expected to be minor. Accordingly, NMFS does not prefer this sub-alternative at this time.

Sub-Alternative A2-1e, the preferred sub-alternative, is a new alternative that was added after the Draft EA stage and is based on public comments, updated data, and additional analyses. This sub-alternative is similar to Sub-Alternative A2-1b, except that fishermen removing smooth dogfish fins at sea may also retain other sharks provided those sharks' fins remain naturally to the carcass through offloading. As described above, based on public comments, NMFS undertook additional data analyses with updated data to confirm the mixed nature of the smoothhound shark fishery and how well catch composition reflects target species. The analyses indicated there was evidence of a change in catch composition of other sharks caught as the percentage of smooth dogfish retained increased (

Table 4.1). This trend was particularly noticeable with pelagic sharks and with spiny dogfish, with an increase in pelagic sharks and a decrease in spiny dogfish retained with increased retention of smooth dogfish. Such variability in the catch composition supports public comments received suggesting the mixed nature of the smooth dogfish fishery, with concerns about potential loss of revenue if other valuable shark species could not be retained. Additionally, when trips were binned based on the amount of smooth dogfish retained, it was possible to determine the amount of gross revenue that would be lost if fishermen with less than 75 percent smooth dogfish onboard were unable to retain other sharks (Table 4.2 – Table 4.5). Trips that landed between 26 to 50 percent smooth dogfish could lose 26.6 percent of gross revenue, while trips that landed between 51 to 75 percent smooth dogfish could lose 14.6 percent of gross revenue. Additionally, there could be additional losses in overall revenue due to a potential reduction in quality of smooth dogfish meat if fishermen in either of the aforementioned bins could not process smooth dogfish at sea due to a catch composition requirement of 75 percent. These new analyses showed that the smooth dogfish fishery is more mixed than considered in the Draft EA and highlighted that a considerable amount of revenue could be lost by fishermen under the 75 percent catch composition alternative.

Table 4.1 Catch composition of “other sharks” caught while fishing for smooth dogfish

	% SCS	% LCS	% Pelagic	% Spiny	Other sharks (lb dw)
0 - 25% smooth dogfish trips	0.17%	0.28%	0.67%	98.88%	1,437,926
26-50% smooth dogfish trips	4.31%	0.48%	4.68%	90.53%	78,546
51-75% smooth dogfish trips	4.56%	3.21%	30.17%	62.06%	42,956
76-100% smooth dogfish trips	4.48%	9.65%	62.96%	22.91%	23,360

Table 4.2 Gross revenues from trips retaining 0 to 25% smooth dogfish

0 to 25% Smooth Dogfish Retained (n = 1,999 trips)			
	lb dw	Average Ex-Vessel Price	Gross Revenue
Smooth dogfish meat	183,392	\$0.72	\$132,042.24
Smooth dogfish fins	22,007	\$1.62	\$35,651.40
Spiny dogfish meat	1,421,797	\$0.21	\$298,577.38
Spiny dogfish fins	71,090	\$5.78	\$410,899.35
LCS meat	4,061	\$0.71	\$2,883.13
LCS fins	203	\$9.26	\$1,880.12
Pelagic meat	9,639	\$1.46	\$14,072.58
Pelagic fins	482	\$2.34	\$1,127.73
SCS meat	2,429	\$0.53	\$1,287.60
SCS fins	121	\$5.78	\$702.11
Other finfish	3,219,247	--	--
Subtotal Other sharks:			\$36,962.30
Subtotal Smooth Dogfish:			\$215,887.10

Table 4.3 Gross revenues from trips retaining 26 to 50% smooth dogfish

26 to 50% Smooth Dogfish Retained (n = 322 trips)			
	lb dw	Average Ex-Vessel Price	Gross Revenue
Smooth dogfish meat	134,718	\$0.72	\$96,996.96
Smooth dogfish fins	16,166	\$1.62	\$26,189.18
Spiny dogfish meat	71,108	\$0.21	\$14,932.73
Spiny dogfish fins	3,555	\$5.78	\$20,550.28
LCS meat	375	\$0.71	\$266.60
LCS fins	19	\$9.26	\$173.85
Pelagic meat	3,678	\$1.46	\$5,369.62
Pelagic fins	184	\$2.34	\$430.31
SCS meat	3,384	\$0.53	\$1,793.75
SCS fins	169	\$5.78	\$978.10
Other finfish	146,362	--	--
Subtotal Other sharks:			\$44,495.25
Subtotal Smooth Dogfish:			\$123,186.14

Table 4.4 Gross revenues from trips retaining 51 to 75% smooth dogfish

51 to 75% Smooth Dogfish Retained (n = 243 trips)			
	lb dw	Average Ex-Vessel Price	Gross Revenue
Smooth dogfish meat	236,097	\$0.72	\$169,989.84
Smooth dogfish fins	28,332	\$1.62	\$45,897.26
Spiny dogfish meat	26,658	\$0.21	\$5,598.18
Spiny dogfish fins	1,333	\$5.78	\$7,704.16
LCS meat	1,377	\$0.71	\$977.67
LCS fins	69	\$9.26	\$637.55
Pelagic meat	12,961	\$1.46	\$18,923.06
Pelagic fins	648	\$2.34	\$1,516.44
SCS meat	1,960	\$0.53	\$1,038.80
SCS fins	98	\$5.78	\$566.44
Other finfish	86,117	--	--
Subtotal Other sharks:			\$36,962.30
Subtotal Smooth Dogfish:			\$215,887.10

Table 4.5 Gross revenues from trips retaining 76 to 100% smooth dogfish

76 to 100% Smoothhounds Retained (n = 1,240 trips)			
	lb dw	Average Ex-Vessel Price	Gross Revenue
Smooth dogfish meat	2,104,173	\$0.72	\$1,515,004.56
Smooth dogfish fins	252,501	\$1.62	\$409,051.23
Spiny dogfish meat	5,350	\$0.21	\$1,123.60
Spiny dogfish fins	268	\$5.78	\$1,546.29
LCS meat	2,253	\$0.71	\$1,599.78
LCS fins	113	\$9.26	\$1,043.23
Pelagic meat	14,709	\$1.46	\$21,474.82
Pelagic fins	735	\$2.34	\$1,720.93
SCS meat	1,048	\$0.53	\$555.19
SCS fins	52	\$5.78	\$302.74
Other finfish	98,952	--	--
Subtotal Other sharks:			\$29,366.58
Subtotal Smooth Dogfish:			\$1,924,055.79

Alternative A2-1e would result in direct short and long-term minor beneficial socioeconomic impacts. Because smooth dogfish could be processed at sea when they make up at least 25 percent of the catch, Sub-Alternative A2-1e would allow many, but not all, fishermen that catch smooth dogfish to avail themselves of the limited fins-attached exception. Thus, this sub-alternative would allow fishermen the flexibility to increase the profitability of each trip and allow individual operators the flexibility to make decisions, before the trip and while on the water, as to the retained catch composition that would maximize ex-vessel revenues. Due to the highly mixed nature of the fishery, NMFS believes the lower, 25-percent catch composition threshold is an appropriate level to use to identify those fishermen who are fishing for smooth dogfish. In addition, the ability for fishermen to retain other sharks on board when removing smooth dogfish fins at sea provides additional economic benefits compared to the impacts associated with those in Alternative A2-1b. NMFS believes that a 25 percent catch composition more accurately characterizes fishermen directing effort on smooth dogfish, non-smooth dogfish sharks provide economic benefits and a no-other-sharks-on-board prohibition could increase regulatory discards, NMFS now prefers Alternative A2-1e.

State Fishing Permit Requirement Sub-Alternatives

Sub-Alternative A2-2a would require federal smoothhound permitted fishermen to obtain a smooth dogfish-specific state commercial fishing license in order to be able to remove smooth dogfish fins at sea. The requirement to obtain a smooth dogfish-specific state commercial fishing license may be more difficult for fishermen who are in states that do not have smooth dogfish-

specific permits in place. This sub-alternative could result in the increased burden on fishermen to obtain another permit, and depending upon the state, could result in an additional permit charge which could have short and long-term direct, minor negative socioeconomic impacts. Since most permits are generally valid for one year, fishermen would likely need to renew the permit each year for as long as they wish to retain smoothhound sharks and remove the fins while at sea. Because not all states have smooth dogfish-specific permits, creating one could introduce a regulatory burden, and because all states that noted a preference on this issue prefer Sub-Alternative A2-2b, NMFS does not prefer this alternative.

Sub-Alternative A2-2b, the preferred sub-alternative, would likely have neutral short and long-term direct impacts. Under this sub-alternative, fishermen would be required to hold a state commercial fishing permit appropriate for the harvest of smooth dogfish in state waters. It is likely, however, that most smooth dogfish fishermen already hold this type of state permit and would be unaffected by this requirement (neutral direct short and long-term socioeconomic impacts). This sub-alternative would likely be the most straightforward for compliance since the permit requirement would be simpler than Sub-Alternative A2-2a and all states that noted a preference on this issue prefer Sub-Alternative A2-2b. Thus, NMFS prefers this sub-alternative.

Short-term and long-term indirect socioeconomic impacts resulting from all sub-alternatives of Alternative A2 would be expected to be neutral as these sub-alternatives address measures to facilitate enforcement and, although some alternative may have minor direct impacts to fishermen, businesses supporting the smooth dogfish fishery (e.g. bait and tackle sales, ice suppliers, dealers) are unlikely to see any substantial social or economic impacts resulting from these sub-alternatives.

Geographic Applicability of Exception Sub-Alternatives

NMFS considered two alternatives for Geographic Application of the SCA exception. Under Sub-Alternative A2-3a, the exception would apply along the Atlantic Coast and the Florida west coast in the Gulf of Mexico. As explained earlier, as a practical matter, smooth dogfish and other smoothhound species are indistinguishable in the field. The best available scientific information indicates that smooth dogfish are the predominant smoothhound shark species along the Atlantic coast (only a handful of Florida smoothhound have ever been recorded in the Atlantic and those have been near southern Florida) (Giresi et al 2014). In the Gulf of Mexico, however, there are at least three different smoothhound species, with no practical way to readily distinguish among them. This sub-alternative would apply the smooth dogfish exception 50 nautical miles from the baseline of all the States that fall under the SCA definition of “State,” including the west coast of Florida in the Gulf of Mexico. This sub-alternative could result in smoothhound sharks other than smooth dogfish indirectly falling under the exception, because they cannot be distinguished from smooth dogfish. NMFS expects neutral direct and indirect short and long-term socioeconomic impacts because, at this time, there is no commercial fishery for smooth dogfish in the Gulf of Mexico. However, NMFS does not prefer this sub-alternative because, if a fishery does develop, species misidentification could result in enforcement action.

Under Sub-Alternative 3b, the preferred sub-alternative, the exception would only apply along the Atlantic coast and not the Florida west coast in the Gulf of Mexico. By limiting the exception to the Atlantic region, as specified at § 635.27 (b)(1), this sub-alternative would ensure that the exception would only apply where the population is almost entirely smooth dogfish, reducing identification problems and inadvertent finning violations. NMFS expects neutral direct and indirect short and long-term socioeconomic impacts because, at this time, there is no commercial fishery for smooth dogfish in the Gulf of Mexico. NMFS prefers this sub-alternative because it simplifies enforcement and compliance without adverse impacts.

4.1.3 CONCLUSION

NMFS prefers Alternative A2 and Sub-Alternatives A2-1e, A2-2a, and A2-3b because they meet NMFS' objectives for the implementation of the smooth dogfish-specific provisions of the SCA by narrowly focusing the at-sea fin removal allowance on the smooth dogfish fishery as specified by the SCA and would provide a flexible, profitable, and sustainable smooth dogfish fishery.

4.2 SMOOTHHOUND SHARK COMMERCIAL QUOTAS

As described in Section 2.2, the following five alternatives consider the quota provisions for the smoothhound shark fishery based on the availability of new landings data and the results of the SEDAR 39 smoothhound shark stock assessments. In addition to the base quota, a small smoothhound shark research set-aside quota (6 mt ww) was considered and analyzed in Amendment 3. This action does not consider altering the research set-aside quota that was finalized in Amendment 3, and therefore it is not addressed in this impact analysis.

- Alternative B1:** Implement a smooth dogfish quota that is equal to the maximum annual landings from 1998 – 2007 plus two standard deviations (715.5 mt) (established in Amendment 3)
- Alternative B2** Establish a “rolling quota” each year based upon the previous five years of available data. Annual quota would be equal to maximum landings during the previous five years of available data plus two standard deviations (2016 quota would be 1,729 mt based on 2010-2014 data).
- Alternative B3** Establish a smoothhound quota that is equal to the maximum annual landings from 2004-2014 plus two standard deviations (1,733.9mt dw)
- Alternative B4** *Establish a smoothhound shark TAC of 1,430.6 mt dw and commercial quota of 1,201.7 mt dw in the Atlantic region, and a TAC of 509.6 mt dw and commercial quota of 336.4 mt dw in the Gulf of Mexico region based*

on results of the 2015 smoothhound shark stock assessment- Preferred Alternative

4.2.1 ECOLOGICAL IMPACTS

Given the current open-access nature of the fishery, the implementation of *any* quota alternative could potentially have short- and long-term beneficial ecological impacts as it would provide a mechanism to regulate the amount of fishing mortality on the stocks and subsequent effects on EFH and protected resources.

Alternative B1 would implement the quota finalized in Amendment 3 (715.5 mt dw). Establishing a smoothhound shark quota equal to the maximum annual landing between 1998-2007 plus two standard deviations (1,577,319 lb dw) would maintain the quota within the scope of landing levels analyzed in Amendment 3, though the quota would be lower than reported landings from 2009 through 2011. While the quota under this alternative would be lower than reported landings during the aforementioned period, based on results of the 2015 stock assessments, this quota would be capped at a level significantly below that necessary to sustainably harvest smoothhound sharks stocks or to decrease the likelihood that the stocks would become overfished. Thus, this conservative quota alternative could have direct, moderate beneficial short- and long-term ecological impacts on the stock by capping effort and reducing overall landings through quota restrictions, which may benefit the smoothhound shark stocks. As the smoothhound shark fishery is a mixed fishery, capping effort would also have indirect, moderate beneficial ecological impacts on a number of the other shark and finfish species collectively harvested on smoothhound shark directed trips. Alternative B1 would establish a quota based on past landings data and would not consider the results of the SEDAR 39 smoothhound shark stock assessments. Since this alternative would not establish a scientifically-based quota and does not take into consideration separate management of the Gulf of Mexico and Atlantic stocks, NMFS does not prefer this alternative.

Alternative B2 would implement a “rolling quota” each year based on the previous five years of available data. Under this alternative, the annual quota would be equal to maximum annual landings during the previous five years of available data plus two standard deviations. Using this methodology, the 2016 quota would 1,729 mt dw based on data from 2010-2014. At this time, the quota considered under this alternative is higher than the scientifically-based regional Atlantic smoothhound quota, where the majority of landings occur. This quota alternative could also potentially allow for the substantial growth of the fishery should landings increase in consecutive years. With potential for the quota to increase exponentially if landings continue to increase in the future for smoothhound sharks, there would be increased likelihood of these stocks becoming overfished. Thus, Alternative B2 is expected to have direct, moderate adverse ecological impacts, particularly since there is the potential for the quota to increase above sustainable levels under the rolling quota scheme. Alternative B2 would establish a quota based on past landings data and would not consider the results of the SEDAR 39 smoothhound shark stock assessments. Since this alternative would not establish a scientifically-based quota and does not take into consideration

separate management of the Gulf of Mexico and Atlantic stocks, NMFS does not prefer this alternative.

Alternative B3 would establish a smoothhound shark quota of 1,733.9 mt dw which is equal to the maximum annual landings from the ten most recent years of available data (*i.e.* 2005-2014) plus two standard deviations. The quota alternative that was finalized in Amendment 3 was selected because NMFS, with guidance from the NEFSC and SEFSC, determined that adding two standard deviations to the maximum annual landings was the best way to account for any underreporting in the fishery while minimizing changes in catch levels and catch rates in the smoothhound shark fishery. This alternative would set the quota above reported landing levels, in order to account for the fact that landings data could be underestimated due to underreporting, with the intention of allowing the fishery to continue at current levels and minimizing changes to the fishery while collecting information on catch and participants. Nonetheless, this alternative is expected to have direct minor adverse ecological impacts on the smoothhound stock as it is higher than the Atlantic TAC recommended under the SEDAR 39 stock assessments. Although the Alternative B3 quota would be applicable across both regions, the fishery occurs almost exclusively in the Atlantic, thus, nearly all landings counted against the quota would occur in the Atlantic region. While there is not the potential for exponential growth under this quota alternative, unlike the rolling quota under Alternative B2, the quota under this alternative is still higher than either regional quota for the Atlantic or Gulf of Mexico calculated from the SEDAR 39 assessments. As such, levels of harvest under this alternative would be greater than that recommended by the stock assessments. Although Alternative B3 was preferred in the Draft EA, based on public comment, and the results of SEDAR 39, NMFS no longer prefers this alternative. Commenters were concerned that the quota under Alternative B3 was not based on a stock assessment and thus, requested that NMFS wait for SEDAR 39 to be completed and implement a scientifically-based quota consistent with these results. While under this alternative landings would be constrained with a cap that prevents uncontrolled growth of the fishery, since it does not establish a scientifically-based quota and does not take into consideration separate management of the Gulf of Mexico and Atlantic stocks, NMFS does not prefer this alternative.

Alternative B4 would implement TACs and commercial quotas based on final results of the SEDAR 39 stock assessments. Specifically, under Alternative B4, the preferred alternative, NMFS would establish a smoothhound shark TAC of 1,430.6 mt dw and a commercial quota of 1,201.7 mt dw in the Atlantic region, and a TAC of 509.6 mt dw and commercial quota of 336.4 mt dw in the Gulf of Mexico region, based on results of the 2015 smoothhound shark stock assessments (*i.e.*, SEDAR 39). . During the public comment period on the proposed rule and draft EA, commenters expressed concern about implementing a smoothhound shark commercial quota based on historical landings, and requested that NMFS wait for SEDAR 39 to be completed. Based on these comments, in this final EA, NMFS now prefers region-specific commercial quotas based on SEDAR 39. Specifically, an overall TAC of 1,940.2 mt would be implemented as follows: an Atlantic regional smoothhound shark TAC of 1,430.6 mt dw with a commercial quota of 1,201.7 mt dw, and a Gulf of Mexico regional smoothhound shark TAC of 509.6 mt dw with a commercial quota of 336.4 mt dw.

Although the TAC identified in the final rule and EA is inclusive of sources of mortality other than a commercial quota (which is thus necessarily less than the TAC), the overall TAC in the final rule and EA is only 201 mt more than the 1,739.9 mt dw commercial quota from the proposed rule. Thus, establishing a TAC of this level does not raise concerns about requiring additional environmental analyses or additional regulatory action, which may have been the case if the stock assessment had identified a significantly greater allowable TAC (and resultant commercial quota) than those anticipated and analyzed in the proposed rule. The proposed rule presented and analyzed an alternative that anticipated that the stock assessment would determine that “the commercial smoothhound shark quota should be set at approximately equal to or greater than 1,739.9 mt dw” As acknowledged in the EA, even with a higher quota, effort is likely to remain the same relative to current effort. Thus the ecological, economic and social impacts of quota establishing a quota greater than 1,739.9 mt would be within the range analyzed in the Draft EA. In the final rule, the combined regional commercial quotas (1,538.1 mt) are twelve percent less than the original proposed overall quota (1,739.9 mt) but higher than recent annual commercial landings. Both the commercial quotas and the overall TAC in this final rule are within the range of actions considered in the proposed rule and analyzed in the draft EA.

With regard to the regional quota approach, in the Draft EA, NMFS acknowledged that the stock could be split between two regions based on the SEDAR 39 stock assessments and that the analyses performed for one over-arching quota could apply to multiple regions. Based on information supplied during the Data Workshop for SEDAR 39, including tagging data, the stock assessment scientists decided to split smoothhound sharks into two regional stocks, with smooth dogfish in the Atlantic and smooth dogfish, Florida smoothhound, and Gulf smoothhound in the Gulf of Mexico. As noted in Section 3.4 and as confirmed in the SEDAR 39 stock assessments, the smoothhound shark fishery primarily occurs in the Mid-Atlantic region and is composed entirely of smooth dogfish catch. In the Gulf of Mexico region, only a very small, negligible, number of commercial landings occur and there is no commercial fishery. Thus, Alternative B4 quota analyses were informed entirely by data from the Atlantic region including catch location, price data, landings data, and fishery operations. If NMFS applied the single over-arching quota analyses to regional smoothhound shark quotas at the Draft stage, there would have been no information available for the Gulf of Mexico and, with no commercial fishery in that region, a finding of neutral impact. In the Atlantic region where the fishery is located, all impacts detailed in the Draft EA would apply since all data, including catch location, price data, landings data, and fishery operations, came from the Atlantic. Furthermore, the Atlantic smoothhound shark stock assessment would not have resulted in any new impacts since the assessment found that current harvest levels and effort are sustainable with no changes required. In summary, the impact analyses detailed in the Draft EA under Alternative B4, scenario 4 are equally applicable to two regional quotas as to one over-arching quota. The changes in this final EA are consistent with the conservation and management objectives of the Magnuson-Stevens Act and Amendment 9 and based on the best scientific information available. Implementing TACs based on the stock assessment results would ensure continued sustainable harvest of smoothhound sharks in the Atlantic and Gulf of Mexico regions and increase the likelihood of maintaining healthy smoothhound shark stocks in both regions.

Implementing science-based quotas would ensure continued sustainable harvest of smoothhound sharks in the Atlantic and Gulf of Mexico regions and increase the likelihood of maintaining healthy smoothhound shark stocks in both regions. Additionally, recent total landings under both regionals would be less than the quotas considered under either Alternative B2 or B3. Because commercial harvest of smoothhound sharks would be capped at a level recommended by scientific advice, Alternative B4 would provide short and long-term minor direct beneficial ecological impacts to the smoothhound shark stocks. This alternative would also likely have short and long-term neutral indirect ecological impacts on incidentally-caught species. As these regional quotas are below the recent annual landings for smoothhound sharks, they would likely result in similar levels of interactions with incidentally-caught species as are currently occurring in the smoothhound shark fisheries

4.2.2 SOCIAL AND ECONOMIC IMPACTS

Alternative B1 would implement the quota measures identified in Amendment 3 (715.5 mt dw) based on the calculation of quotas from a historical period in the fishery (1998 to 2007). The quotas would be calculated by taking maximum landings between 1998 and 2007, and adding two standard deviations. In Amendment 3, this alternative was selected in part because NMFS determined that adding two standard deviations to the maximum landings data available at that time best accounted for underreporting in the fishery. However, this alternative would not account for recent years of data in which reported landings were significantly higher (2009 through 2011). Because the actual reported landings are higher than this quota, fishermen would be prevented from fishing at current levels, resulting in lost revenues. In 2010 when landings recently peaked, total smoothhound shark landings totaled 2,688,249 lb dw (ACCSP data) resulting in ex-vessel revenues across the entire smoothhound sink gillnet fishery of \$2,458,135 (2,688,249 lb of meat, 322,590 lb of fins). Implementation of the Amendment 3 quota (715.5 mt dw) would result in ex-vessel revenues of only \$1,442,367 (1,577,391 lb of meat, 189,287 lb of fins), which is \$1,015,768 less than current ex-vessel revenues. Both of these estimates assume \$1.62/lb for fins, \$0.72/lb for meat, and a 12 percent fin-to-carcass ratio (prices based on 2014 dealer data and fin-to-carcass ratio based on the SCA).

Alternative B1 is likely to have direct, minor adverse socioeconomic impacts in the short term because the quota under Alternative B1 does not reflect current reporting landing levels of smoothhound sharks. The VTR data for the Northeastern United States shows that an average of 32 vessels between 2003 and 2014 directed on smoothhound shark (Table 3.5). However, these vessels fish opportunistically on multiple species of coastal migratory fish and elasmobranchs, and it is unlikely that any sector within the fishing industry in the Northeast (fisherman, dealer, or processor) relies wholly upon smoothhound sharks. Longer-term impacts are expected to be neutral given the small size of the fishery and the generalist nature of the sink gillnet fishery. Alternative B1 would establish a quota based on past landings data and would not consider the results of the SEDAR 39 smoothhound shark stock assessments. Since this alternative would not establish a scientifically-based quota, NMFS does not prefer this alternative.

Alternative B2 would establish a rolling smoothhound quota set above the maximum annual landings for the preceding five years; this quota would be recalculated annually to account for the most recent landing trends within the smoothhound complex (2016 quota would be 1,729 mt dw based on 2010-2014 data). The 2016 quota under this alternative is likely to result in annual revenues of \$3,485,466 (3,811,753 lb of meat, 457,410 lb of fins) assuming an ex-vessel price of \$1.62 lb for fins and \$0.72 lb for meat. This alternative is consistent with the intent of Amendment 3, which was to minimize changes to the fishery while information on catch and participants was collected. When compared to Alternative B1, this alternative would allow the fishery to continue at the rate and level observed in recent years into the future without having to be shut down prematurely. Because landings in the smoothhound fishery are likely underreported, it is unclear at this time whether the increase in reported landings is due to existing smoothhound fishermen reporting in anticipation of future management or increased effort (e.g., new entrants into the fishery). Given the fishery would expect to operate as it currently does, NMFS anticipates in the short term, indirect, minor, positive socioeconomic impacts for shark dealers and processor. While a rolling quota would cover all current reporting and likely cover underreporting of landings, the fishery could grow exponentially if reporting landings continue to increase over consecutive years. Long term direct socioeconomic impacts of this alternative when compared to the Alternative B1 may be minor and adverse, if a constantly changing, and likely increasing, quota results in stock declines and in turn a potential loss of revenue to the fishing industry. The rolling quota could also lead to lower quotas in consecutive years if landings decrease over time. Alternative B2 would establish a quota based on past landings data and would not consider the results of the SEDAR 39 smoothhound shark stock assessments. Since this alternative would not establish a scientifically-based quota, NMFS does not prefer this alternative.

Alternative B3 would create a smoothhound quota equal to the maximum annual landings from 2005-2014 plus two standard deviations and would equal 1,733.9 mt dw. This alternative establishes a smoothhound quota two standard deviations above the maximum annual landings reported over the last ten years. This quota would result in potential annual revenues in the entire fishery of \$3,495,345 (3,822,556 lb of meat, 458,707 lb of fins) assuming an ex-vessel price of \$1.62 lb for fins and \$0.72 for meat. Per the intent of Amendment 3, smoothhound management measures were designed to collect data while minimizing changes in catch levels and catch rates in the fishery. Setting the quota above current landings levels should allow the fishery to continue throughout the year, rather than be closed for part of the year, allowing NMFS to collect year-long information that can be used in future stock assessments. NMFS anticipates direct moderate, beneficial short- and long-term socioeconomic impacts with implementing a quota based on maximum recent annual landings plus two standard deviations to allow for a buffer for potential unreported landings during that time. This would allow the fishery to continue at the landings rate and level reported in recent years. Because landings in the smoothhound fishery may be underreported, it is unclear at this time whether the increase in reported landings is due to existing smoothhound fishermen reporting in anticipation of future management or increased effort. Under this alternative, NMFS anticipates the fishery would operate as it currently does resulting in indirect moderate positive socioeconomic

impacts in the short- and long-term for shark dealers and processors. However, Alternative B3 would establish a quota based on past landings data and would not consider the results of the SEDAR 39 smoothhound shark stock assessments. Since this alternative would not establish a scientifically-based quota, NMFS does not prefer this alternative.

Under Alternative B4, the preferred alternative, NMFS would establish an Atlantic regional smoothhound commercial quota of 1,201.7 mt dw and a Gulf of Mexico regional smoothhound shark quota of 336.4 mt dw based on results of the 2015 stock assessments. These quotas would result in annual revenues of \$2,422,251.54 (2,649,006 lb of meat, 317,881 lb fins), assuming an ex-vessel price of \$1.62 lb for fins and \$0.72 lb for meat. These quotas are both consistent with the intent of Amendment 3, which was to minimize changes to the fishery while information on catch and participants was collected, while also implementing science-based quotas to ensure continued sustainable harvest of smoothhound sharks in the Atlantic and Gulf of Mexico regions. NMFS anticipates short term, direct minor beneficial socioeconomic impacts under this alternative given the combined commercial quotas for the Atlantic and Gulf of Mexico regions would result in increased revenues compared to the commercial quota under Alternative B1, though lower than those anticipated under Alternatives B2 or B3. These commercial quotas would allow the fishery to continue at the rate and level observed in recent years into the future without having to be shut down prematurely. The quotas under Alternative B4 would maintain the smoothhound stocks at sustainable levels, providing direct beneficial socioeconomic impacts in the long-term. Given the fishery would expect to operate as it currently does, NMFS anticipates in the short term, indirect, minor, beneficial socioeconomic impacts for shark dealers and processor. Since this alternative establishes scientifically-based quotas and would result in beneficial socioeconomic impacts, NMFS prefers this alternative.

4.2.3 CONCLUSION

NMFS prefers Alternative B4 because it is based on the results of the SEDAR 39 smoothhound shark stock assessments, allows the smoothhound shark fishery to continue at its current landings level, is consistent with the intent and approach of Amendment 3, would not unnecessarily limit fishermen or close the fishery, and would allow NMFS to gather more data and information. Further, it implements scientifically based quotas in the Atlantic and Gulf of Mexico regions that will maintain these stocks at sustainable levels.

4.3 BIOLOGICAL OPINION IMPLEMENTATION

The following four alternatives consider implementation of TC 4 contained in the 2012 Atlantic Shark and Smoothhound Shark Fisheries Biological Opinion (BiOp), which requires all Atlantic shark and smoothhound gillnet fishermen to either check their gear at least every 2.0 hours, or soak their gear no longer than 24 hours. Atlantic shark fishermen are currently required to conduct net checks at least every 2 hours to look for and remove any protected species. NMFS prefers Alternative C4.

- Alternative C1:** No Action. Do not take further action to implement TC 4 in the smoothhound shark fishery
- Alternative C2** Require smoothhound shark gillnet fishermen to conduct net checks at least every 2 hours to look for and remove any sea turtles, marine mammals, smalltooth sawfish, or Atlantic sturgeon found in the net
- Alternative C3** Establish a gillnet soak time limit of 24 hours for smoothhound shark permit holders; fishermen holding both a directed Atlantic shark limited access permit and a smoothhound shark permit must abide by both soak time restrictions and net check requirements
- Alternative C4** *Establish a soak time limit of 24 hours for sink gillnet gear and a 2 hour net check requirement for drift gillnet gear in the Atlantic shark and smoothhound shark fisheries – Preferred Alternative*

4.3.1 ECOLOGICAL IMPACTS

Alternative C1 would not implement the BiOp TC 4 that would require all smoothhound shark permit holders to either check their gillnet gear at least every 2.0 hours or limit their soak time to no more than 24 hours. This alternative would have neutral short and long-term direct ecological impacts to smoothhound sharks. Under Alternative C1, smoothhound shark fishermen would continue to fish as they do now, which would not affect catch rates or levels or impact the smoothhound shark stock. Similarly, this alternative would result in neutral short and long-term indirect ecological impacts. Since effort and catch would not be impacted, no indirect impacts to incidentally caught fish species are expected. However, adverse ecological impacts to protected resources would be expected under this alternative. Gillnet soak time limits and net checks were specifically required under the 2012 Shark BiOp for the Atlantic shark and smoothhound shark fisheries to minimize impacts to protected resources. While gillnet soak time restrictions and net check requirements would mitigate bycatch mortality of a variety of protected resources, these measures were specifically designed to protect sea turtles and Atlantic sturgeon that might be incidentally captured in this gear type. Although the current net check requirement would remain in place for the Atlantic shark gillnet fishery, adoption of Alternative C1 would not implement any net checks requirements or soak time restrictions for fishermen with smoothhound shark permits, likely resulting in short and long-term minor adverse impacts on protected resources. Because this alternative does not meet the requirements of the TC 4 of the 2012 Shark BiOp, NMFS does not prefer this alternative at this time.

Alternative C2 would require smoothhound shark fishermen to conduct net checks at least every 2.0 hours to look for and remove any protected species. This alternative would impact smoothhound shark fishing effort since it would require fishermen to change current fishing practices.

Some smoothhound shark gillnet fishermen fish multiple nets at one time or deploy their net(s), leave the vicinity, and return at a later time. Alternative C2 would require these fishermen to check each gillnet at least once every 2 hours, making fishing with multiple nets or leaving nets unattended difficult. The result would be a reduction in effort, which, if the reduction is large enough, could lead to a slower catch rate of smoothhound sharks and a reduction in overall landings. This resulting reduction in smoothhound shark fishing mortality would likely lead to direct neutral short-term ecological impacts since the stock can likely sustain current harvest levels. However, in the long-term, direct minor beneficial ecological impacts would be expected since this alternative would likely slow the growth of the fishery because catch rates would be reduced if fishermen have to modify fishing methods. The reduction in effort would also lead to short and long-term indirect minor beneficial ecological impacts since fishing impacts to incidentally-caught fish species would be proportionally reduced as a result of the implementation of net checks and reduced effort. This alternative would likely have short and long-term minor beneficial impacts on protected resources since it would implement one of the TCs of the 2012 BiOp to minimize impacts on protected resources. Requiring smoothhound shark fishermen to check their gillnets at least every two hours, as currently required of all other Atlantic shark fishermen, would limit the amount of a time a protected resource would be entangled in a gillnet, potentially decreasing bycatch mortality. However, as noted above, this alternative would alter the fishing methods of some smoothhound shark fishermen. Since other alternatives comply with the 2012 Shark BiOp TC 4 and minimize impacts to protected resources while not dramatically altering current smoothhound shark fishing methods, NMFS does not prefer this alternative at this time.

Alternative C3 would both establish a gillnet soak time limit of 24 hours for smoothhound shark permit holders and maintain the net-check requirement for Atlantic shark limited access permit holders. Under this alternative, fishermen holding both an Atlantic shark limited access permit and a smoothhound shark permit must abide by both the 24 hour soak time restriction and conduct net checks at least every 2 hours. This alternative would likely result in short and long-term, direct and indirect, neutral ecological impacts. Requiring smoothhound shark fishermen to limit gillnet soak times to 24 hours would not change current fishing effort, catch levels, or catch rates. For fishermen with both permits, this alternative could reduce smoothhound shark fishing effort since it would require those fishermen to change current fishing practices. However, any reductions in effort would likely be small since only fishermen with both permits would be affected and so ecological impacts to smoothhound sharks and incidentally-caught fish species are likely to be neutral. This alternative would likely have short and long-term minor beneficial impacts on protected resources since it would implement one of the TCs of the 2012 Shark BiOp to minimize impacts on protected resources. Limiting gillnet soak times to 24 hours would limit the amount of time an entangled protected species was caught in the gear, which is particularly important for Atlantic sturgeon that experience higher mortality after being entangled for greater than 24 hours. This alternative would create a disadvantage for smoothhound fishermen that hold both permits since they would need to check their nets at least every two hours but fishermen without a shark permit would not. Since this alternative does not have any ecological benefits and disadvantages a sub-group of smoothhound shark fishermen, NMFS does not prefer this alternative at this time. Although this alternative would

provide benefits to protected resources by complying with the 2012 BiOp, other alternatives that are less disruptive would provide equal benefits.

Alternative C4, the preferred alternative, would establish a soak time limit of 24 hours for fishermen using sink gillnet gear and a 2 hour net check requirement for fishermen using drift gillnet gear in the Atlantic shark and smoothhound shark fisheries. Drift gillnets would be defined as those that are unattached to the ocean bottom with a float line at the surface and sink gillnet gear would be defined as those with a weight line that sinks to the ocean bottom, has a submerged float line, and is designed to be fished on or near the bottom. Most smoothhound shark gillnet fishermen would be required to limit soak times to 24 hours since they primarily use sink gillnet gear. This requirement would not significantly change smoothhound shark fishing practices. With regard to other Atlantic shark fishermen, fishermen who use sink gillnet gear would be required to limit soak times to 24 hours and those that use drift gillnets would be required to perform net checks at least every 2 hours. Currently, all Atlantic shark fishermen that use gillnet gear to fish for or who are in possession of any large coastal, small coastal, or pelagic shark, regardless of gillnet type, are required to perform net checks at least every 2 hours (see § 635.21(e)(3)(v)). During the net checks, fishermen are required to look for and remove any sea turtles, marine mammals, or smalltooth sawfish. Only a few Atlantic shark limited access permit holders use gillnet gear and the proportions of each type (e.g. sink or drift) vary in any one year. Fishermen are not required to report the type of gillnet gear used, so the proportion of each type is best estimated using data from observed gillnet trips, although it is important to note that not all observed trips targeted sharks. From 2009 through 2012, the portion of gillnet trips that used sink gillnet gear ranged from a low in 2009 of 47 percent, up to 87 percent, 100 percent, and 93 percent in 2010-2012, respectively. 2014 information is not provided because the number of shark drift gillnet trips was insufficient to meet the confidentiality threshold (data from NMFS shark gillnet observer reports). For a variety of reasons (e.g., reduced LCS retention limits and gillnet gear fishing restrictions), it appears that the fishery has moved predominately to sink gillnet gear. Shark gillnet fishermen that use sink gillnet gear would no longer be required to perform net checks at least every 2 hours under this alternative. Instead, they would be required to limit soak times to 24 hours. In the 2002 rulemaking that implemented the net checks (July 9, 2002, 67 FR 45393), NMFS stated that the net checks would be unlikely to impact the bycatch of species that are not protected resources. This statement was made because the net checks do not require fishermen to remove or disentangle any animals except protected species during the net checks. In the 2012 Shark BiOp, the requirement to use either net checks or the 24 hour set limitation was determined to ensure that any incidentally taken ESA-listed species are detected and released in a timely manner, reducing the likelihood of mortality. As such, this action would likely result in short and long-term direct minor adverse ecological impacts because the target species, sharks, could remain in the gillnet for longer periods of time before being released, reducing the chances of a live release. Similarly, this alternative could result in short and long-term indirect neutral ecological impacts to non-target, incidentally caught fish species and bycatch because net checks do not require fishermen to remove or disentangle any animals except protected species during the net checks. This alternative would likely have, however, short and long-term minor beneficial impacts on protected resources since it would implement TC 4 of the 2012 Shark BiOp to minimize impacts on protected resources. Since

this alternative complies with the Biological Opinion, has only minor adverse direct and indirect ecological impacts to other species, and allows all smoothhound shark gillnet fishermen to continue current fishing practices (unlike Alternative C3), NMFS prefers Alternative C4 at this time.

4.3.2 SOCIAL AND ECONOMIC IMPACTS

Alternative C1 would not implement the BiOp term and condition that would require all smoothhound shark permit holders to either check their gillnet gear at least every 2.0 hours or limit their soak time to no more than 24 hours. This alternative would likely result in short and long-term neutral direct socioeconomic impacts. Under Alternative C1, smoothhound shark fishermen would continue to fish as they do now and so this alternative would not have economic impacts that differ from the status quo. Similarly, this alternative would likely result in neutral short and long-term indirect socioeconomic impacts since supporting businesses including dealers and bait, tackle, and ice suppliers would not be impacted.

Alternative C2 would require smoothhound shark fishermen using gillnet gear to conduct net checks at least every 2.0 hours to check for and remove any protected species, and would likely result in short and long-term direct moderate adverse socioeconomic impacts. Some smoothhound shark gillnet fishermen fish multiple nets at one time or deploy their net(s), leave the vicinity, and return at some later time. Alternative C2 would require these fishermen to check each gillnet at least once every 2 hours, making fishing with multiple nets or leaving nets unattended difficult. This would likely lead to a reduction in effort and landing levels, resulting in lower ex-vessel revenues. Quantifying the loss of income is difficult without information characterizing the fishery including the number of nets fished. However, limiting the amount of fishing effort in this manner is likely to reduce total landings of smoothhound sharks or, in order to keep landing levels high, extend the length of trips. Landings of incidentally caught fish species could be reduced as well, although under preferred sub-Alternative A2-1c, smoothhound shark fishermen that wish to process at sea could not retain other species. This alternative would not have a large impact on supporting businesses such as dealers or bait, tackle, and ice suppliers since these businesses do not solely rely on the smoothhound shark fishery. The smoothhound shark fishery is small relative to other fisheries. Thus, Alternative C2 would likely result in short- and long-term indirect neutral socioeconomic impacts. Since this alternative would reduce landings without ecological benefit, NMFS does not prefer this alternative at this time.

Alternative C3 would establish a gillnet soak time limit of 24 hours for smoothhound shark permit holders. Under this alternative, fishermen holding both an Atlantic shark limited access permit and a smoothhound shark permit must abide by the 24 hour soak time restriction and conduct net checks at least every 2 hours. This alternative would likely result in short and long-term direct minor adverse socioeconomic impacts to those smoothhound permitted fishermen that also have an Atlantic shark limited access permit and therefore would be required to check their nets at least every 2 hours. Currently, smoothhound shark gillnet fishermen sometimes fish multiple nets or leave nets unattended for short periods of time. Rarely are these nets soaked for more than 24 hours, thus, this

alternative would not impact smoothhound shark gillnet fishermen that do not have an Atlantic shark limited access permit. Adverse socioeconomic impacts resulting from this alternative would likely occur to the subset of smoothhound shark fishermen that also hold an Atlantic shark limited access permit. These smoothhound shark fishermen would be at a disadvantage compared to other smoothhound shark fishermen that do not have an Atlantic shark limited access permit because they would be required to check their gillnets at least every 2 hours which is a large change in the way the smoothhound shark fishery currently operates. Dropping the Atlantic shark permit to avoid the net check requirement is unlikely to be feasible since Atlantic shark permits are limited access and cannot be easily obtained. Additionally, pelagic longline fishermen are required to have an incidental or directed shark permit when targeting swordfish or tunas, even if they are not fishing for sharks, due to the likelihood of incidental shark catch. In practical terms, this could result in smoothhound shark gillnet fishermen abiding by the 2 hour net check requirement even if they do not fish for Atlantic sharks and only hold a Atlantic shark limited access permit to fish for swordfish or tunas (note that gillnets cannot be used to target swordfish or tunas, but some vessels may switch gears between trips). For this subset of fishermen, basing gillnet requirements on permit types could introduce fishing inefficiencies when compared to other smoothhound fishermen, likely resulting in adverse socioeconomic impacts to these fishermen. The number of fishermen that would be adversely affected is unknown since NMFS does not yet know which vessel will obtain a smoothhound shark fishing permit. It is unlikely that this alternative would have a large impact on supporting businesses such as dealers or bait, tackle, and ice suppliers since these businesses do not solely rely on the smoothhound shark fishery. The smoothhound shark fishery is small relative to other fisheries. Thus, Alternative C3 would likely result in short and long-term indirect neutral socioeconomic impacts. Due to the adverse direct economic impacts to some smoothhound shark fishermen resulting from the change in fishing practices, NMFS does not prefer this alternative at this time.

Alternative C4, the preferred alternative, would establish a soak time limit of 24 hours for fishermen using sink gillnet gear and a 2 hour net check requirement for fishermen using drift gillnet gear in the Atlantic shark and smoothhound shark fisheries. Drift gillnets would be defined as those that are unattached to the ocean bottom with a float line at the surface and sink gillnet gear would be defined as those with a weight line that sinks to the ocean bottom, has a submerged float line, and is designed to be fished on or near the bottom. Alternative C4 would likely result in neutral short and long-term direct socioeconomic impacts. Smoothhound shark fishermen, who typically use sink gillnets, would be required to limit soak times to 24 hours and as discussed above, this requirement is unlikely to significantly alter smoothhound shark fishing practices. Drift gillnet fishermen, who are more likely to target Atlantic sharks rather than smoothhound sharks, would be required to check their nets at least every 2 hours, as is currently required. Thus, this alternative is unlikely to have any socioeconomic impacts to Atlantic shark and smoothhound shark fishermen since it would not change current fishing practices. Similarly, this alternative would likely result in neutral short and long-term indirect socioeconomic impacts since supporting businesses including dealers and bait, tackle, and ice suppliers should not be impacted. Alternative C4 would impact the approximately 32 vessel that annually direct on smoothhound sharks with gillnet gear (annual average from 2003-2014, Table 3.1).

Since Alternative C4 would have minimal economic impact but is still consistent with the 2012 Shark BiOp, NMFS prefers this alternative at this time.

4.3.3 CONCLUSION

The requirements of preferred Alternative C4 would not impact the majority of Atlantic shark and smoothhound shark fishermen since normal fishing operations would not be affected. Since Alternative C4 would implement one of the requirements of the 2012 Shark BiOp, would likely result in beneficial impacts for protected resources since these measures would mitigate gillnet impacts, and have minimal economic impact, NMFS prefers this alternative at this time.

4.4 ATLANTIC SHARK GILLNET VESSEL MONITORING SYSTEM REQUIREMENTS

The following two alternatives consider a change to the existing Atlantic shark gillnet Vessel Monitoring System (VMS) requirements.

Alternative D1: No Action. Do not change VMS requirements for federal directed shark permit holders with gillnet gear on board.

Alternative D2 *Require federal directed shark permit holders with gillnet gear on board to use VMS only in the Southeast U.S. Monitoring Area, pursuant to Atlantic Large Whale Take Reduction Plan requirements – Preferred Alternative*

4.4.1 ECOLOGICAL IMPACTS

Alternative D1 would not change current VMS requirements for directed shark permit holders with gillnet gear on board. Currently whenever a vessel issued a directed shark limited access permit is away from port with a gillnet on board, it must have VMS on board regardless of where the vessel is fishing, pursuant to ALWTRP requirements. These VMS requirements were put in place in 2004 (69 FR 51010) as an enforcement tool for complying with ALWTRP requirements set forth in 50 CFR 229.32, which help to minimize the risk to large whales in the area including right, humpback, and fin whales. The ALWTRP regulations have several restricted and monitoring areas that are closed to gillnet fishing certain times of the year and require that fishermen meet certain requirements in order to fish in those areas during other times of the year. Per 50 CFR 229.32 (h) (2)(i), Atlantic shark gillnet fishermen are only required to have VMS if they are fishing in the Southeast U.S. Monitoring Area. Since NMFS has determined that VMS is not necessary for Atlantic shark gillnet fishermen in the other ALWTRP restricted areas, requiring VMS onboard regardless of where these fishermen are fishing is not expected to have direct or indirect beneficial ecological impacts to protected whale species. Therefore, the No Action alternative would have neutral short and long-term direct and indirect ecological impacts. VMS requirements do not impact incidentally caught

species. Because this alternative requires VMS in the Southeast U.S. Monitoring Area as required by the ALWTRP, it could have short and long-term moderate beneficial impacts for protected resources. This VMS requirement is an enforcement tool to help ensure gillnet fishermen are abiding by gillnet fishing requirements in the Southeast U.S. Monitoring Area such as minimum mesh sizes, nighttime fishing prohibitions, and soak time restrictions. Due to significant costs associated with obtaining and operating VMS units, it may not be necessary to require VMS for Atlantic shark gillnet vessels if it is not required by the ALWTRP. Therefore, because this alternative would have neutral ecological impacts and potential adverse socioeconomic impacts related with maintaining the current VMS requirements, NMFS does not prefer this alternative at this time.

Alternative D2, the preferred alternative, would require federal directed Atlantic shark limited access permit holders with gillnet gear on board to use VMS only in the vicinity of the Southeast U.S. Monitoring Area (Figure 2.4), pursuant to ALWTRP requirements. This alternative is expected to have neutral short and long-term direct and indirect ecological impacts. These VMS requirements are an enforcement tool for complying with the ALWTRP requirements and would not affect catch. VMS requirements do not impact incidentally caught species. Alternative D2 would likely provide short and long-term moderate beneficial impacts for protected resources because it maintains the requirement to have VMS on board when gillnet fishing in the U.S. Southeast Monitoring Area, as required in the ALWTRP. The difference between this alternative and the No Action alternative, Alternative D1, is that this alternative would limit the VMS requirement for Atlantic shark permit holders using gillnet gear to the vicinity of the Southeast U.S. Monitoring Area. Requirements to minimize large whale interactions would not change, only the geographic area of the VMS requirement. For this reason, protected resource impacts resulting from Alternative D2 are the same as for Alternative D1. Thus, because this alternative maintains the VMS requirements for large whales consistent with the ALWTRP, and at the same time, reduces adverse socioeconomic impacts, NMFS prefers this alternative at this time.

4.4.2 SOCIAL AND ECONOMIC IMPACTS

Alternative D1 would maintain the current requirement of requiring Atlantic shark permit holders fishing with gillnet gear to have VMS on board, regardless of where the vessel is fishing. These VMS requirements were put in place as an enforcement tool for complying with the ALWTRP requirements set forth in 50 CFR 229.32. Per 50 CFR 229.32 (h)(2)(i) Atlantic shark gillnet fishermen are only required to have VMS if they are fishing in the Southeast U.S. Monitoring Area. Purchasing and installing a VMS unit costs fishermen around \$3,500 and monthly data transmission charges cost, on average, approximately \$44.00. Because these monthly costs are currently incurred whenever a shark gillnet fishermen is fishing, these costs can affect the fishermen's annual revenues. Although the affected fishermen already have VMS installed, they continue to pay for transmission and maintenance costs, and could need to buy a new unit if theirs fails. It is possible that a NMFS VMS reimbursement program could defray part of the purchase cost, but is not certain. Thus, it is likely that this alternative could have short and long-term direct minor adverse socioeconomic

impacts to fishermen due to the cost of purchasing and maintaining a VMS unit, and has the same economic impact as Alternative D2, therefore, NMFS does not prefer this alternative at this time.

Alternative D2, the preferred alternative, would change the gillnet VMS requirements and would require federal directed shark permit holders with gillnet gear on board to use VMS only in the vicinity of the Southeast U.S. Monitoring Area, pursuant to ALWTRP requirements, and would have short and long-term direct minor beneficial socioeconomic impacts. Atlantic shark gillnet fishermen fishing in the vicinity of the Southeast U.S Monitoring Area would still incur the installation costs of the VMS, but data transmission would be limited to those times when the vessel is in this area. Furthermore, shark gillnet fishermen outside of this area that do not fish in the vicinity of the Southeast U.S Monitoring Area would not need to install a VMS unit or, if they already have one, maintain the VMS unit or replace a malfunctioning one. Thus, the socioeconomic impacts from this alternative, while still adverse, are of a lesser degree than those under Alternative D1, the No Action alternative. This alternative would likely result in neutral short and long-term indirect socioeconomic impacts since supporting businesses including dealers and bait, tackle, and ice suppliers would not be impacted. Since this alternative is more in line with the requirements of the ALWTRP and because it would reduce socioeconomic impacts while still maintaining beneficial ecological impacts for protected whale species, NMFS prefers this alternative at this time.

4.4.3 CONCLUSION

NMFS prefers this Alternative D2 since it is consistent with the requirements of the ALWTRP and because it would result in smaller socioeconomic impacts while still maintaining beneficial ecological impacts for protected whale species.

4.5 IMPACTS ON ESSENTIAL FISH HABITAT

The Magnuson-Stevens Act, 16 U.S.C. 1855(b)(1), as implemented by 50 C.F.R. § 800.815, 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 §800.815(a)(2) 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.

The preferred measures for implementing the smooth dogfish-specific provisions of the SCA define catch composition requirements, and require a state fishing permit to remove the fins of a smooth dogfish at sea, would maintain the current efficiency and functionality of the smooth dogfish fishery, and would not affect EFH. The requirements of holding a state fishing permit are administrative in nature and would not affect EFH. The preferred alternative for the establishment of smoothhound shark quotas is based on the SEDAR 39 stock assessments and are slightly above maximum landings over the past 5 years, thus, effort and associated EFH impacts are not expected to

change. The actions to implement TC 4 of the 2012 Shark BiOp and modify VMS requirements for shark gillnetters would not affect EFH. NMFS determined in Amendment 3 that EFH impacts from the primary gear used to target smoothhound sharks (sink gillnets) were minimal and temporary in nature, and NMFS has not received information that would suggest otherwise. NMFS considers these assessments to remain valid, and assumes any implementation of quota will have neutral short- and long-term, direct and indirect impacts on EFH.

EFH designation for smoothhound sharks was detailed in Chapter 11 of Amendment 3. 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 this time, NMFS has determined that fishing for HMS using gillnet, bottom longline, or pelagic longline gear is not likely to adversely affect EFH for smoothhound sharks. Thus, there is no evidence to suggest that implementing any of the preferred alternatives in this action would adversely affect EFH to the extent that adverse effects could be identified on the habitat or fisheries.

On June 29, 2015, NMFS published a final 5-year review of EFH for Atlantic HMS (80 FR 36974). The purpose of the review was to gather all new information and determine whether modifications to existing EFH descriptions and delineations are warranted. Based on the review and public comment, NMFS determined that new information warrants the initiation of an amendment to revise EFH components found in Amendments 1 and 3 to the 2006 Consolidated HMS FMP, and the 2010 White Marlin/Roundscale Spearfish Interpretive Rule and Final Action. During the FMP amendment process, NMFS will apply any new and appropriate information including, but not limited to, observer data, survey data, logbook information, and tag/recapture data that are available for all HMS. Specifically for smoothhound sharks, the review found that recent studies do not support updating EFH boundaries. However, NMFS will update smoothhound shark EFH boundaries based on new observer, survey, and tag/recapture data since 2009. If any changes to the regulations are also needed, NMFS will issue proposed and final rules with public comment.

4.6 IMPACTS ON PROTECTED RESOURCES

On December 12, 2012, consistent with Section 7(b)(4) of the ESA, the NMFS SERO PRD determined that the continued operation of the Atlantic shark and smoothhound 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 TCs listed in the 2012 Shark BiOp. One purpose of this amendment is to propose measures to implement the 2012 Shark BiOp TCs that are specific to the Atlantic shark and smoothhound shark fisheries.

Currently, federal directed shark permit holders with gillnet gear on board are required to use VMS regardless of vessel location. This requirement was originally implemented to comply with the ALWTRP requirements at 50 CFR 229.32. However, the current ALWTRP regulations require federal directed shark permit holders with gillnet gear on board to use VMS only when fishing in a certain area in the South Atlantic. Thus, another purpose of Draft Amendment 9 is to examine

measures to bring current VMS regulations for federal directed shark permit holders using gillnet gear in-line with the current requirements of the ALWTRP at 50 CFR 229.32.

Specific protected resources impacts that would result from each of the alternatives are as follows.

Smooth Dogfish Provisions of the Shark Conservation Act of 2010

Protected resources impacts resulting from the adoption of any of the alternative or sub-alternatives to implement the SCA are expected to be neutral. All of the alternatives and sub-alternatives address the limited fins-attached exception in the SCA and would not impact fishing effort levels or rates, beyond those expected and described under Alternative A2.

Smoothhound Shark Commercial Quotas

Each of the alternatives considered for implementing smoothhound shark quota(s) would have different impacts on protected resources since effort under each alternative would be different and there is likely a positive correlation between fishing effort and protected resource interactions. Alternative B1 would implement the lowest quota and would likely lead to short and long-term moderate beneficial impacts on protected resources. Alternative B2 would introduce a quota, however, this quota could increase as landings increased, likely resulting in minor adverse impacts on protected resources. Alternative B3 would implement a quota that would not change if landings increase in subsequent years and thus would not allow the fishery to expand as in Alternative B2. Therefore, compared to Alternative B2, Alternative B3 would likely lead to short and long-term minor beneficial impacts on protected resources. Alternative B4 would establish quotas based on the results of the SEDAR 39 smoothhound shark stock assessments. Scientifically-based quota(s) would provide short and long-term ecological benefits and the resulting sustainable fishery would ensure long-term economic benefits for the fishermen. Furthermore, the quotas calculated from the stock assessments are only slightly higher than recent peak landings, thus, effort is unlikely to significantly increase. Since Alternative B4 would establish scientifically-based quotas, NMFS prefers this alternative.

Biological Opinion Implementation

Alternative C1, the No Action alternative, would likely have short and long-term minor adverse impacts on protected resources. Gillnet soak time limits and net checks were specifically required under the 2012 BiOp for the Atlantic shark and smoothhound shark fisheries to minimize impacts to protected resources. While gillnet soak time restrictions and net check requirements would impact a variety of protected resources, these measures were designed to protect sea turtles and Atlantic sturgeon that might be incidentally captured in this gear type. Although the net check requirement would remain in the Atlantic shark gillnet fishery, adoption of Alternative C1 would not

implement any measures in the smoothhound shark gillnets fishery, likely resulting in minor short and long-term adverse impacts on protected resources.

Alternative C2 would likely have short and long-term minor beneficial impacts on protected resources since it would implement TC 4 of the 2012 BiOp to minimize impacts on protected resources. Requiring smoothhound shark fishermen to check their gillnets at least every two hour, as currently required of Atlantic shark fishermen, would limit the amount of a time a protected resource would be entangled in a gillnet, decreasing potential bycatch mortality.

Alternative C3 would likely have short and long-term minor beneficial impacts on protected resources since it would implement TC 4 of the 2012 BiOp to minimize impacts on protected resources. Limiting gillnet soak times to 24 hours would limit the amount of time an entangled protected resource was caught in the gear, which is particularly important for Atlantic sturgeon that experience higher mortality after being entangled for greater than 24 hours. This alternative would also maintain the currently required net checks in place for the Atlantic shark gillnet fishermen and would continue to provide beneficial impacts to protected resources especially sea turtles. This alternative would also comply with the 2012 Shark BiOp.

Alternative C4, the preferred alternative, would likely have short and long-term minor beneficial impacts on protected resources since it would implement TC 4 of the 2012 Shark BiOp to minimize impacts on protected resources. Limiting gillnet soak times would limit the amount of time an entangled protected resource was caught in the gear, which is particularly important for Atlantic sturgeon that experience higher mortality after being entangled for greater than 24 hours.

Atlantic Shark Gillnet Vessel Monitoring System Requirements

Alternative D1 likely provides short and long-term moderate beneficial impacts for protected resources because it would maintain VMS requirements in the Southeast U.S. Monitoring Area. This VMS requirement is an enforcement tool to help ensure shark gillnet fishermen are abiding by gillnet fishing requirements specified in the ALWTRP such as minimum mesh sizes, nighttime fishing prohibitions, and soak time restrictions. These requirements help to minimize the risk to large whales in the area including right, humpback, and fin whales.

Like Alternative D1, Alternative D2 would maintain the VMS requirement as an enforcement tool to help ensure shark gillnet fishermen are abiding by gillnet fishing requirements in the Southeast U.S Monitoring Area such as minimum mesh sizes, nighttime fishing prohibitions, and soak time restrictions. The only difference from Alternative D1 is that it would limit the VMS requirement to the vicinity of the Southeast U.S. Monitoring Area, consistent with the regulations of the ALWTRP at 50 CFR 229.32(h)(2)(i). Requirements to minimize large whale interactions would not change, only the geographic area of the VMS requirement. For this reason, protected resource impacts resulting from Alternative D2 are the same as for Alternative D1.

4.7 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 are available in the 2006 Consolidated HMS FMP (Chapter 9), a recent report by MRAG Americas, 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 2012 HMS SAFE Report. 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 (NMFS 2011 and NMFS 2012) include updated census data for all coastal Atlantic states, and some selected communities that are known centers of HMS fishing, processing or dealer activity. Demographic data indicate that coastal counties with fishing communities are variable in terms of social indicators like income, employment, and race and ethnic composition.

The preferred alternatives were selected to minimize ecological and economic impacts and provide for the sustained participation of fishing communities. The preferred alternatives would not have any effects on human health nor are they expected to have any disproportionate social or economic effects on minority and low-income communities. Implementing the smooth dogfish provisions of the Shark Conservation Act would likely have neutral effects on minorities and low-income members of communities because the number of fishermen, dealers, and processors in the smooth dogfish fishery are small and most of these fishermen, dealers, and processors target multiple species and are not wholly dependent on smooth dogfish. Allowing fishermen to remove smooth dogfish fins at sea would provide direct and indirect, minor, beneficial socioeconomic impacts because these actions are necessary to protect the quality of the meat of this high volume fishery. Implementing a 25 percent target catch requirement would provide fishermen some flexibility in which species they retain, but would still limit the fins-attached exception to fishermen fishing for smooth dogfish. State permit requirements are expected to have neutral short and long term requirements, since most fishermen likely already have a commercial state fishing permit. The preferred quota alternative would likely also have neutral to slightly positive effects for minority and low-income participants in the fishery. The establishment of a quota (and management measures) would allow for better management decisions and place a cap on effort to protect the smoothhound stock; these actions should allow the fishery to continue in a sustainable manner in the future. In addition, the preferred alternatives herein would allow NMFS to collect additional information on the universe of smoothhound fishermen. More information about the fishery would allow NMFS to

anticipate and better respond to future social justice concerns.

The preferred alternative to implement the 2012 Shark BiOp would base gillnet soak time restrictions and net check requirements on gillnet gear type. Alternative C4 would establish a soak time limit of 24 hours for fishermen using sink gillnet gear and a 2 hour net check requirement for fishermen using drift gillnet gear in the Atlantic shark and smoothhound shark fisheries. These requirements would protect protected resources while minimizing negative socioeconomic impacts on fishermen. Similarly, the preferred alternative to modify shark gillnet VMS requirements would result in beneficial socioeconomic impacts since VMS requirements would be limited to those fishing in the vicinity of the Southeast U.S. Monitoring Area consistent with the regulations of the ALWTRP at 50 CFR 229.32(h)(2)(i).

4.8 COASTAL ZONE MANAGEMENT ACT (CZMA)

The Coastal Zone Management Act (CZMA) requires that Federal agency activities be consistent to the maximum extent practicable with the enforceable policies of federally-approved state coastal management program (CMP). NMFS has determined that the preferred alternatives would be implemented in a manner consistent to the maximum extent practicable with the enforceable policies of the coastal states in the Atlantic, Gulf of Mexico, and Caribbean that have federally approved CMPs. On August 12, 2014, NMFS provided all coastal states along the eastern seaboard and the Gulf of Mexico (21 states), including Puerto Rico and the U.S. Virgin Islands, with a consistency determination under CZMA § 307(c) regarding Amendment 9 and its proposed rule (August 7, 2014, 79 FR 46217). 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)). Nine states replied within the response time period that the proposed regulations were consistent, to the extent practicable, with the enforceable policies of their CMPs (Alabama, Delaware, Florida, Louisiana, Mississippi, New Hampshire, Rhode Island, South Carolina, and Virginia). Another ten states (Connecticut, Maine, Maryland, Massachusetts, New York, Puerto Rico, Texas, and the U.S. Virgin Islands) did not respond within the response time period, nor did they request an extension in the comment period; therefore, NMFS presumes their concurrence. The States of Georgia, New Jersey, and North Carolina replied that the proposed rule was not consistent with the enforceable policies of their respective state's CMPs. Their concerns along with NMFS' responses are summarized below.

State of Georgia

In a December 12, 2014 letter, the State of Georgia stated that the Georgia Coastal Management Program found Alternatives A2 and its sub-alternatives and all the alternatives considering quotas to be inconsistent with its CMP. The letter states the State would concur with the consistency determination if the proposed rule is modified to:

1. “implement Alternative A1 or eliminate all sub-alternatives under Alternative A2 in their entirety and require that smoothhound shark fin removal at sea is allowed only if the weight of the fins does not exceed 12 percent of the total weight of shark carcass found on board.” and
2. “postpone implementation of any quota management measure until Alternative B4 becomes a legitimate alternative after SEDAR data is available and this Alternative is implemented.”

Regarding Alternative A2 and all the sub-alternatives, the State of Georgia commented State law prohibits the landing of shark unless the fins and tail are intact and that State law prohibits the use of gillnets and longlines in State waters. The State also notes that if identification of the individual smoothhound species is as difficult as indicated, then limiting the geographic area to anything less than the full species distribution area could allow for inequitable allowances between the Gulf of Mexico and the Atlantic. Given this, the State of Georgia recommends Alternative A1, which would not implement the smooth dogfish-specific provisions in the SCA. While the State of Georgia prefers Alternative A1 as supportive of the enforcement of shark finning regulations, enhancing species-specific stock assessments, and producing more sustainable shark fishery management, the State of Georgia also notes that if NMFS cannot implement Alternative A1, NMFS should implement an alternative that is consistent with the measures implemented by ASMFC in order to be consistent with the Georgia CMP.

While NMFS also acknowledges the concerns of the State of Georgia, the SCA, which includes the smooth dogfish-specific exception, became Federal law upon Presidential signature on January 4, 2011. Thus, NMFS is obligated to implement the law in a manner consistent with Congressional intent. Although a combination of both positive and negative ecological impacts could occur when allowing some smooth dogfish fins to be removed at sea, NMFS’s objective is to implement the provision as mandated by the SCA.

The State of Georgia conditioned a finding of consistency with its CMP if Alternative A2 were modified to remove the sub-alternatives and only implement the 12 percent fin to carcass ratio so it would be consistent with ASMFC’s implementation of the smooth dogfish-specific provisions of the SCA. The ASMFC can establish regulations that are more or less restrictive than NMFS. In the case of the implementation of the smooth dogfish-specific provisions of the SCA, NMFS’ regulations will be more restrictive than those established by ASMFC, which we have found necessary to implement properly the SCA smoothhound provisions. NMFS believes that the preferred alternatives are consistent with the SCA because the preferred sub-alternatives in addition to the 12 percent fin to carcass ratio narrowly focuses the at-sea fin removal allowance on the smooth dogfish fishery. In addition, NMFS believes that implementing less restrictive measures to match the ASMFC measures would not meet the intent of the SCA. Finally, NMFS believes that with the modifications to the preferred sub-alternatives in the Final EA, NMFS has addressed the State of Georgia’s conditional concurrence. Therefore, NMFS considers the preferred alternatives in the Final EA to be consistent with the State of Georgia’s CMP with regard to implementations of the smooth dogfish-specific provisions of the SCA.

With regard to the condition that smoothhound quota implementation be postponed until SEDAR 39 data are available; the final action satisfies this condition. Since publication of the proposed rule, the SEDAR 39 stock assessments have been completed. Based on the results of SEDAR 39, NMFS has modified the preferred alternative to establish scientifically-based smoothhound quotas for the Atlantic and Gulf of Mexico regions. Therefore, NMFS considers the preferred smoothhound quota alternative in the Final EA to be consistent with the State of Georgia's CMP.

Under the relevant provisions of the CZMA, and the State of Georgia's enforceable CZMA policies, NMFS has determined that Final Amendment 9 is consistent to the maximum extent practicable with Georgia's CMP enforceable policies because it meets NMFS' objectives for the implementation of the smooth dogfish-specific provisions of the SCA by narrowly focusing the at-sea fin removal allowance on the smooth dogfish fishery as specified by the SCA, establishes scientifically-based TACs and commercial quotas, and provides a flexible, profitable, and sustainable smooth dogfish fishery.

State of New Jersey

In an October 28, 2014 letter, the State of New Jersey indicated that the proposed smooth dogfish-specific provisions of the SCA and the quota adjustment for the smooth dogfish fishery were not consistent with its CMP. Specifically, the State of New Jersey stated that NMFS's proposed alternative A2-1c (which would allow an exemption for the at-sea removal of smooth dogfish fins if the catch composition of the retained catch comprises 75 percent smooth dogfish) would be inconsistent with its CMP, and that the State of New Jersey preferred an alternative similar to A2-1b, which would allow the at-sea fin removal of smooth dogfish if smooth dogfish made up at least 25 percent of the retained catch and would be preferable "as long as no catch composition, requirements or restrictions" are imposed on a vessel with the proper permits for shark fishing. Additionally, the State of New Jersey also concluded that the proposed smooth dogfish quota, Alternative B3, that would equal the maximum annual landing from 2004 – 2013 plus two standard deviations, was inconsistent because it did not incorporate the pending species stock assessments. However, the letter conditioned the consideration of consistency if NMFS adjusted the smoothhound quota as a result of the 2015 smoothhound shark stock assessments.

Based on updated data, public comment, and additional analysis, NMFS no longer prefers the alternative A2-1c. The new preferred alternative, A2-1e, is similar to Sub-Alternative A2-1b, except that fishermen removing smooth dogfish fins at sea may also retain other sharks provided those sharks' fins remain naturally to the carcass through offloading. The State of New Jersey CZMA consistency letter noted that it preferred an alternative that in all material respects reflects the elements of new preferred alternative A2-1e; therefore, NMFS considers the preferred alternatives in the Final EA to be consistent with the State of New Jersey's CMP with regard to its concerns with the implementations of the smooth dogfish-specific provisions of the SCA.

At the time of publication for the proposed rule, the SEDAR 39 smoothhound stock assessment was underway. In anticipation of the final stock assessments, NMFS considered a range of smoothhound quota alternatives. Since the SEDAR 39 assessments have now been finalized, NMFS is establishing regional smoothhound TACs and commercial quotas based the SEDAR 39 assessments. Specifically, under Alternative B4, the Atlantic regional smoothhound shark TAC would be 1,430.6 mt dw with a commercial quota of 1,201.7 mt dw, and the Gulf of Mexico regional smoothhound shark TAC would be 509.6 mt dw with a commercial quota of 336.4 mt dw. Therefore, NMFS considers the preferred smoothhound quota alternative in the Final EA to be consistent with the State of New Jersey's CMP.

Because the final action incorporates and addresses both of the State of New Jersey's conditions for consistency, NMFS has determined that Final Amendment 9 is consistent to the maximum extent practicable with the State of New Jersey's CMP enforceable policies.

State of North Carolina

Similar to the letters from the States of Georgia and New Jersey, the State of North Carolina, in its October 29, 2014 letter, indicated that the proposed rule for Amendment 9 was not consistent with the State's CMP for several reasons. Specifically, the State of North Carolina stated that the catch composition requirement of 75 percent could increase fishing pressure and result in waste, inconsistent with ASMFC SCA actions, and that the commercial quotas should be based on the SEDAR 39 assessments. Additionally, the State of North Carolina felt that allowing no other sharks to be retained if smoothhound sharks are processed at seas would result in dead discards. The State of North Carolina indicated that the action could be consistent on two conditions; first, that Amendment 9 removes the requirement to have a 75 percent catch composition of smooth dogfish in order to remove smooth dogfish fins at sea, and second, that the smoothhound shark quota to be implemented based on the results of the 2015 smoothhound shark stock assessments.

As described above, the final action implements a new alternative, sub-alternative A2-1e, that removes the requirement to have a 75 percent catch composition of smooth dogfish in order to remove smooth dogfish fins at sea. The new catch composition sub-alternative requires a 25 percent catch composition instead and allows for other sharks to be retained provided those sharks' fins remain naturally to the carcass through offloading. Additionally, the final action implements total allowable catches and commercial quotas based on the results of SEDAR 39. Accordingly, because the final action incorporates and addresses both of the State of North Carolina's conditions for consistency, NMFS has determined that Final Amendment 9 is consistent to the maximum extent practicable with the State of North Carolina's CMP enforceable policies.

4.9 CUMULATIVE IMPACTS

Cumulative impacts are the impacts on the environment that result from the incremental impacts of the 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 with regard to the management measures presented in this document.

Since the smoothhound shark stocks have not previously been actively managed at the federal level, there are no currently effective actions of federal, non-federal, public or private entities that are affecting the smoothhound shark stock or smoothhound shark fishery. Future actions are likely as NMFS begins to gather data on the operation of the fishery and is better able to characterize the smoothhound shark fishery. As NMFS learns more about the fishery through permitting, reporting, and observer requirements, better measures can be developed that will more effectively manage the fishery.

The Atlantic shark fishery has had a number of past rules but two in particular affect the shark gillnet fishery that would be impacted by this amendment. Amendment 3 to the 2006 Consolidated HMS FMP (75 FR 30484, 6/1/2010), among other things, established separate blacknose shark and non-blacknose SCS quotas, applicable across both the Atlantic and Gulf of Mexico regions. This action was in response to a stock assessment that found blacknose sharks were overfished with overfishing occurring. These species are typically targeted with gillnet gear. Amendment 5a to the 2006 Consolidated HMS FMP (78 FR 40318, July 3, 2013) divided the blacknose and non-blacknose SCS quotas into separate regional quotas in response to a new stock assessment that determined that there are separate blacknose shark stocks in the Atlantic and Gulf of Mexico. Additionally, Amendment 5a established a separate blacktip shark quota in the Gulf of Mexico. This species is sometimes targeted with gillnet gear, however, this fishing method is more prevalent in the Atlantic, although greatly diminished since the retention limit was reduced in Amendment 2 to the 2006 Consolidated HMS FMP (73 FR 35778, June 24, 2008). In June 2013, the Atlantic and Gulf of Mexico bonnethead and sharpnose shark stock assessments (SEDAR 34) were completed. The results of SEDAR 34 found that both the Atlantic and Gulf of Mexico stocks of Atlantic sharpnose are not overfished and are not experiencing overfishing. In addition, the status of both Atlantic and Gulf of Mexico stocks of bonnethead sharks were found to be unknown. Additional details on the status of these stocks can be found in Chapter 3 of the Final EA for Amendment 6 to the 2006 Consolidated HMS FMP. Amendment 6 to the 2006 Consolidated HMS FMP (August 18, 2015; 80 FR 50073) includes measures related to blacknose sharks and the non-blacknose SCS management group including changes to quota linkages, establishing non-blacknose TACs and modifying the non-blacknose commercial quotas in the Atlantic and Gulf of Mexico regions based on the results of SEDAR 34.

This analysis also considers cumulative socio-economic impacts that may occur under these alternatives as a result of this, previous rulemakings, and anticipated future rulemakings. In addition to this draft amendment, Amendment 3 and the 2011 Rule to Modify the Retention of Incidentally-Caught Highly Migratory Species in Atlantic Trawl Fisheries (76 FR 49368, August 10, 2011) are the only published or anticipated rules to directly impact the smoothhound shark fishery. Until permit and reporting requirements are in place, NMFS is unable to determine the universe of fishermen and their fishing effort on smoothhound sharks, and fully evaluate the cumulative impacts of this draft Amendment and previous rulemakings. However, NMFS anticipates that the cumulative direct and indirect socio-economic impacts separate from the short and long-term impacts, of all alternatives considered are likely neutral (*i.e.* not affected by previous rulemakings) in the short and long-term.

On December 2, 2011, NMFS published a final rule updating VMS requirements. The purpose of the action was to facilitate enhanced communication with HMS vessels at sea, provide HMS fishery participants with an additional means of sending and receiving information at sea, ensure that HMS VMS units are consistent with the current VMS technology and type approval requirements that apply to newly installed units, and to provide NMFS enforcement with additional information describing gear onboard and target species. The action applied to all vessels with Atlantic HMS permits that are required to use VMS, including: vessels with pelagic longline gear, vessels with bottom longline gear in the vicinity of the mid-Atlantic closed area (between 33° N and 36° 30' N) from January 1 to July 31, and shark gillnet vessels fishing. The existing requirement to provide location reports using VMS, on an hourly basis, when vessels are away from port, was maintained. The fishery declaration system, where fishermen use their E-MTU VMS to report target fishery and gear types possessed two hours prior to leaving the dock, allows NMFS to more accurately track and monitor vessels for compliance with the regulations for relevant fisheries. Vessels are also required to notify NMFS at least three hours prior to landing. These requirements are often referred to as “hail-in/hail-out” provisions and have been implemented in other Atlantic fisheries where E-MTU VMS are required. Due to some unforeseen technical issues, the effective date of this action was delayed, but all measures became effective on January 1, 2013.

NMFS published a final rule on November 14, 2013 (78 FR 68757), that implemented measures to reduce the burden on fishermen who may not be engaged in HMS fishing at all times while also ensuring that NOAA OLE receives the information needed to enforce HMS regulations. These measures changed the current hail-in/hail-out requirements, required 24/7 hourly position reports, and provided the flexibility to “declare out” of the fishery for specified periods of time as opposed to hailing in or hailing out on each trip. The rule requires that all VMS units remain on continually in order to provide hourly position reports 24 hours a day, 7 days a week. The rulemaking in combination with the preferred VMS alternative in this draft Amendment will help to streamline the current requirements and provide beneficial socioeconomic impacts to the affected Atlantic HMS fishermen.

NMFS published a final rule the Federal Register on December 24, 2014 (79 FR 77339) that codified the type-approval specifications, revised latency standards, and established initial type-

approval, renewal, revocation, and appeals processes for industry and constituents. The final rule is effective January 23, 2015.

4.10 COMPARISON OF ALTERNATIVES

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

Table 4.6 Comparison of alternatives considered

Alternative	Quality	Timeframe	Ecological	Protected Resources	Socioeconomic
Alternative A1: Do not implement the smooth dogfish-specific measures in the Shark Conservation Act of 2010. By default, Amendment 3's fins-attached requirement would apply to the smooth dogfish fishery (i.e., fins and tail of all smooth dogfish must remain naturally attached to the shark carcass through offloading)	Direct	Short-term	⊕ ₊	○	⊖ ₋
		Long-term	⊕ ₊	○	⊖ ₋
	Indirect	Short-term	⊕ ₊	○	⊖ ₋
		Long-term	⊕ ₊	○	⊖ ₋
	Cumulative	Short-term	○	○	○
		Long-term	○	○	○
Alternative A2: <i>Implement the smooth dogfish-specific measures in the Shark Conservation Act of 2010 to establish an allowance for the removal of smooth dogfish fins while at sea, considering eight sub-alternatives - Preferred Alternative</i>	Direct	Short-term	○	⊖ ₋	○
		Long-term	○	○	○
	Indirect	Short-term	○	○	○
		Long-term	○	○	○
	Cumulative	Short-term	○	○	○
		Long-term	○	○	○
Sub -Alternative A2-1a: Smooth dogfish can make up any portion of the retained catch (no other sharks can be retained)	Direct	Short-term	○	○	⊕ ₊
		Long-term	○	○	⊕ ₊
	Indirect	Short-term	○	○	○

Alternative	Quality	Timeframe	Ecological	Protected Resources	Socioeconomic
	Cumulative	Long-term	O	O	O
		Short-term	O	O	O
		Long-term	O	O	O
Sub -Alternative A2-1b: Smooth dogfish must make up at least 25 percent of the retained catch (non-smooth dogfish catch must be non-shark)	Direct	Short-term	O	O	⊖ ₊
		Long-term	O	O	⊖ ₊
	Indirect	Short-term	O	O	O
		Long-term	O	O	O
	Cumulative	Short-term	O	O	O
		Long-term	O	O	O
Sub -Alternative A2-1c: Smooth dogfish must make up at least 75 percent of the retained catch (no other sharks can be retained)	Direct	Short-term	⊖ ₊	O	⊖ ₋
		Long-term	⊖ ₊	O	⊖ ₋
	Indirect	Short-term	O	O	O
		Long-term	O	O	O
	Cumulative	Short-term	O	O	O
		Long-term	O	O	O
Sub -Alternative A2-1d: Smooth dogfish must make up at 100 percent of the retained catch	Direct	Short-term	⊖ ₊	O	⊖ ₋
		Long-term	⊖ ₊	O	⊖ ₋
	Indirect	Short-term	⊖ ₊	O	O
		Long-term	⊖ ₊	O	O
	Cumulative	Short-term	O	O	O

Alternative	Quality	Timeframe	Ecological	Protected Resources	Socioeconomic
		Long-term	O	O	O
Sub-Alternative A2-1e: <i>Smooth dogfish must make up at least 25 percent of the retained catch and other sharks may be retained provided their fins remain naturally attached to the carcass – preferred alternative</i>	Direct	Short-term	O	O	O ₊
		Long-term	O	O	O ₊
	Indirect	Short-term	O	O	O
		Long-term	O	O	O
	Cumulative	Short-term	O	O	O
		Long-term	O	O	O
Sub -Alternative A2-2a: Require smooth dogfish-specific state commercial fishing permit	Direct	Short-term	O	O	O ₋
		Long-term	O	O	O ₋
	Indirect	Short-term	O	O	O
		Long-term	O	O	O
	Cumulative	Short-term	O	O	O
		Long-term	O	O	O
Sub -Alternative A2-2b: <i>Require any state commercial fishing permit that allows smooth dogfish retention in conjunction with the federal smoothhound permit - preferred alternative</i>	Direct	Short-term	O	O	O
		Long-term	O	O	O
	Indirect	Short-term	O	O	O
		Long-term	O	O	O
	Cumulative	Short-term	O	O	O
		Long-term	O	O	O
Sub-Alternative A2-3a: Apply exception for smooth dogfish along the	Direct	Short-term	O	O	O

Alternative	Quality	Timeframe	Ecological	Protected Resources	Socioeconomic	
Atlantic Coast and to Florida's coast in the Gulf of Mexico.		Long-term	○	○	○	
	Indirect	Short-term	○	○	○	
		Long-term	○	○	○	
	Cumulative	Short-term	○	○	○	
		Long-term	○	○	○	
	Sub-Alternative A2-3b: Apply exception for smooth dogfish along the Atlantic Coast but not to Florida's coast in the Gulf of Mexico.- Preferred Sub-Alternative	Direct	Short-term	○	○	○
Long-term			○	○	○	
Indirect		Short-term	○	○	○	
		Long-term	○	○	○	
Cumulative		Short-term	○	○	○	
		Long-term	○	○	○	
Alternative B1: Implement a smoothhound shark quota that is equal to the maximum annual landings from 1998 – 2007 plus two standard deviations (715.5 mt)		Direct	Short-term	○	○ ₊	○ ₋
			Long-term	○ ₊	○ ₊	○
	Indirect	Short-term	○	○ ₊	○	
		Long-term	○	○ ₊	○	
	Cumulative	Short-term	○	○ ₊	○	
		Long-term	○	○ ₊	○	
	Alternative B2: Establish a “rolling quota” each year based upon the previous five years of available data. Annual quota would be equal to maximum landings during the previous five years of available data plus two	Direct	Short-term	○	○ ₋	○ ₊
			Long-term	○ ₋	○ ₋	○ ₋
Indirect		Short-term	○	○ ₋	○ ₊	
		Long-term	○	○ ₋	○ ₊	

Alternative	Quality	Timeframe	Ecological	Protected Resources	Socioeconomic
standard deviations (2016 quota would be 1,729 mt based on 2010-2014 data).		Long-term	∅ ₋	⊖ ₋	⊖ ₋
	Cumulative	Short-term	○	⊖ ₋	○
		Long-term	○	⊖ ₋	○
Alternative B3: Establish a smoothhound shark quota that is equal to the maximum annual landings from 2005-2014 plus two standard deviations (1,733.9 mt dw)	Direct	Short-term	○	⊖ ₊	∅ ₊
		Long-term	⊖ ₋	⊖ ₊	∅ ₊
	Indirect	Short-term	○	⊖ ₊	∅ ₊
		Long-term	⊖ ₋	⊖ ₊	∅ ₊
	Cumulative	Short-term	○	⊖ ₊	○
		Long-term	○	⊖ ₊	○
Alternative B4: Establish smoothhound shark quotas based on results of the 2015 smoothhound shark stock assessments - - Preferred Sub-Alternative	Direct	Short-term	⊖ ₊	○	⊖ ₊
		Long-term	⊖ ₊	○	⊖ ₊
	Indirect	Short-term	⊖ ₊	○	⊖ ₊
		Long-term	⊖ ₊	○	⊖ ₊
	Cumulative	Short-term	⊖ ₊	○	⊖ ₊
		Long-term	⊖ ₊	○	⊖ ₊
Alternative C1 No Action. Do not take further action to implement TC 4 in the smoothhound shark fishery	Direct	Short-term	○	⊖ ₋	○
		Long-term	○	⊖ ₋	○
	Indirect	Short-term	○	⊖ ₋	○
		Long-term	○	⊖ ₋	○
	Cumulative	Short-term	○	○	○

Alternative	Quality	Timeframe	Ecological	Protected Resources	Socioeconomic
		Long-term	○	○	○
Alternative C2 Require smoothhound shark gillnet fishermen to conduct net checks at least every 2 hours to look for and remove any sea turtles, marine mammals, smalltooth sawfish, or Atlantic sturgeon found in the net t	Direct	Short-term	○	⊙ ₊	⊙ ₋
		Long-term	⊙ ₊	⊙ ₊	⊙ ₋
	Indirect	Short-term	○	⊙ ₊	○
		Long-term	○	⊙ ₊	○
	Cumulative	Short-term	○	○	○
		Long-term	○	○	○
Alternative C3 Establish a gillnet soak time limit of 24 hours for smoothhound shark permit holders; fishermen holding both a directed Atlantic shark limited access permit and a smoothhound shark permit must abide by both soak time restrictions and net check requirements	Direct	Short-term	○	⊙ ₊	⊙ ₋
		Long-term	○	⊙ ₊	⊙ ₋
	Indirect	Short-term	○	⊙ ₊	○
		Long-term	○	⊙ ₊	○
	Cumulative	Short-term	○	○	○
		Long-term	○	○	○
Alternative C4 Establish a soak time limit of 24 hours for sink gillnet gear and a 2 hour net check requirement for drift gillnet gear in the Atlantic shark and smoothhound shark fisheries – Preferred Alternative	Direct	Short-term	⊙ ₋	⊙ ₊	○
		Long-term	⊙ ₊	⊙ ₋	○
	Indirect	Short-term	○	⊙ ₋	○
		Long-term	○	⊙ ₋	○
	Cumulative	Short-term	○	○	○
		Long-term	○	○	○
Alternative D1: No Action. Do not change VMS requirements for federal	Direct	Short-term	○	○	⊙ ₊

Alternative	Quality	Timeframe	Ecological	Protected Resources	Socioeconomic
directed shark permit holders with gillnet gear on board.		Long-term	○	○	⊖ ₊
	Indirect	Short-term	○	○	○
		Long-term	○	○	○
	Cumulative	Short-term	○	○	○
		Long-term	○	○	○
	Alternative D2 <i>Require federal directed shark permit holders with gillnet gear on board to use VMS only in the Southeast U.S. Monitoring Area, pursuant to Atlantic Large Whale Take Reduction Plan requirements – Preferred Alternative</i>	Direct	Short-term	○	○
Long-term			○	○	⊖ ₊
Indirect		Short-term	○	○	○
		Long-term	○	○	○
Cumulative		Short-term	○	○	○
		Long-term	○	○	○

Symbol Key:

- Neutral Impacts
- ⊖₊ Minor Beneficial Impacts
- ⊖₋ Minor Adverse Impacts
- ⊖₋ Moderate Adverse Impacts
- ⊖₊ Moderate Beneficial Impacts

5.0 MITIGATION AND UNAVOIDABLE ADVERSE IMPACTS

5.1 MITIGATING MEASURES

If NMFS implements preferred alternative A2 to establish an allowance for the removal of smooth dogfish fins while at sea, some constituents have expressed concern that enforcement of the fins-attached requirement in all other shark fisheries could be compromised. This concern is primarily attributed to the difficulty in identifying the species of sharks when fins have been removed. To ensure that this limited exception does not impact other shark stocks, NMFS

specifically developed the sub-alternatives under A2 to limit the scope of the exception. The specific advantages of the catch composition, state permit, and geographic applicability sub-alternatives are discussed in detail in Chapters 2 and 4.

In addition to these sub-alternatives, several other mitigating measures are either in place or could be used to ensure that a limited smooth dogfish fin removal allowance does not impact other shark stocks. Currently, all shark dealer permit holders are required to attend shark identification workshops as a condition of their permit renewal. This requirement has virtually eliminated uncategorized shark reports by federal shark dealers. Consequently, the shark identification workshops decrease the likelihood that dealers would unknowingly purchase sharks other than smooth dogfish without the fins naturally attached.

Smoothhound sharks also have a unique physical feature that can make the species easy to identify from other shark species (although identification/differentiation within the smoothhound shark complex among the three different species is extremely difficult, as discussed previously), regardless of whether and to what extent the carcass has been processed. Many shark species have an inter-dorsal ridge that runs between the first and second dorsal fin. This inter-dorsal ridge appears as a peak or crease in the skin that runs medially across the back and has, in the past, been the basis for categorizing allowed and prohibited sharks due to the ease with which the feature can be identified. Smoothhound sharks are the only commonly encountered shark species in the Atlantic Ocean, including the Gulf of Mexico and Caribbean Sea, that has an inter-dorsal ridge that extends forward of the first dorsal fin, forming a “pre-dorsal ridge.” This pre-dorsal ridge can be used for positive species identification, regardless of the condition of the carcass, as long as some portion of this pre-dorsal area is intact, as is the case in most dressed sharks. Although this feature is shared by all three species of smoothhound sharks and thus may help distinguish them from non-smoothhound sharks, it is not helpful in distinguishing among the smoothhound species (i.e., smooth dogfish v. Florida smoothhound). Thus, to avoid illegal finning of smoothhound species not covered by the SCA exception, the geographic applicability of the smooth dogfish-specific provisions of the SCA would be limited to only the Atlantic Ocean in the preferred sub-alternatives and not in the Gulf of Mexico. In the Atlantic Ocean, and especially in the area of the directed fishery, smooth dogfish is likely the only smoothhound shark species that would be encountered, thus, is the only shark with a pre-dorsal ridge in the affected area. NMFS can communicate this distinguishing feature to both enforcement agents and the public to reduce the likelihood of misidentification. Fins can sometimes be identified to specific species, however, this is more difficult for agents that are not shark experts. Often times, to ensure accurate identification of detached fins, enforcement relies on genetic analyses, rather than identification by sight; such analyses are costly and cannot be done immediately.

Establishing the quotas considered in preferred Alternative B4 are expected to maintain effort at current levels but could arguably result in some increase to effort since landings are typically somewhat lower than the considered quotas. However, establishing scientifically-based quotas would help ensure that total mortality does not exceed sustainable levels. NMFS will monitor landings through mandatory shark dealer reports, and will close the fishery when landings reach, or are

projected to reach, 80 percent of the quota. In January 2013, NMFS implemented an electronic dealer reporting system that tracks the quota with greater temporal resolution and includes landings from most states from Maine through Texas, including the Caribbean, thereby providing greater protection against quota overages.

The purpose of preferred alternative C4 is to implement the Terms and Conditions of the 2012 Atlantic Shark Smoothhound Shark BiOp. This measure would mitigate and minimize impacts to protected resources and no further mitigation measures are necessary. Similarly, preferred alternative D2 complies with measures in the ALWTRP, the purpose of which is to mitigate and minimize impacts to large whales and so no further mitigation measures are necessary.

5.2 UNAVOIDABLE ADVERSE IMPACTS

Preferred alternative A2, allows for a limited exception in the Atlantic smooth dogfish fishery to the SCA fins attached requirement, and could result in unavoidable direct adverse short-term ecological impacts and indirect adverse short and long-term ecological impacts. These unavoidable adverse ecological impacts are primarily the result of increased fishing efficiency and the associated increase in fishing pressure directly on the smooth dogfish stock and indirectly on bycatch species and essential fish habitat. There are unavoidable minor adverse socioeconomic impacts associated with each of the preferred sub-alternatives under Alternative A2. The preferred sub-alternatives for catch composition and the state permit requirements help to limit the fins-attached exception to those fishermen that are fishing for smooth dogfish. Additionally, these minor socioeconomic adverse impacts are offset by the moderate beneficial socioeconomic impacts that would result from the implementation of Alternative A2.

Preferred Alternative B4 would establish smoothhound quotas based on the results of the SEDAR 39 stock assessments (Atlantic quota would be 1,201.7 mt dw and the Gulf of Mexico quota would be 336.4 mt dw). There are no adverse ecological impacts associated with this alternative in the short- or long-term because the levels are determined by the results of the stock assessments which projected reasonable commercial catch limits to maintain a sustainable fishery. No adverse socioeconomic impacts are expected since the quota is slightly higher than recent peak landings.

Preferred Alternative C4 would implement a soak time limit in the smoothhound shark gillnet fishery, in compliance with the 2012 Smoothhound Shark and Atlantic Shark BiOp. The alternative would establish a soak time limit of 24 hours for fishermen using sink gillnet gear and a 2 hour net check requirement for fishermen using drift gillnet gear in the Atlantic shark and smoothhound shark fisheries. Atlantic shark gillnet fishermen that have moved to sink gillnet gear would no longer be required to perform net checks at least every 2 hours under this alternative. Instead, they would be required to limit soak times to 24 hours. As such, Alternative C4 would result in short and long-term direct minor adverse ecological impacts because the target species, sharks, could remain in the gillnet for longer periods of time before being released, reducing the chances of a live release. Alternative C4 would likely result in neutral short and long-term direct socioeconomic impacts. Smoothhound

shark fishermen, who typically use sink gillnets, would be required to limit soak times to 24 hours and as discussed above, this requirement is unlikely to significantly alter smoothhound shark fishing practices. Drift gillnet fishermen, who are more likely to target Atlantic sharks other than smoothhound sharks, would be required to check their nets every 2 hours, as is currently required. Thus, this alternative is unlikely to have any socioeconomic impacts since it would not change current fishing practices.

Preferred Alternative D2 would modify VMS requirements for shark the shark gillnet fishery to better reflect the requirements of the ALWTRP. This alternative would narrow the geographic range of the VMS requirement to the vicinity of the Southeast U.S Monitoring Area. This VMS measure is strictly an enforcement tool and likely would not have any adverse ecological impacts. Similarly, reducing the number of fishermen that need a VMS unit and the area in which they need to transmit would likely have beneficial socioeconomic impacts for 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 ECONOMIC EVALUATION

Note that all dollars are reported in nominal dollars, consistent with methods used in the 2006 Consolidated HMS FMP.

6.1 NUMBER OF VESSELS AND PERMIT HOLDERS

This section further describes the number of vessels and permit holders that may be affected by this draft amendment. The commercial smoothhound shark permit requirement has not yet been implemented so NMFS does not have precise information on the universe of fishermen that would be affected by this amendment. VTR data, however, can provide some context for the number of vessels that participate in the fishery. Table 6.1 shows the number of vessels and trips, by year, that reported landing smooth dogfish regardless of gear type.

Table 6.1 Number of vessels and trips landing smooth dogfish, by year; Source: VTR data, 2003-2014

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Number of Vessels	129	136	129	151	160	150	198	198	187	201	199	192
Number of Trips	1889	1811	1448	1672	1601	1764	2329	2698	2646	2752	3037	2822

As discussed in Section 3.4, sink gillnet and otter bottom trawls are the two gears most often used to catch and retain smooth dogfish. Between 2003 and 2014, 10,697 sink gillnet trips that retained smooth dogfish were reported through VTR. These trips occurred aboard 241 different vessels over the 12 years. Of these vessels, only 83 vessels retained an annual average of at least 1,000 lbs of smooth dogfish, and only 20 vessels retained an annual average of at least 10,000 lbs of smooth dogfish. Table 6.2 summarizes the total number of vessels and trips that land smooth dogfish caught in sink gillnet gear each year between 2003 and 2014. Additional landings data can be found in Section 3.5.

Table 6.2 Number of vessels and trips landing smooth dogfish in sink gillnet gear, by year; Source: VTR data, 2003-2014

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Number of Trips	590	633	548	677	626	550	878	1184	1207	1237	1282	1295
Number of Vessels	58	58	56	71	69	68	83	95	94	97	91	87

Although smooth dogfish are generally only caught incidentally in trawl gear, landings of the species caught in this gear can be high due to the large number of trips taken by vessels involved in the trawl fishery. Table 6.3 lists the number of vessels and trips catching smooth dogfish in bottom otter fish trawl gear per year. A few vessels show some consistency in catching smooth dogfish in trawl gear year to year, however, the majority of vessels do not appear to land the species consistently, indicative of an incidental fishery. From 2003-2014, a total of 251 vessels landed smoothhound sharks that were caught in trawl gear, well above the maximum number of vessels in any one year.

Table 6.3 Number of vessels and trips landing smooth dogfish caught in trawl gear, by year. Source: VTR data, 2003-2014

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Number of Vessels	77	80	80	84	99	75	99	88	82	87	88	87
Number of Trips	1841	1794	1489	1485	1623	1109	1272	1323	1316	1343	1543	1362

Gillnet fishermen with an Atlantic shark permit would also be affected by this amendment. As of October 11, 2014, there are 206 directed shark and 258 incidental shark permit holders. Logbook records indicate that there are usually about 18 Atlantic shark directed permit holders that use gillnet gear in any year. However, the universe of directed permit holders using gillnet gear can change from year to year and could include anyone who holds an Atlantic shark directed permit.

6.2 GROSS REVENUES OF COMMERCIAL FISHERMEN

See Section 3.6.2 for a detailed discussion of smoothhound shark commercial revenues.

The Atlantic shark gillnet fishery generally targets SCS. Ex-vessel prices for SCS and shark fins by region can be found in Table 6.4.

Table 6.4 Average Ex-vessel Prices per Pound for Atlantic HMS, by Area (2004-2013); Sources: HMS eDealer, Dealer weighout slips from the Southeast Fisheries Science Center (SEFSC), Northeast Fisheries Science Center (NEFSC), and bluefin tuna dealer reports from the Northeast Regional Office. Gulf of Mexico includes: TX, LA, MS, AL, and the west coast of FL. S. Atlantic includes: east coast of FL, GA, SC, and NC dealers reporting to SEFSC. Mid-Atlantic includes: NC dealers reporting to NEFSC, VA, MD, DE, NJ, NY, and CT. N. Atlantic includes: RI, MA, NH, and ME.

Species	Area	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Small coastal sharks	Gulf of Mexico	0.35	0.47	0.51	0.58	0.62	0.69	0.55	0.58	0.66	0.33
	S. Atlantic	0.67	0.71	0.68	0.80	0.78	0.71	0.79	0.81	0.99	0.72
	Mid-Atlantic	0.44	0.39	0.45	0.43	0.48	0.57	0.57	0.59	0.68	0.83
	N. Atlantic	-	-	-	-	-	-	-	-	-	-
Shark fins	Gulf of Mexico	15.76	16.22	16.40	13.22	14.94	15.09	16.48	15.11	14.97	11.06
	S. Atlantic	12.55	13.93	13.24	11.44	12.73	13.15	15.35	14.91	11.00	6.02
	Mid-Atlantic	7.72	10.58	9.82	6.12	3.74	3.62	6.83	3.50	2.79	1.45
	N. Atlantic	1.39	4.55	6.23	3.24	3.00	3.67	2.40	1.60	1.86	1.85

7.0 REGULATORY IMPACT REVIEW

7.1 DESCRIPTION OF MANAGEMENT OBJECTIVES

Please see Chapter 1 for a description of the objectives of draft Amendment 9.

7.2 DESCRIPTION OF FISHERY

Please see Chapter 3 for a description of fishery and environment that could be affected by Draft Amendment 9.

7.3 STATEMENT OF PROBLEM

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

7.4 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 suite and its expected ecological, social, and economic impacts. Chapters 3 and 6 provide additional information related to the economic impacts of the alternative suites.

7.5 ECONOMIC ANALYSIS OF EXPECTED EFFECTS OF EACH ALTERNATIVE RELATIVE TO THE BASELINE

Table 7.1 shows the net economic benefits and costs of each of the alternatives analyzed in this EA.

Table 7.1 Net Economic Benefits and Costs of Alternatives.

Alternative	Net Economic Benefits	Net Economic Costs
Alternative A1: Do not implement the smooth dogfish -specific provisions of the Shark Conservation Act of 2010. By default, Amendment 3's fins-attached requirement would apply to the smooth dogfish fishery (i.e., fins of all smooth dogfish must remain naturally attached to the shark carcass through offloading)	This alternative would implement management measures and would begin data collection for the fishery that, in the long term, would provide economic benefits to fishermen and communities.	Under this alternative, fishermen would not be able to remove smooth dogfish fins at sea, reducing efficiency and landings.

Alternative	Net Economic Benefits	Net Economic Costs
Alternative A2: <i>Implement the smooth dogfish -specific provisions of the Shark Conservation Act of 2010 to establish an allowance for the removal of smooth dogfish fins while at sea, considering eight sub-alternatives - preferred alternative</i>	Would allow for the removal of smooth dogfish fins at sea, and therefore would maintain current efficiencies and landings for fishermen from Maine to Florida that fish within 50 nm of shore.	Would reduce the number of trips that can remove smooth dogfish fins at sea, relative to the status quo. Smooth dogfish would likely have a lower ex-vessel price if not fully processed.
Sub -Alternative A2-1a: Smooth dogfish can make up any portion of the retained catch (no other sharks can be retained)	Would maintain current flexibility in processing retained catch at sea and thereby maintaining current value of the fishery.	Both incidental and directed trips could remove smooth dogfish fins at sea, possibly resulting in greater fishing mortality.
Sub -Alternative A2-1b: Smooth dogfish s must make up at least 25 percent of the retained catch (no other sharks can be retained)	Would maintain some of the current flexibility in processing the retained catch, thereby allowing some fishermen to maintain current value of the fishery. Fishermen could still retain other valuable species as long as they were not sharks.	Some trips (those that retain smooth dogfish in an amount less than 25 percent of the total catch) would be unable to remove fins at sea, reducing profitability and efficiency.
Sub -Alternative A2-1c: Smooth dogfish must make up at least 75 percent of the retained catch (no other sharks can be retained)	Would maintain some of the current flexibility in processing the retained catch, thereby allowing some fishermen to maintain current value of the fishery. Fishermen could still retain other valuable species as long as they were not sharks.	Larger number of trips, relative to Sub-Alternative A2-1d, could remove smooth dogfish fins at sea possibly resulting in greater fishing mortality
Sub -Alternative A2-1d: Smooth dogfish s must make up at 100 percent of the retained catch	Reduced number of trips could remove smooth dogfish fins at sea resulting in reduced fishing pressure and long-term economic sustainability of the fishery.	No flexibility to retain other valuable species.
Sub -Alternative A2-1e: <i>Smooth dogfish must make up at least 25 percent of the retained catch and other sharks may be retained provided their fins remain naturally attached to the carcass – preferred alternative</i>	Would maintain some of the current flexibility in processing the retained catch, thereby allowing some fishermen to maintain current value of the fishery. Fishermen could still retain other valuable species including sharks.	Some trips (those that retain smooth dogfish in an amount less than 25 percent of the total catch) would be unable to remove fins at sea, reducing profitability and efficiency.

Alternative	Net Economic Benefits	Net Economic Costs
Sub -Alternative A2-2a: Require smoothhound shark-specific state commercial fishing permit in conjunction with the federal smoothhound permit	No economic benefits associated with this sub-alternative beyond those that already exist.	Additional permit requirement could result in additional labor to apply for the permit in addition to the permit cost.
Sub -Alternative A2-2b: <i>Require any state commercial fishing permit that allows smooth dogfish in conjunction with the federal smoothhound permit- preferred alternative</i>	No economic benefits associated with this sub-alternative beyond those that already exist.	Additional permit requirement could result in additional labor to apply for the permit in addition to the permit cost. However, many fishermen would likely already hold this type of permit.
Sub-Alternative A2-3a: Apply exception for smooth dogfish along the Atlantic Coast and to Florida’s coast in the Gulf of Mexico.	None in the short-term since there is no commercial fishery in the Gulf of Mexico. In the long-term, could prevent inadvertent violations due to misidentification of smoothhound species in the Gulf of Mexico if a commercial fishery develops in that region	None in the short-term since there is no commercial fishery in the Gulf of Mexico. No costs in the long term if a fishery develops in the region.
Sub-Alternative A2-3b: <i>Apply exception for smooth dogfish along the Atlantic Coast but not to Florida’s coast in the Gulf of Mexico - preferred alternative</i>	None in the short-term since there is no commercial fishery in the Gulf of Mexico. In the long-term, could simplify compliance and reduce violations if a fishery develops in that region.	None in the short-term since there is no commercial fishery in the Gulf of Mexico. In the long-term, could prevent fishermen from removing the fins of smooth dogfish at sea, leading to increased labor cost and possibly a lower value product if a commercial fishery develops in that region.
Alternative B1: Implement a smoothhound shark quota that is equal to the maximum annual landings from 1998 – 2007 plus two standard deviations (715.5 mt)	Reduces total landings from current levels to ensure that fishing mortality is restricted and sustainable.	The quota would be lower than current landings, resulting in resulting in \$1,015,768 of unrealized income, relative to 2010 landings.
Alternative B2: Establish a “rolling quota” each year based upon the previous five years of available data. Annual quota would be equal to maximum landings during the previous five years of available data plus two standard deviations (2016 quota would be 1,729 mt based on 2010-2014 data).	Quota would allow for the current level of landings and would allow for growth in the fishery.	If the quota grows to unsustainable levels, the result could be a closed or less productive fishery resulting in unrealized income.
Alternative B3: Establish a smoothhound shark quota that is equal to the maximum annual landings from 2005-2014 plus two standard deviations (1,733.9mt)	Quota would allow for the current level of landings.	Would limit growth in the fishery.

Alternative	Net Economic Benefits	Net Economic Costs
<p>Alternative B4: <i>Establish a smoothhound shark TAC of 1,430.6 mt dw and commercial quota of 1,201.7 mt dw in the Atlantic region, and a TAC of 509.6 mt dw and commercial quota of 336.4 mt dw in the Gulf of Mexico region based on results of the 2015 smoothhound shark stock assessment- Preferred Alternative</i></p>	<p>Would ensure a sustainable fishery and maximize access to the resource in the long-term. Would maintain total fishery revenue near current levels. Potential annual revenues in the entire fishery of \$2,422,251.54.</p>	<p>Would limit growth in the fishery but short-term increased revenues compared to the commercial quota under Alternative B1, though lower than those anticipated under Alternatives B2 or B3. Quotas would allow the fishery to continue at the rate and level observed in recent years into the future without having to be shut down prematurely.</p>
<p>Alternative C1: No Action. Do not take further action to implement TC 4 in the smoothhound shark fishery</p>	<p>Gillnet fishermen targeting smoothhound sharks would not need to comply with gillnet fishing restrictions, possibly maintaining current efficiencies.</p>	<p>Protected resources including sea turtles and sturgeon have an existence value. This value is diminished if there are not adequate protections in place.</p>
<p>Alternative C2: Require smoothhound shark gillnet fishermen to conduct net checks at least every 2 hours to look for and remove any sea turtles, marine mammals, smalltooth sawfish, or Atlantic sturgeon found in the net</p>	<p>Protected resources including sea turtles and sturgeon have an existence value. This value is protected if there are adequate protections in place.</p>	<p>This alternative would limit effort in the smoothhound shark gillnet fishery. Currently, smoothhound shark gillnet fishermen sometimes fish multiple nets or leave nets unattended. This alternative would eliminate those practices, increasing trip costs and/or decreasing landings.</p>
<p>Alternative C3: Establish a gillnet soak time limit of 24 hours for smoothhound shark permit holders; fishermen holding both a directed Atlantic shark limited access permit and a smoothhound shark permit must abide by both soak time restrictions and net check requirements</p>	<p>Gillnet fishermen targeting smoothhound sharks would not need to comply with gillnet fishing restrictions, possibly maintaining current efficiencies.</p>	<p>Currently, smoothhound shark fishermen rarely soak gillnets for more than 24 hours and Atlantic shark fishermen already abide by the net check requirement. Fishermen only holding one permit are unlikely to be affected. Fishermen holding both permits, however, would be affected. Smoothhound shark fishermen that also hold an Atlantic shark permit and that fish with gillnet gear would need to perform net-checks at least every 2 hours. This would limit effort in the fishery, increasing trip costs and/or decreasing landings.</p>

Alternative	Net Economic Benefits	Net Economic Costs
Alternative C4: <i>Establish a soak time limit of 24 hours for sink gillnet gear and a 2 hour net check requirement for drift gillnet gear in the Atlantic shark and smoothhound shark fisheries – Preferred Alternative</i>	Gillnet fishermen targeting smoothhound sharks would not need to comply with gillnet fishing restrictions, possibly maintaining current efficiencies.	Smoothhound shark fishermen, who typically use sink gillnets, would be required to limit soak times to 24 hours, thus this alternative is unlikely to significantly alter fishing practices. Drift gillnet fishermen, would are more likely to target sharks than smoothhound sharks, would be required to check their nets at least every 2 hours, as is currently required. Thus, this alternative is unlikely to have to have any socioeconomic impacts
Alternative D1: No Action. Do not change VMS requirements for federal directed shark permit holders with gillnet gear on board.	No economic benefits associated with this alternative beyond those that already exist.	Fishermen that do not fish in the vicinity of the Southeast U.S. Monitoring Area would need to install and/or maintain a VMS and incur data transmission costs.
Alternative D2: <i>Require federal directed shark permit holders with gillnet gear on board to use VMS only in the Southeast U.S. Monitoring Area, pursuant to Atlantic Large Whale Take Reduction Plan requirements – Preferred Alternative</i>	Reduced costs for gillnet fishermen outside of the vicinity of the Southeast U.S. Monitoring Area. Fishermen would only need to turn on VMS (incurring transmission costs) when in that vicinity. Fishermen that never fish in that area would not need to install a VMS unit.	Some fishermen may avoid the productive fishing grounds around the vicinity of the Southeast U.S. Monitoring Area to avoid the VMS requirement, resulting in unrealized income.

7.6 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; and (3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the legal mandates, the President’s priorities, or the principles set forth in the Executive Order; 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 Chapters 4 and 6, can be found in Table 7.1.

8.0 FINAL REGULATORY FLEXIBILITY ANALYSIS

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 a 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.

8.1 STATEMENT OF THE NEED FOR AND OBJECTIVES OF THIS FINAL RULE

Please see Chapter 1 for a full description of the objectives of this action. In compliance with section 604(a)(1) of the Regulatory Flexibility Act, the management goals and objectives of this action are to provide for the sustainable management of smoothhound sharks and Atlantic shark 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 and the Marine Mammal Protection Act (MMPA). The management objectives are to achieve the following:

- Implement the smooth dogfish provisions of the SCA
- Implement other measures, as necessary, to ensure that the smooth dogfish provisions of the SCA do not negatively impact the sustainable fishery of other shark species
- Reexamine the smoothhound shark quota in light of updated landings data
- Implement the Term and Condition of the 2012 Smoothhound Shark and Atlantic Shark Biological Opinion related to gillnet impacts on ESA-listed species
- Reexamine Atlantic shark gillnet VMS regulation in compliance with the ALWTRP, per the MMPA

8.2 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 many 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. NMFS did not receive comments specifically on the IRFA.

8.3 DESCRIPTION AND ESTIMATE OF THE NUMBER OF SMALL ENTITIES TO WHICH THE FINAL RULE WILL APPLY

Section 604(a)(3) requires Agencies to provide an estimate of the number of small entities to which the rule would apply. On June 24, 2014, the Small Business Administration (SBA) issued a final rule revising the small business size standards for several industries, effective July 14, 2014 (79 FR 33647). The rule increased the size standard for Finfish Fishing from \$19.0 to 20.5 million, Shellfish Fishing from \$5.0 to 5.5 million, and Other Marine Fishing from \$7.0 to 7.5 million. *Id.* at 37400. NMFS has reviewed the analyses prepared for this action in light of the new size standards. Under the former, lower size standards, all entities subject to this action were considered small entities, thus they all would continue to be considered small entities under the new standards. NMFS does not believe that the new size standards affect analyses prepared for this action and solicits public comment on the analyses in light of the new size standards. Under these standards, NMFS considers all Atlantic HMS permit holders subject to this rulemaking to be small entities

As discussed in Section 6.1, NMFS does not have exact numbers on affected commercial fishermen. The smoothhound shark commercial permit has not yet been created, so NMFS does not know how many smoothhound shark fishermen will be impacted. Table 6.1 shows an annual average of 169 vessels reported retaining smooth dogfish through VTR from 2003 – 2014. This is NMFS' best estimate of affected smoothhound shark fishermen.

While the retention of sharks in federal waters requires one of two limited access commercial shark permits, these permits do not specific gear type, including gillnets. For this reason, NMFS does not know the exact number of affected shark gillnet fishermen. As of May 21, 2015, there are 208 directed shark and 253 incidental shark permit holders. Logbook records indicate that there are usually about 18 Atlantic shark directed permit holders that use gillnet gear in any year. However, the universe of directed permit holders using gillnet gear can change from year to year and could include anyone who holds an Atlantic shark directed permit.

As of May 21, 2015, there are 97 Atlantic shark dealers. These dealers could be affected by these measures to varying degrees. Not all of these dealers purchase smoothhound sharks and those that do are concentrated in the Mid-Atlantic region. NMFS will know more about the number of affected dealers when smoothhound reporting requirements go into place. Similarly, not all of these dealers purchase Atlantic sharks caught with gillnet gear. The number is likely low and is concentrated in Florida and the Gulf of Mexico.

NMFS has determined that the proposed rule is not likely to 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 3.

8.4 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. This action contains one new collection of information, reporting, record-keeping, or other compliance requirement. The federal commercial smoothhound shark permit requirement analyzed in Amendment 3 to the 2006 Consolidated HMS FMP will become effective upon the effective date of this rule. NMFS submitted a PRA change request to The Office of Management and Budget (OMB) to add this permit to the existing HMS permit PRA package (OMB control number 0648-0327). OMB subsequently approved the change request to add the federal commercial smoothhound shark permit to the HMS permit PRA package in May 2011. The previously approved commercial smoothhound shark permit will be moved from the HMS permit PRA package (OMB control number 0648-0327) to the Southeast Regional Office (SERO) permit PRA package (OMB control number 0648-0205), pending OMB approval, which is expected in late 2016. NMFS will issue a notice when the move has been approved. When the commercial smoothhound shark permit is moved into the SERO permit PRA package, NMFS will provide a more accurate estimate of the number of respondents, reducing the estimated number of respondents from 4,000 to 500 based on recent landings data.

Additionally, this action reduces the burden for shark gillnet fishermen to comply with VMS requirements. The information collection requirements approved under OMB Control No. 0648-0372, whose burden will be reduced by this rule, will be requested as part of the 2016 extension, at which time the estimate of the burden change will be more accurate.

8.5 DESCRIPTION OF THE STEPS THE AGENCY HAS TAKEN TO MINIMIZE THE SIGNIFICANT ECONOMIC IMPACT ON SMALL ENTITIES CONSISTENT WITH THE STATED OBJECTIVES OF APPLICABLE STATUTES, 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 (5 U.S.C. § 603 (c)(1)-(4)) 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, ATCA, 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 alternatives 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 this action on vessels.

Alternatives to Implement the Smooth Dogfish-Specific Provisions of the Shark Conservation Act of 2010

With regard to the implementation of the SCA, NMFS considered two alternatives. Alternative A1, which would not implement the smooth dogfish-specific provisions of the SCA and would instead implement the fins-attached requirement finalized in Amendment 3, and Alternative A2, which would implement the smooth dogfish-specific provisions of the SCA and has sub-alternatives that address the specific elements of the of the smooth dogfish-specific provisions.

Alternative A1 would not implement the smooth dogfish-specific provisions of the SCA and would require all smooth dogfish to be landed with fins naturally attached. This alternative would change current fishing practices since smooth dogfish caught in the directed and incidental fisheries are fully processed while at sea. As a result, this Alternative A1 would likely lead to reduced landings and a lower ex-vessel price because the product would not be fully processed. This could lead to adverse socioeconomic impacts.

Under Alternative A2, the preferred alternative, an allowance for the removal of smooth dogfish fins at sea would increase efficiency in the smooth dogfish fishery and provide a more highly processed product for fishermen to sell to dealers. Quantifying the financial benefits is difficult because baseline effort and increases in efficiency cannot be calculated, but the benefit would fall somewhere between the two extremes of \$0 and \$699,364, the ex-vessel value of the entire fishery (Section 3.6.2). Assuming that amount is spread evenly across all 169 vessels per year that retain smooth dogfish (Section 6.1), the benefit to individual vessels would be \$4,138. However, vessels and trips retain smooth dogfish in widely varying amounts, thus, this per vessel estimate may not provide an accurate picture of individual revenues.

Supporting entities, such as bait and tackle suppliers, ice suppliers, dealers, and other similar businesses, could experience increased revenue if the efficiency of fin removal at sea results in a higher quality product. However, while supporting businesses would benefit from the increased profitability of the fishery, they do not solely rely on the smooth dogfish fishery.

In the long-term, it is likely that changes in the smooth dogfish fishery would not have large impacts on these businesses.

Catch Composition Sub-Alternatives

Under Sub-Alternative A2-1a, smooth dogfish could make up any portion of the retained catch on board provided that no other sharks are retained. This sub-alternative would authorize smooth dogfish fishermen to retain any non-shark species of fish while still availing themselves of the at-sea fin removal allowance. Smooth dogfish are often caught incidentally during other fishing operations, thus, this sub-alternative would allow fishermen to maximize the profitability of each trip and allow individual operators the flexibility to make decisions, before the trip and while on the water, as to the retained catch composition that would maximize ex-vessel revenues. Under this alternative, fishermen could remove smooth dogfish fins at sea during any type of trip including those trips that are directing effort on other non-shark species. This alternative would maintain the current practice in the fishery and vessels could continue to have ex-vessel revenues of \$699,364 per year across the entire fishery (Section 3.6.2).

Under Sub-Alternative A2-1b, fishermen could avail themselves of the at-sea fin removal allowance only if smooth dogfish comprise 25 percent of the retained catch on board. This sub-alternative would authorize smooth dogfish fishermen to retain some non-shark species of fish while still availing themselves of the at-sea fin removal allowance. This sub-alternative would allow some fishermen to maintain the profitability of each trip and allow individual operators some flexibility to make decisions, before the trip and while on the water, as to the retained catch composition that would increase ex-vessel revenues. This increase in flexibility would be to a lesser extent than Sub-Alternative A2-1a which would not have a catch composition requirement, but greater than the other sub-alternatives that limit the fins-attached exception to higher catch composition percentages. This sub-alternative would decrease total ex-vessel revenues relative to the current level of \$699,364 per year (Section 3.6.2).

Under Sub-Alternative A2-1c fishermen could avail themselves of the at-sea fin removal allowance only if smooth dogfish comprise 75 percent of the retained catch on board. This sub-alternative would allow fishermen limited flexibility to maintain the profitability of each trip and would allow fishermen to make decisions, before the trip and while on the water, as to the retained catch composition that would increase ex-vessel revenues. While limited, the flexibility in this alternative would be greater than in sub-alternative A2-1d, which would require smooth dogfish catch composition of 100 percent. Because some fishermen catch smooth dogfish along with other species, this sub-alternative could decrease the number of mixed species trips where fishermen could take advantage of the at-sea fin removal allowance. This sub-alternative would likely decrease total ex-vessel revenues relative to the current level of \$699,364 per year (Section 3.6.2).

Sub-Alternative A2-1d would require smooth dogfish to comprise 100 percent of the retained catch on board the vessel in order for fishermen to avail themselves of the at-sea fin removal allowance for smooth dogfish. This sub-alternative would eliminate the ability of mixed trips to take advantage of the at-sea fin removal, and would reduce flexibility in deciding which species to retain on each fishing trip. However, approximately 31 vessels (annual average 2003-2014) on directed smooth dogfish trips often only retain smooth dogfish due to the processing

practices in place. Thus, these fishermen would not be impacted by a 100 percent smooth dogfish requirement and would benefit from the ability to remove the smooth dogfish fins at sea. This sub-alternative would likely decrease total ex-vessel revenues relative to the current level of \$699,364 per year (Section 3.6.2).

Sub-Alternative A2-1e, the preferred sub-alternative, would, similar to Sub-Alternative A2-1b, allow fishermen to avail themselves of the at-sea fin removal allowance only if smooth dogfish comprise 25 percent of the retained catch on board. However, under Sub-Alternative A2-1e, other sharks could be retained as well, provided they are maintained with the fins naturally attached to the carcass. This sub-alternative would allow some fishermen to maintain the profitability of each trip and allow individual operators some flexibility to make decisions, before the trip and while on the water, as to the retained catch composition that would increase ex-vessel revenues. This increase in flexibility would be to a lesser extent than Sub-Alternative A2-1a, which would not have a catch composition requirement, but greater than the other sub-alternatives that limit the fins-attached exception to higher catch composition percentages. This sub-alternative would decrease total ex-vessel revenues relative to the current level of \$699,364 per year (Section 3.6.2).

State Fishing Permit Requirement Sub-Alternatives

Sub-Alternative A2-2a would require federal smoothhound permitted fishermen to obtain a smooth dogfish-specific state commercial fishing license in order to be able to remove smooth dogfish fins at sea. The requirement to obtain a smooth dogfish-specific state commercial fishing license may be more difficult for fishermen who are in states that do not have smooth dogfish-specific permits in place. This sub-alternative would result in the increased burden on fishermen to obtain another permit, and depending upon the state, could result in an additional permit charge. Since most permits are valid for one year, fishermen would likely need to renew the permit each year for as long as they wish to retain smooth dogfish and remove the fins while at sea. Because not all states have smooth dogfish-specific permits, NMFS does not prefer this alternative.

Sub-Alternative A2-2b, the preferred alternative, would require fishermen to hold any state commercial fishing permit that allows retention of smooth dogfish. It is likely, however, that most smooth dogfish fishermen already hold this type of state permit and would be unaffected by this requirement. This sub-alternative would likely be the most straightforward for regulatory compliance because the permit requirement would be the simpler than sub-alternative A2-2a. Thus, NMFS prefers this sub-alternative.

Geographic Applicability of Exception Sub-Alternatives

NMFS considered two alternatives for Geographic Application of the SCA exception. Under Sub-Alternative A2-3a, the exception would apply along the Atlantic Coast and the Florida west coast in the Gulf of Mexico. As explained earlier, as a practical matter, smooth dogfish and other smoothhound species are indistinguishable, although smoothhound are distinguishable from other ridgeback sharks by the presence of a pre-dorsal ridge. The best available scientific information indicates that smooth dogfish are likely the only smoothhound shark species along the Atlantic coast. In the Gulf of Mexico, however, there are at least three different smoothhound species, with no practical way to distinguish among them. This sub-

alternative would apply the smooth dogfish exception 50 nautical miles from the baseline of all the States that fall under the SCA definition of “State.” This sub-alternative could result in other smoothhound sharks indirectly falling under the exception, because they cannot be distinguished from smooth dogfish. NMFS does not expect any impacts because there is no commercial fishery for smooth dogfish in the Gulf of Mexico at this time. However, NMFS does not prefer this sub-alternative because, if a fishery does develop, species misidentification could result in enforcement action.

Under Sub-Alternative 3b, the preferred sub-alternative, the exception would only apply along the Atlantic coast and not the Florida west coast in the Gulf of Mexico. By not extending the exception into the Gulf of Mexico, this sub-alternative would ensure that the SCA's exception to the fins-attached requirements for smooth dogfish would only apply along the Atlantic Coast where the population is almost entirely smooth dogfish, reducing identification problems and inadvertent finning violations. NMFS does not expect any impacts because, at this time, there is no commercial fishery for smooth dogfish in the Gulf of Mexico. NMFS prefers this sub-alternative because it simplifies enforcement and compliance without adverse impacts. This sub-alternative would not affect total ex-vessel revenues relative to the current level of \$699,364 per year.

Smoothhound Shark Commercial Quotas

With regard to the smoothhound quota alternatives, NMFS considered four alternatives. Alternative B1, which would implement the smoothhound shark quota finalized in Amendment 3; Alternative B2, which would establish a rolling quota based on the most recent five years of landings data; Alternative B3, which would calculate the smoothhound quota using the same method as in Amendment 3 but would use updated smoothhound landings information; and Alternative B4, which would establish smoothhound shark quotas that reflects the results of the SEDAR 39 smoothhound shark stock assessments.

Alternative B1 would implement the quota finalized in Amendment 3 (715.5 mt dw), which was based on highest annual landings from (1998 to 2007) and adding two standard deviations. Current reported smoothhound shark landings are higher than the quota level in Alternative B1. As such, implementing this quota would prevent fishermen from fishing at current levels, resulting in lost revenues. In 2010 when landings peaked, total smoothhound shark landings totaled 2,688,249 lb dw (ACCSP data) resulting in ex-vessel revenues across the entire smoothhound sink gillnet fishery of \$2,458,135 (2,688,249 lb of meat, 322,590 lb of fins). Implementation of the Amendment 3 quota (715.5 mt dw) would result in ex-vessel revenues of only \$1,442,367 (1,577,391 lb of meat, 189,287 lb of fins), which is \$1,015,768 less than current ex-vessel revenues. Both of these estimates assume \$1.62/lb for fins, \$0.72/lb for meat, and a 12 percent fin-to-carcass ratio (prices based on 2014 dealer data and fin-to-carcass ratio based on the SCA). Seventy-five percent of all landings in the smoothhound shark fishery come from sink gillnets and there are approximately 77 vessels that use sink gillnet gear to fish for smoothhound sharks in any given year. Assuming an average of 77 sink gillnet vessels fishing for smoothhound sharks, the quota in this alternative would result in annual ex-vessel revenues of \$18,732 per vessel which is less than 2010 ex-vessel revenues of \$31,923 per vessel. This is an average across all directed and incidental sink gillnet vessels and this individual annual vessel

ex-vessel revenue may fluctuate based on the degree to which fishermen direct on smoothhound sharks.

The quota in Alternative B1 does not accurately characterize current reported landings of smoothhound sharks. Vessels that fish for smoothhound sharks likely fished opportunistically on multiple species of coastal migratory fish and elasmobranchs, and it is unlikely that any sector within the fishing industry in the Northeast (fisherman, dealer, or processor) relies wholly upon smoothhound sharks. Longer-term impacts are expected to be neutral given the small size of the fishery and the generalist nature of the sink gillnet fishery.

Alternative B2 would establish a rolling smoothhound shark quota set above the maximum annual landings for the preceding five years; this quota would be recalculated annually to account for the most recent landing trends within the smoothhound complex (2016 quota would be 1,729 mt dw based on 2010-2014 data). The 2016 quota under this alternative is likely to result in annual revenues of \$3,485,466 (3,811,753 lb of meat, 457,410 lb of fins) assuming an ex-vessel price of \$1.62 lb for fins and \$0.72 lb for meat. Seventy-five percent of all landings in the smoothhound shark fishery come from sink gillnets and there are approximately 77 vessels that use sink gillnet gear to fish for smoothhound sharks. Assuming an average of 77 sink gillnet vessels fishing for smoothhound sharks, the quota in this alternative would result in individual vessel annual revenues of \$45,266 which is more than 2010 ex-vessel revenues of \$31,923 per vessel. This is an average across all sink gillnet vessels, regardless of catch levels, and this individual annual vessel revenue may fluctuate based on the degree to which fishermen direct on smoothhound sharks.

Setting the quota above current landings levels should allow the fishery to continue, rather than be closed, allowing for NMFS to collect more information that can be used in future stock assessments. Alternative B2 is consistent with the intent of Amendment 3, which was to minimize changes to the fishery while information on catch and participants was collected. Because landings in the smoothhound shark fishery are likely underreported, it is unclear at this time whether the increase in reported landings is due to existing smoothhound fishermen reporting in anticipation of future management or increased effort (e.g., new entrants into the fishery). While a rolling quota would cover all current reporting and likely cover all underreporting of landings, the fishery could grow exponentially if reported landings continue to increase over consecutive years, possibly resulting in stock declines and in turn a potential loss of revenue to the fishing industry. The rolling quota could also lead to lower quotas in consecutive years if landings decrease over time. Thus, the changing nature of the rolling quota could lead to uncertainty in the fishery and could cause direct and indirect minor adverse socioeconomic impacts in the long term.

Alternative B3 would create a smoothhound quota equal to the maximum annual landings from 2005-2014 plus two standard deviations and would equal 1,733.9 mt dw. This alternative would establish a smoothhound quota two standard deviations above the maximum annual landings reported over the last ten years which is the method used to calculate the smoothhound shark quota that was finalized in Amendment 3. This quota would result in potential annual revenues in the entire fishery of \$3,495,345 (3,822,556 lb of meat, 458,707 lb of fins) assuming an ex-vessel price of \$1.62 lb for fins and \$0.72 for meat. Seventy-five percent of all landings in

the smoothhound shark fishery come from sink gillnets and there are approximately 77 vessels that use sink gillnet gear to fish for smoothhound sharks. Assuming an average of 77 sink gillnet vessels fishing for smoothhound sharks, the quota proposed in this alternative would result in individual vessel annual revenues of \$45,394. This is an average across all sink gillnet vessels, regardless of catch levels, and this individual annual vessel revenue may fluctuate based on the degree to which fishermen direct on smoothhound sharks.

At the time of publication for the Draft EA, the SEDAR 39 smoothhound stock assessments were underway, but not yet complete. In anticipation that the final stock assessments could be finalized before this final rule, NMFS considered a range of scenarios under Alternative B4 to implement potential results and scenarios, recognizing that results beyond the scope of those analyzed could require additional analysis or regulatory action. The SEDAR 39 stock assessment is now final; thus, the scenarios considered in the Draft EA are no longer appropriate to consider. Rather, NMFS has analyzed the actual results of the stock assessments, which would establish an Atlantic smoothhound commercial quota of 1,201.7 mt dw and a Gulf of Mexico smoothhound shark quota of 336.4 mt dw. These quotas would result in annual revenues of \$2,422,251.54 (2,649,006 lb of meat, 317,881 lb fins), assuming an ex-vessel price of \$1.62 lb for fins and \$0.72 lb for meat. Seventy-five percent of all landings in the smoothhound shark fishery come from sink gillnets and there are approximately 77 vessels that use sink gillnet gear to fish for smoothhound sharks. Assuming an average of 77 sink gillnet vessels fishing for smoothhound sharks, the quota in this alternative would result in individual vessel annual revenues of \$31,458. This is an average across all sink gillnet vessels, regardless of catch levels, and this individual annual vessel revenue may fluctuate based on the degree to which fishermen direct on smoothhound sharks. The quotas under Alternative B4 are both consistent with the intent of Amendment 3, which was to minimize changes to the fishery while information on catch and participants was collected, while also implementing science-based quotas to ensure continued sustainable harvest of smoothhound sharks in the Atlantic and Gulf of Mexico regions. NMFS anticipates short-term, direct minor beneficial socioeconomic impacts under this alternative given the combined commercial quotas for the Atlantic and Gulf of Mexico regions under this alternative would result in increased revenues compared to the commercial quota under Alternative B1, though lower than those anticipated under Alternatives B2 or B3. These commercial quotas would allow the fishery to continue at the rate and level observed in recent years into the future without having to be shut down prematurely. Given that the fishery would expect to operate as it currently does, NMFS anticipates in the short term, indirect, minor, positive socioeconomic impacts for shark dealers and processor. Since this alternative establishes scientifically-based quotas and would result in beneficial socioeconomic impacts, NMFS prefers this alternative.

Biological Opinion Implementation

In order to implement TC 4 of the 2012 Shark BiOp in the smoothhound shark fishery, NMFS considered 4 alternatives. The No Action alternative, which would not implement TC 4 of the 2012 Shark BiOp; alternative C2, which would require smoothhound shark fishermen to conduct net checks at least every 2 hours; alternative C3, which would require smoothhound shark fishermen to limit their gillnet soak time to 24 hours and those smoothhound shark fishermen that also have a Atlantic shark limited access permit to check their nets at least every 2 hours; and finally, Alternative C4, which would require smoothhound and Atlantic shark

fishermen using sink gillnet to soak their nets no longer than 24 hours and those fishermen using drift gillnets to check their nets at least every 2 hours.

Alternative C1 would not implement the BiOp term and condition that would require all smoothhound shark permit holders to either check their gillnet gear at least every 2.0 hours or limit their soak time to no more than 24 hours. This alternative would likely result in short and long-term neutral direct socioeconomic impacts. Under Alternative C1, smoothhound shark fishermen would continue to fish as they do now and so this alternative would not have economic impacts that differ from the status quo. Similarly, this alternative would likely result in neutral short and long-term indirect socioeconomic impacts since supporting businesses including dealers and bait, tackle, and ice suppliers would not be impacted.

Alternative C2 would require smoothhound shark fishermen using gillnet gear to conduct net checks at least every 2.0 hours to check for and remove any protected species, and would likely result in short and long-term direct moderate adverse socioeconomic impacts. Some smoothhound shark gillnet fishermen fish multiple nets at one time or deploy their net(s), leave the vicinity, and return later. Alternative C2 would require these fishermen to check each gillnet at least once every 2 hours, making fishing with multiple nets or leaving nets unattended difficult. This would likely lead to a reduction in effort and landing levels, resulting in lower ex-vessel revenues. Quantifying the loss of income is difficult without information characterizing the fishery including the number of nets fished. However, limiting the amount of fishing effort in this manner is likely to reduce total landings of smoothhound sharks or, in order to keep landing levels high, extend the length of trips. Landings of incidentally caught fish species could be reduced as well, although under preferred Sub-Alternative A2-1c, smoothhound shark fishermen that wish to remove smooth dogfish fins at sea could not retain other species. This alternative would not have a large impact on supporting businesses such as dealers or bait, tackle, and ice suppliers since these businesses do not solely rely on the smoothhound shark fishery. The smoothhound shark fishery is small relative to other fisheries. Thus, Alternative C2 would likely result in short and long-term indirect neutral socioeconomic impacts. Alternative C2 would impact the approximately 77 vessels that annually catch smoothhound sharks with gillnet gear (annual average from 2003-2014, Table 3.1).

Alternative C3 would establish a gillnet soak time limit of 24 hours for smoothhound shark permit holders. Under this alternative, fishermen holding both an Atlantic shark limited access permit and a smoothhound shark permit must abide by the 24 hour soak time restriction and conduct net checks at least every 2 hours. This alternative would likely result in short- and long-term direct minor adverse socioeconomic impacts to those smoothhound permitted fishermen that also have an Atlantic shark limited access permit and therefore would be required to check their nets at least every 2 hours. Currently, smoothhound shark gillnet fishermen sometimes fish multiple nets or leave nets unattended for short periods of time. Rarely are these nets soaked for more than 24 hours, thus, this alternative would not impact smoothhound shark gillnet fishermen that do not have an Atlantic shark limited access permit. Adverse socioeconomic impacts resulting from this alternative would likely occur to the subset of smoothhound shark fishermen that also hold an Atlantic shark limited access permit. These smoothhound shark fishermen would be at a disadvantage to other smoothhound shark fishermen that do not have an Atlantic shark limited access permit because they would be required to check

their gillnets at least every 2 hours which is a large change in the way the smoothhound shark fishery currently operates. Dropping the Atlantic shark permit to avoid the net check requirement is unlikely to be feasible because Atlantic shark permits are limited access and cannot be easily obtained. Additionally, pelagic longline fishermen are required to have an incidental or directed shark permit when targeting swordfish or tunas, even if they are not fishing for sharks, due to the likelihood of incidental shark catch. In practical terms, this could result in smoothhound shark gillnet fishermen abiding by the 2 hour net check requirement even if they do not fish for Atlantic sharks and only hold a Atlantic shark limited access permit to fish for swordfish or tunas (note that gillnets cannot be used to target swordfish or tunas, but some vessels may switch gears between trips). For this subset of fishermen, basing gillnet requirements on permit types could introduce fishing inefficiencies when compared to other smoothhound fishermen, likely resulting in adverse socioeconomic impacts to these fishermen. It is unlikely that this alternative would have a large impact on supporting businesses such as dealers or bait, tackle, and ice suppliers since these businesses do not solely rely on the smoothhound shark fishery. The smoothhound shark fishery is small relative to other fisheries. It is difficult to determine the number of fishermen that would be adversely affected because NMFS does not yet know which vessels will obtain a smoothhound shark fishing permit. However, it is likely that this number will be approximately equal to 169 which is the average annual number of vessel that retain smoothhound sharks (Section 3.4).

Alternative C4, the preferred alternative, would establish a soak time limit of 24 hours for fishermen using sink gillnet gear and a 2 hour net check requirement for fishermen using drift gillnet gear in the Atlantic shark and smoothhound shark fisheries. Drift gillnets would be defined as those that are unattached to the ocean bottom with a float line at the surface and sink gillnet gear would be defined as those with a weight line that sinks to the ocean bottom, has a submerged float line, and is designed to be fished on or near the bottom. Alternative C4 would likely result in neutral short and long-term direct socioeconomic impacts. Smoothhound shark fishermen, who typically use sink gillnets, would be required to limit soak times to 24 hours and as discussed above, this requirement is unlikely to significantly alter smoothhound shark fishing practices. Drift gillnet fishermen, who are more likely to target Atlantic sharks rather than smoothhound sharks, would be required to check their nets at least every 2 hours, as is currently required. Thus, this alternative is unlikely to have any socioeconomic impacts to Atlantic shark and smoothhound shark fishermen because it would not change current fishing practices. Similarly, this alternative would likely result in neutral short and long-term indirect socioeconomic impacts because supporting businesses including dealers and bait, tackle, and ice suppliers should not be impacted. Alternative C4 would impact the approximately 77 vessels that annually catch smoothhound sharks with gillnet gear (annual average from 2003-2014, Table 3.1). Because Alternative C4 would have minimal economic impact but is still consistent with the 2012 Shark BiOp, NMFS prefers this alternative.

Atlantic Shark Gillnet Vessel Monitoring System Requirements

NMFS also considered two alternatives to streamline the current VMS requirements for Atlantic shark fishermen with gillnet gear on board. The No Action alternative would maintain the current requirement to have VMS on board when fishing for Atlantic sharks with gillnet regardless of where the vessel is fishing and alternative D2 would require VMS on board only

for Atlantic shark fishermen using gillnet gear in an area specified by the ALWTRP requirements at 50 CFR 229.32.

Alternative D1 would maintain the current requirement of requiring Atlantic shark permit holders fishing with gillnet gear to have VMS on board, regardless of where the vessel is fishing. These VMS requirements were put in place as an enforcement tool for complying with the ALWTRP requirements set forth in 50 CFR 229.32. Atlantic shark gillnet fishermen are only required to have VMS if they are fishing in the Southeast U.S. Monitoring Area. See 50 CFR 229.32 (h)(2)(i). Purchasing and installing a VMS unit costs approximately \$3,500, and monthly data transmission charges cost, on average, approximately \$44.00. Because these monthly costs are currently incurred whenever a shark gillnet fishermen is fishing, these costs can affect the fishermen's annual revenues. Although the affected fishermen already have VMS installed, they continue to pay for transmission and maintenance costs, and could need to buy a new unit if theirs fails. It is possible that a NMFS VMS reimbursement program could defray part of the purchase cost, but is not certain. Thus, it is likely that this alternative could have short and long-term direct minor adverse socioeconomic impacts to fishermen due to the cost of purchasing and maintaining a VMS unit. While the retention of sharks in federal waters requires one of two limited access commercial shark permits, these permits do not specify gear type, including gillnets. For this reason, NMFS does not know the exact number of affected shark gillnet fishermen. As of October 11, 2014, there are 206 directed shark and 258 incidental shark permit holders. Logbook records indicate that there are usually about 18 Atlantic shark directed permit holders that use gillnet gear in any year. However, the universe of directed permit holders using gillnet gear can change from year to year and could include anyone who holds an Atlantic shark directed permit.

Alternative D2, the preferred alternative, would change the gillnet VMS requirements and would require federal directed shark permit holders with gillnet gear on board to use VMS only in the vicinity of the Southeast U.S. Monitoring Area, pursuant to ALWTRP requirements, and would have short and long-term direct minor beneficial socioeconomic impacts. Atlantic shark gillnet fishermen fishing in the vicinity of the Southeast U.S Monitoring Area would still incur the installation costs of the VMS, but data transmission would be limited to those times when the vessel is in this area. Furthermore, shark gillnet fishermen outside of this area that do not fish in the vicinity of the Southeast U.S Monitoring Area would not need to install a VMS unit or, if they already have one, maintain the VMS unit or replace a malfunctioning one. Thus, the socioeconomic impacts from this alternative, while still adverse, are of a lesser degree than those under Alternative D1, the No Action alternative. This alternative would likely result in neutral short and long-term indirect socioeconomic impacts because supporting businesses, including dealers and bait, tackle, and ice suppliers, would not be impacted. While the retention of sharks in federal waters requires one of two limited access commercial shark permits, these permits do not specify gear type, including gillnets. For this reason, NMFS does not know the exact number of shark gillnet fishermen that would be affected by this alternative. As of October 11, 2014, there are 206 directed shark and 258 incidental shark permit holders. Logbook records indicate that there are usually about 18 Atlantic shark directed permit holders that use gillnet gear in any year. However, the universe of directed permit holders using gillnet gear can change from year to year and could include anyone who holds an Atlantic shark directed permit. Because this alternative is more in line with the requirements of the ALWTRP, and because it

would reduce socioeconomic impacts while still maintaining beneficial ecological impacts for protected whale species, NMFS prefers this alternative.

9.0 COMMUNITY PROFILES

Section 102(2)(a) of the National Environmental Policy Act 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 2014 Stock Assessment and Fishery Evaluation Report (NMFS 2014). The states most likely to be impacted by this action due to the importance of the smoothhound shark fishery are those in North Carolina, Virginia, New Jersey, and New York. The specific communities that would be impacted in these states are difficult to determine. NMFS knows which states are the most likely to be impacted from state-by-state landings reports, but NMFS does not have more precise geographic information. Once permitting, reporting, and observer requirements are in place, NMFS will learn more about which specific communities would be impacted.

Regardless, none of the communities would be greatly impacted by the preferred alternative in this action because the smoothhound shark fishery is not a high revenue fishery across the entire geographic range. Measures considered in Draft Amendment 9 could introduce some inefficiencies in the fishery, but should not greatly impact smooth dogfish landings or effort. For example, in 2010 total smooth dogfish landings were 2,688,249 lb dw (ACCSP data) resulting in revenues across the entire sink gillnet fishery of \$2,458,134 (2,688,249 lb of meat, 322,590 lb of fins; 12 percent fin-to-carcass ratio; \$0.72/lb for meat and \$1.62/lb for fins – 2014 eDealer data). However, NMFS has considered the potential impacts of the modified VMS requirements for gillnet fishermen operating in the Southeast U.S. Monitoring area. This area was put in place, in accordance with the ALWTRP, to prohibit gillnet fishing and possession during annual restricted periods that coincide with the right whale calving season. As of October 11, 2014, there are 206 directed shark and 258 incidental shark permit holders. Logbook records indicate that there are usually about 18 Atlantic shark directed permit holders that use gillnet gear in any year. While the universe of directed permit holders using gillnet gear can change from year to year, and potentially could include anyone who holds an Atlantic shark directed permit, NMFS believes that a small portion of shark fisherman would be impacted by these changes. Overall, reporting burden would be reduced on shark gillnet fishermen as a result of these modified VMS requirements.

10.0 OTHER CONSIDERATIONS

10.1 MAGNUSON-STEVENS ACT: NATIONAL STANDARDS

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 (NS) (see 50 C.F.R. Part 600, Subpart D for National Standard Guidelines).

NS1 requires NMFS to prevent overfishing while achieving on a continuing basis Optimum Yield (OY), from each fishery for the U.S. fishing industry. The preferred alternatives in this document are consistent, to the greatest extent practicable, with ongoing management efforts to rebuild, manage, and conserve target species in accordance with NS1, NS Guideline 1 and 16 U.S.C. § 1854(e)(4). The preferred quota alternative for smoothhound sharks would cap effort at a level that is scientifically-based through the SEDAR 39 smoothhound shark stock assessments.

NS2 requires that conservation and management measures be based on the best scientific information available. The preferred alternatives in this document are consistent with NS2 guidelines. The preferred quota alternative for smoothhound sharks would cap effort at a level that is scientifically-based through the SEDAR 39 smoothhound shark stock assessments. Consistent with NS2, the analysis for the 2012 Shark BiOp was based on the latest shark stock assessments and other available shark fishery information. The preferred VMS alternative would only require Atlantic shark gillnet fishermen to use VMS in the ALWTRP specified area and the analysis of the effects of gillnet gear on Atlantic large whales is based on the best available scientific information.

NS3 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 smoothhound shark range extends beyond U.S. waters. The preferred alternatives for smoothhound sharks and the Atlantic shark fishermen using gillnet gear are consistent with NS3 because they would apply to these species throughout their range in U.S. federal waters from Maine to Texas, including the Gulf of Mexico and the Caribbean Sea. These alternatives would also apply to federally permitted vessels fishing for Atlantic sharks on the high seas. Federal permit requirements and quotas would apply to all shark fishermen wanting to retain smoothhound sharks.

NS4 requires that conservation and management measures do not discriminate between residents of different states. Furthermore, if it becomes necessary to allocate or assign fishing privileges among various U.S. fishermen, such allocation should be fair and equitable to all fishermen; be reasonably calculated to promote conservation; and should be carried out in such a manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges. The smooth dogfish-specific provisions of the SCA pertains to smoothhound sharks from Maine to Florida, and thus the preferred alternatives would be applicable to smooth dogfish fishermen in these states and establishes measures for fishermen outside those states consistent with the rest of the SCA. The preferred smoothhound quota alternative is consistent with NS4 because it would apply to all of the open access smoothhound permit holders in the entire U.S. EEZ. Similarly the preferred alternatives that implement the 2012 Shark BiOp as well as the VMS requirements are consistent with NS4 because these measures would apply to all smoothhound permit holders and Atlantic shark permit holders using gillnet gear.

NS5 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 alternatives are consistent with NS 5 because the preferred alternatives that implement the smooth dogfish-specific provisions of the SCA maintain the current processing efficiencies in the smooth dogfish fishery while maintaining a sustainable fishery for this species.

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 alternatives in this document are consistent with this NS because the preferred alternatives (A2, B4, C4, and D2) implements measures that consider the variations among, and contingencies in, fisheries, fishery resources, and catches. The preferred measures relate to either fishing effort/retention restrictions, including the SCA alternatives, or quotas, as is in the case of the commercial smoothhound shark fisheries. When preferring these management measures, NMFS analyzed the data considering variations among the fisheries, fishery resources, and catches. Measures are already in place to ensure quotas are not exceeded in the presence of variations in the fishery and catches. Timely reporting of catch data and the requirement to close the fishery after 80 percent of the quota utilized would allow for these measures to adjust to variations and contingencies, consistent with NS 6.

NS 7 states that conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication. The preferred alternatives in this document (A2, B4, C4 and D2) are consistent with this NS because they would not implement new requirements that would not be costly for fishermen. As a part of this action, NMFS will be implementing the smoothhound federal permit that was finalized in Amendment 3. A minimal fee would be required upon applying for the permit, but it is likely that this would not introduce a significant barrier to the fishery. Consistent with NS 7, the preferred alternatives were analyzed to avoid unnecessary duplication.

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 alternatives in this document are consistent with this NS. The preferred alternatives that implement the smooth dogfish-specific provisions of the SCA taking into account the importance of the smooth dogfish fisheries to fishermen in the Atlantic States by allowing a small exception to the fins attached requirement which allows this fishery to maintain current processing efficiencies. The other preferred alternatives, including the smoothhound quotas and BiOp and VMS requirements take into account the fishery resources to communities. Specifically, the smoothhound quota would be set at a level that would allow the fishery to continue at current levels.

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 alternatives in this document are consistent with this NS. The preferred alternatives for the smooth dogfish-specific provisions of the SCA ensure that bycatch

is accounted for by limiting the smooth dogfish fins-attached exception so as not to impact other incidentally caught shark species. The preferred alternatives that would implement the 2012 Shark BiOp are consistent with NS 9 and would ensure that the Atlantic shark fisheries are fully implementing the Reasonable and Prudent Measures and minimizing bycatch of sea turtles, sawfish, and Atlantic sturgeon. For incidentally-caught non-protected resources, no impacts are expected to result from the 2012 Shark BiOp changes to net check and soak time restrictions. In the 2002 rulemaking that implemented the net checks (July 9, 2002, 67 FR 45393), NMFS stated that the net checks would be unlikely to impact the bycatch of species that are not protected resources. This statement was made because the net checks do not require fishermen to remove or disentangle any animals except protected species during the net checks. In the 2012 BiOp, the requirement to use either net checks or the 24 hour set limitation was determined to ensure that any incidentally taken ESA-listed species are detected and released in a timely manner, reducing the likelihood of mortality. Thus, this change is unlikely to impact non-protected resource bycatch, consistent with NS9

In addition, the VMS preferred alternatives would bring the VMS requirements for Atlantic shark fishermen using gillnet gear in line with the current requirements of the ALWTRP thereby minimizing interactions with Atlantic large whales.

NS 10 states that conservation and management measures shall, to the extent practicable, promote the safety of human life at sea. The preferred alternatives in the document are consistent with this NS because no impact to safety of life at sea is anticipated to result from these preferred alternatives (A2, B4, C4 and D2). The management measures in the preferred alternatives would not require fishermen to travel greater distances, fish in bad weather, or otherwise fish in an unsafe manner.

10.2 CONSIDERATION OF MAGNUSON-STEVENSON ACT SECTION 304(G) MEASURES

Section 304(g) of the Magnuson-Stevens Act sets forth requirements specific to the preparation and implementation of an FMP or FMP amendment for HMS. See 16 U.S.C. 1854(g) for full text. The summary of the requirements of Section 304(g) and an explanation of how we are consistent with these requirements are below. The impacts of the preferred alternatives and how it meets these requirements are described in more detail in Chapters 2 and 4 of the document.

1. Consult with and consider the views of affected Councils, Commissioners, and advisory groups

During the development of the smoothhound shark management measures contained in Amendment 3, NMFS consulted with and considered the views of affected Councils, Commissioners, and advisory groups. A Predraft of Amendment 3 to the 2006 Consolidated HMS FMP (Amendment 3) was developed and released to consulting parties and HMS Advisory panel (AP) members in February 2009. NMFS presented the Predraft to the HMS AP members at the February 2009 AP meeting to discuss and receive comments. Written comments received on the issues and options presentation, during the scoping meetings, and at the HMS AP meeting were considered in the preparation of the DEIS for Amendment 3 (July 24, 2009, 74 FR 36892). Comments received on the DEIS from public submissions, public hearings, the HMS AP

September 2009 meeting, and presentations to the five Atlantic Regional Fishery Management Councils were used in the preparation of this document.

Since publication of the final Amendment 3 EIS and rule, NMFS has continued to consult with these groups. Between July and October 2010, HMS Management Division staff performed four site visits; one in each of the top four smooth dogfish fishing states of North Carolina, Virginia, New York, and New Jersey. In addition to meeting with affected constituents, these outreach trips also allowed staff to consult directly with members of the Mid-Atlantic Fishery Management Council which has jurisdiction in the primary area of the commercial smooth dogfish fishery.

As NMFS prepared to consider these actions, the Advisory Panel was once again consulted on September 11, 2013 during the Fall 2013 HMS Advisory Panel meeting. During that consultation, implementation of the smooth dogfish-specific provisions of the SCA was discussed.

During the public comment period, NMFS held 2 public hearings and 2 conference calls/webinars and consulted with the five Atlantic Regional Fishery Management Councils, the Atlantic and Gulf of Mexico States Marine Fisheries Commissions, and the HMS Advisory Panel. The public comment period closed on November 14, 2014. All comments received, including those from the public, the Regional Fishery Management Councils, and the HMS Advisory Panel, were considered at all stages while preparing this document.

2. Establish an advisory panel for each FMP

As part of the 2006 Consolidated HMS FMP, NMFS combined the Atlantic Billfish and HMS Advisory Panels into one panel. This combined HMS Advisory Panel provides representation from the commercial and recreational fishing industry, academia, non-governmental organizations, state representatives, representatives from the Regional Fishery Management Councils, and the Atlantic and Gulf States Marine Fisheries Commissions. This amendment will not change the HMS Advisory Panel.

3. Evaluate the likely effects, if any, of conservation and management measures on participants in the affected fisheries and minimize, to the extent practicable, any disadvantage to U. S. fishermen in relation to foreign competitors.

Throughout this document, NMFS has described the effects of the management measures and any impacts on U.S. fishermen. The preferred quota alternative in this document is necessary to meet Magnuson-Stevens Act mandates which in the long-term are not expected to disadvantage U.S. fishermen in relation to foreign competitors.

4. With respect to HMS for which the United States is authorized to harvest an allocation, quota, or fishing mortality level under a relevant international fishery agreement, provide fishing vessels with a reasonable opportunity to harvest such allocation, quota, or at such fishing mortality level.

There is currently no international agreement on smoothhound sharks quotas, allocations, or fishing mortality levels. Therefore, this requirement is not applicable for these species.

5. *Review on a continuing basis, and revise as appropriate, the conservation and management measures included in the FMP.*

NMFS continues to review the need for any revisions to the existing regulations for Atlantic HMS fisheries.

6. *Diligently pursue, through international entities, comparable international fishery management measures with respect to HMS.*

NMFS continues to work with international entities to implement comparable international fishery management measures where applicable. To the extent that some of the management measures in this amendment are exportable, NMFS will work to provide foreign nations with the techniques and scientific knowledge to implement similar management measures.

7. *Ensure that conservation and management measures under this subsection:*
 - a. *Promote international conservation of the affected fishery;*
 - b. *Take into consideration traditional fishing patterns of fishing vessels of the United States and the operating requirements of the fisheries;*
 - c. *Are fair and equitable in allocating fishing privileges among United States fishermen and do not have economic allocation as the sole purpose; and*
 - d. *Promote, to the extent practicable, implementation of scientific research programs that include the tagging and release of Atlantic HMS.*

All of the objectives of this document indicate how NMFS promotes the international conservation of the affected fisheries in order to obtain optimum yield while maintaining traditional fisheries and fishing gear and minimizing economic impacts on U.S. fishermen. The management measures in the preferred alternatives in this document are expected to meet these goals. More specifically:

- a. As detailed in Item 4 above, there is currently no international agreement on smoothhound sharks quotas, allocations, or fishing mortality levels. NMFS will continue to work with the international community to promote conservation in fisheries that span international jurisdiction.
- b. The preferred alternatives take traditional fishing patterns into account when establishing quotas and, at this time, regional quotas are not preferred.
- c. As noted in Item b above, regional quotas are not preferred at this time.
- d. NMFS has a number of Atlantic HMS scientific research programs in place including tagging and release projects. The preferred alternatives would not directly implement or establish any new scientific programs; however, these actions would not impact existing programs either.

10.3 PAPERWORK REDUCTION ACT

The federal commercial smoothhound shark permit requirement analyzed in Amendment 3 to the 2006 Consolidated HMS FMP will become effective upon the effective date of this rule. NMFS submitted a PRA change request to The Office of Management and Budget (OMB) to add this permit to the existing HMS permit PRA package (OMB control number 0648-0327). OMB subsequently approved the change request to add the federal commercial smoothhound shark permit to the HMS permit PRA package in May 2011. The previously approved commercial smoothhound shark permit will be moved from the HMS permit PRA package (OMB control number 0648-0327) to the Southeast Regional Office (SERO) permit PRA package (OMB control number 0648-0205), pending OMB approval, which is expected in late 2016. NMFS will issue a notice when the move has been approved. When the commercial smoothhound shark permit is moved into the SERO permit PRA package, NMFS will provide a more accurate estimate of the number of respondents, reducing the estimated number of respondents from 4,000 to 500 based on recent landings data.

Additionally, this action reduces the burden for shark gillnet fishermen to comply with VMS requirements. The information collection requirements approved under OMB Control No. 0648-0372, whose burden will be reduced by this rule, will be requested as part of the 2016 extension, at which time the estimate of the burden change will be more accurate.

10.4 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.

11.0 LIST OF PREPARERS

This Environmental Assessment, Regulatory Impact Review, and Initial Regulatory Flexibility Analysis were prepared by LeAnn Hogan, Steve Durkee, Jennifer Cudney, Alexis Jackson, Andrew Rubin, 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/SF1
1315 East-West Highway
Silver Spring MD, 20910
phone: (301) 427 - 8503 fax: (301) 713-1917

12.0 LIST OF AGENCIES/PERSONS CONSULTED

Discussions relevant to the formulation of the preferred alternatives and the analyses for this document involved input from several NMFS components and constituent groups, including: the NOAA Office of 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, and the 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). NMFS also considered the numerous comments received at HMS Advisory Panel meetings from individual fishermen and interested parties regarding these issues.

13.0 REFERENCES

- Bigelow, H.B. & Schroeder, W.C. 1948. Sharks. In: Tee-Van, J., Breder, C.M., Hildebrand, S.F., Parr, A.E., & Schroeder, W.C. (Eds), *Fishes of the Western North Atlantic. Part One. Lancelets, Cyclostomes, Sharks*. Sears Foundation for Marine Research, Yale University, New Haven, 576 pp.
- Boudreau, S. A. and B. Worm. 2010. Top-Down Control of Lobster in the Gulf of Maine: Insights from Local Ecological Knowledge and Research Surveys. *Marine Ecology Press Series 403*: 181-191.
- Casterlin, M. E. and W. W. Reynolds. 1979. Diel Activity Patters of the Smooth Dogfish Shark, *Mustelus Canis*. *Bulletin of Marine Science 29*(3): 440-442.
- Compagno, L.J.V. 1984. FAO Species Catalog Vol.4, Part 1 and 2: Sharks of the world: An annotated and illustrated catalogue of shark species known to date. FAO Fish. Synop. 125. FAO, Rome, Italy.
- Conrath, C.L., and J.A. Musick. 2002. Reproductive biology of the smooth dogfish, *Mustelus canis*, in the northwest Atlantic Ocean. *Environmental Biology of Fishes 64*: 367-377.
- Conrath, C.L., J. Gelsleichter, and J.A. Musick. 2002. Age and growth of the smooth dogfish (*Mustelus canis*) in the northwest Atlantic Ocean. *Fisheries Bulletin 100*: 674-682.
- Gelsleichter, J., J.A. Musick, and S. Nichols. 1999. Food habits of the smooth dogfish, *Mustelus canis*, dusky shark, *Carcharhinus obscurus*, Atlantic sharpnose shark, *Rhizopriondon terraenovae*, and the sand tiger, *Carcharias Taurus*, from the northwest Atlantic Ocean. *Environmental Biology of Fishes 54*: 205-217.
- Giresi, M.M., R.D. Grubbs, D.S. Portno, and J.R. Gold. 2013. A morphological key to distinguish among smoothhound sharks (Genus *Mustelus*) in the Gulf of Mexico. *Proceedings of the Gulf and Caribbean Fisheries Institute, 65*, 143-146.
- Grubbs, R.D. & Musick, J.A. 2007. Occurrence, catch rates, and length frequencies for smooth dogfish (*Mustelus canis*) caught in the VIMS Longline Survey: 1974-2006. Report to AMFC *Mustelus* Working Group, 9 pp.
- Mathers, A.N., M.S. Passerotti, and J.K. Carlson. 2015. Catch and Bycatch in U.S. Southeast gillnet fisheries, 2014. NOAA Technical Memorandum NMFS-SEFSC-675, 24 p.
- Jensen, C.F. & Hopkins, G.A. 2001. Evaluation of bycatch in the North Carolina Spanish and king mackerel sinknet fishery with emphasis on sharks during October and November 1998 and 2000 including historical data from 1996-1997. Report to North Carolina Sea Grant, 63 pp.
- Jones, Lisa. NMFS SEFSC. Personal communication.

- Jones, L.M., E.R. Hoffmayer, W.B Driggers III, J.M. Quattro, G.M. Hubble, C.M. Jones, K.M. Hannan, and M.A. Roberts. 2012. Assessing the validity of morphological characters used in identifying two morphologically similar species of triakid sharks in the northern Gulf of Mexico.
- Jones, L.M., W. B. Driggers III, K. M. Hannan, E. R. Hoffmayer, and C. M. Jones. 2014. Identification, Life History and Distribution of *Mustelus canis*, *M. norrisi* and *M. sinusmexicanus* in the northern Gulf of Mexico. SEDAR39-DW-22
- Kohler, N.E., Turner, P.A., Pezullo, M. & McCandless, C.T. 2014. Mark/recapture data for the smooth dogfish, *Mustelus canis*, in the Western North Atlantic from the NMFS Cooperative Shark Tagging Program. SEDAR39-DW-20.
- Link, J. and F. Almeida. 2000. An Overview and History of the Food Web Dynamics Program of the Northeast Fisheries Science Center, Woods Hole, Massachusetts. NOAA Technical Memorandum NMFS-NE-159. 64pp.
- MRAG Americas, Inc. 2008. Updated profiles for HMS Dependent fishing Communities, social impact assessment services for HMS fishing communities. Solicitation Number: DG133F-06-RQ-0381. Available at: <http://www.mragamericas.com/pdf/sr/SIA%20for%20HMS%20Fishing%20Communities%20Final%20Report.pdf>
- NMFS. 2011. Stock assessment and fishery evaluation (SAFE) report for Atlantic Highly Migratory Species. Highly Migratory Species Management Division, 1315 East West Highway, Silver Spring, MD 20910. 294 pp.
- NMFS. 2012. Stock assessment and fishery evaluation (SAFE) report for Atlantic Highly Migratory Species. Highly Migratory Species Management Division, 1315 East West Highway, Silver Spring, MD 20910. 204 pp.
- NMFS. 2014. Stock assessment and fishery evaluation (SAFE) report for Atlantic Highly Migratory Species. Highly Migratory Species Management Division, 1315 East West Highway, Silver Spring, MD 20910. 195 pp.
- NMFS. 2009. Final Amendment 3 to the 2006 Consolidated Highly Migratory Species Fishery Management Plan. NOAA, NMFS, Highly Migratory Species Management Division, Silver Spring, MD.
- Rountree, R.A., and K.W. Able. 1996. Seasonal abundance, growth, and foraging habits of juvenile smooth dogfish, *Mustelus canis*, in a New Jersey estuary. Fishery Bulletin 94: 522-534.
- Scharf, F.S., F. Juanes, and R.A. Rountree. 2000. Predator size-prey size relationships of marine fish predators: interspecific variation and effects of ontogeny and body size on trophic-niche breadth. Marine Ecology Progress Series 208: 229-248.

- Schwartz, F.J. 1964. Fishes of the Isle of Wight and Assawoman Bay near Ocean City, Maryland. *Chesapeake Science* 5:172-193.
- Skomal, G.B. 2007. Shark Nursery Areas in the Coastal Waters of Massachusetts. *American Fisheries Society Symposium* 50:17-33.
- Ulrich, G.F., Jones, C.M., Driggeres, W.B. III, Drumon, M.J., Oakley, D. & Riley, C. 2007. Habitat utilization, relative abundance, and seasonality of sharks in the estuarine and nearshore waters of South Carolina. *American Fisheries Society Symposium* 50:125-139.
- Woodland, R. J., D. H. Secor, and M. E. Wedge. 2011 Trophic Resource Overlap Between Small Elasmobranchs and Sympatric Teleosts in Mid-Atlantic Bight Nearshore Habitats. *Estuaries and Coasts* 34:391-404.

FINDING OF NO SIGNIFICANT IMPACT

Finding of No Significant Impact for Final Amendment 9 to the 2006 Consolidated Atlantic Highly Migratory Species Fishery Management Plan to implement the Smooth Dogfish-Specific Provisions of the 2010 Shark Conservation Act provisions and other regulations in the Atlantic smoothhound fishery

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 analyzes the effects of establishment of an effective date for previously-adopted shark management measures finalized in Amendment 3 (June 1, 2010, 75 FR 30484) and the 2011 HMS Trawl Rule (August 10, 2011; 76 FR 49368); establishment of smoothhound shark quotas based on the recent SEDAR 39 stock assessments; implementation of a limited exception from certain provisions of the SCA that specifically apply to smooth dogfish; implementation of Term and Condition 4 of the 2012 Shark BiOp, which required either net checks or soak time restrictions in the Atlantic shark gillnet fisheries; and modifications of vessel monitoring system (VMS) requirements for shark gillnet fishermen. The EA was developed as an integrated document that includes a Regulatory Impact Review and Final Regulatory Flexibility Analysis. 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/SF1
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 alternatives analyzed in the EA and preferred for implementation in the final rule are:

- Alternative A2: Implement the smooth dogfish-specific provisions of the Shark Conservation Act of 2010 to establish an allowance for the removal of smooth dogfish fins while at sea, selecting three of nine considered sub-alternatives;
 - Sub-Alternative A2-1e: Smooth dogfish must make up at least 25 percent of the retained catch, and other sharks may be retained provided their fins remain naturally attached to the carcass
 - Sub-Alternative A2-2a: Require any state commercial fishing permit that allows smooth dogfish retention in conjunction with the federal smoothhound permit
 - Sub-Alternative A2-3b: Apply exception for smooth dogfish along the Atlantic Coast but not to Florida's coast in the Gulf of Mexico

- Alternative B4: Establish a smoothhound shark TAC of 1,430.6 mt dw and commercial quota of 1,201.7 mt dw in the Atlantic region, and a TAC of 509.6 mt dw and commercial quota of 336.4 mt dw in the Gulf of Mexico region based on results of the 2015 smoothhound shark stock assessment
- Alternative C4: Establish a soak time limit of 24 hours for sink gillnet gear and a 2 hour net check requirement for drift gillnet gear in the Atlantic shark and smoothhound shark fisheries
- Alternative D2: Require federal directed shark permit holders with gillnet gear on board to use VMS only in the Southeast U.S. Monitoring Area, pursuant to Atlantic Large Whale Take Reduction Plan requirements

The National Oceanic and Atmospheric Administration Administrative Order 216-6 (NAO 216-6) (May 20, 1999) contains criteria for determining the significance of the impacts of an action. In addition, 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 NAO 216-6 criteria and 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 smoothhound sharks (which includes smooth dogfish, Florida smoothhound, and Gulf smoothhound (genus *Mustelus*)). This action implements the provision of the SCA that creates a limited exception for smooth dogfish from the otherwise applicable fins-attached landings requirement for sharks. However, these measures would likely result in neutral impacts to smooth dogfish since fishermen are currently not required to land smooth dogfish with all fins naturally attached because the species have not been federally managed prior to the Amendment 9 rulemaking. The results of the 2015 smoothhound shark stock assessments found that the Atlantic and Gulf of Mexico stocks of smoothhound sharks are not overfished and not experiencing overfishing. Implementing science-based quotas would ensure continued sustainable harvest of smoothhound sharks in the Atlantic and Gulf of Mexico regions and increase the likelihood of maintaining healthy smoothhound shark stocks in both regions. Additionally, total landings harvested under the regional quotas established in Amendment 9 would be less than the quotas considered under either Alternative B2 or B3. Because commercial harvest of smoothhound sharks would be capped at a level recommended by scientific advice, Alternative B4 would provide short and long-term minor direct beneficial ecological impacts to the smoothhound shark stocks. This alternative would also likely have short and long-term neutral indirect ecological impacts on incidentally-caught species. As these regional quotas are near the recent annual landings for smoothhound sharks, they would likely result in similar levels of interactions with incidentally-

caught species as are currently occurring in the smoothhound shark fisheries. For these reasons, this action is not expected to jeopardize the sustainability of smoothhound sharks.

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

No. The action is not expected to jeopardize the sustainability of any non-target fish species because overall fishing effort is not expected to significantly increase and non-target species catches would still be limited within the applicable, previously analyzed total allowable catches for regulated species which were established consistent with NMFS' obligations to end overfishing and rebuild overfished stocks. This action addresses the landing condition of smooth dogfish based on the smooth dogfish-specific provisions of the SCA, establishes smoothhound shark quotas based on the SEDAR 39 stock assessments, implements measures from the 2012 Shark BiOp, and modifies VMS requirements for Atlantic shark fishermen using gillnet gear consistent with the ALWTRP requirements. This action is not likely to increase effort in the fishery and, therefore, is unlikely to increase impacts on non-target species. When considering each of the alternatives in this action, NMFS explicitly considers the impact on non-target shark species. The measures that implement the requirements of the 2012 Shark BiOp and the ALWTRP would help to mitigate or reduce interactions with protected resources, thus this action would not jeopardize the sustainability of any non-target 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 FMPs?

No. EFH designation for smoothhound sharks was analyzed and is detailed in Chapter 11 of Amendment 3. In Amendment 1 to the 2006 Consolidated HMS FMP and Amendment 3, NMFS reviewed the various gear types with the potential to affect EFH and, based on the best information available at this time, NMFS has determined that fishing is not likely to adversely affect EFH for smoothhound sharks. Thus, there is no evidence to suggest that implementing any of the preferred alternatives in this rulemaking would adversely affect EFH to the extent that adverse effects could be identified on the habitat or fisheries. On June 29, 2015, NMFS published a final 5-year review of EFH for Atlantic HMS (80 FR 36974). The purpose of the review was to gather all new information and determine whether modifications to existing EFH descriptions and delineations are warranted. Based on the review and public comment, NMFS determined that new information warrants the initiation of an amendment to revise EFH components found in Amendments 1 and 3 to the 2006 Consolidated HMS FMP, and the 2010 White Marlin/Roundscale Spearfish Interpretive Rule and Final Action. During the FMP amendment process, NMFS will apply any new and appropriate information including, but not limited to, observer data, survey data, logbook information, and tag/recapture data that are available for all HMS. Specifically for smoothhound sharks, the review found that recent studies do not support updating EFH boundaries. However, NMFS will update smoothhound shark EFH boundaries based on new observer, survey, and tag/recapture data since 2009. If any changes to the regulations are also needed, NMFS will issue proposed and final rules with public comment.

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

No. The implementation of a limited exception to allow the removal of smooth dogfish fins at-sea, implementation of smoothhound shark quotas, and measures to comply with the 2012 Shark BiOp and ALWTRP are 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, 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. The action cannot reasonably be expected to adversely affect endangered or threatened species, marine mammals, or critical habitat of these species. 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 Shark BiOp. The 2012 Shark BiOp issued under the ESA concluded that the continued operation of the Atlantic shark and smoothhound shark fisheries is unlikely to jeopardize the continued existence of Atlantic sturgeon, smalltooth sawfish or any species of ESA-listed sea turtle. This action would not significantly increase fishing effort rates, levels, or locations. Rather, this action considers implementation of a limited exception to the fins attached requirement and establishment of smoothhound sharks quotas based on the SEDAR 39 stock assessments. Neither of these actions would significantly increase effort beyond status quo because the quotas would be only slightly higher than maximum annual landings over the past five years, and, therefore, are not expected to have any adverse impacts on protected resources. In addition, the management measures are not expected to alter interactions with protected species because effort is expected to be similar as in previous years. Thus, these alternatives are expected to have neutral ecological impacts on the environment and protected resources. Additionally, this action implements one of the Terms and Conditions of the 2012 Shark BiOp which would ensure that the Atlantic shark and smoothhound shark fisheries are fully compliant with the requirements of the BiOp. This action also modifies current VMS requirements consistent with the ALWTRP. Both of these measures would mitigate or reduce interactions with protected resources.

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 implementation of limited exception to the fins attached requirement in the SCA and establishment of smoothhound shark quotas are not expected to have a substantial impact on biodiversity and ecosystem function within the affected area, because the action is not expected to significantly increase fishing effort or change fishing practices, and/or interactions with non-target and endangered or threatened species. Similarly, this action implements measures to comply with the 2012 Shark BiOp and ALWTRP which would mitigate or reduce interactions with protected resources. Thus, the action as a whole is not likely to have substantial adverse impacts biodiversity and ecosystem function.

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 action and no significant social or economic impacts interrelated with natural or physical environmental effects that would result from the action. The ecological impacts of implementing the exception to the fins attached requirement would likely be neutral and the ecological impacts of the smoothhound quotas would provide short and long-term minor direct beneficial ecological impacts to the smoothhound shark stocks. The measures to implement the 2012 Shark BiOp and the VMS requirements consistent with the ALWTRP would likely be beneficial because they would mitigate and reduce interaction with protected species. Because commercial harvest of smoothhound sharks would be capped at a level recommended by scientific advice, Alternative B4 would provide short and long-term minor direct beneficial ecological impacts to the smoothhound shark stocks. This alternative would also likely have short and long-term neutral indirect ecological impacts on incidentally-caught species. Additionally, NMFS anticipates short term, direct minor beneficial socioeconomic impacts given the combined commercial quotas for the Atlantic and Gulf of Mexico regions would result in increased revenues compared to the commercial quota under Alternative B1, though lower than those anticipated under Alternatives B2 or B3. These impacts are not expected to be significant since the action is not expected to significantly increase overall fishing effort. As these regional quotas are below the recent annual landings for smoothhound sharks, they would likely result in similar levels of interactions with incidentally-caught species as are currently occurring in the smoothhound shark fisheries. For these reasons, this action is not expected to jeopardize the sustainability of smoothhound sharks.

8. To what degree are the effects on the quality of the human environment expected to be highly controversial?

The effects of this action on the human environment are not expected to be highly controversial. Based upon public comment on this action and public comment on other, smoothhound-related rules, interest in the implementation of the 2010 Shark Conservation Act is high. 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 such, controversy resulting from the legislation does not impact NMFS’ finding of no significant impact.

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 ocean. In addition, there is no park land, prime farmlands, wetlands, or wild and scenic rivers within the action area so there would 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 Final Environmental Impact Statement (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 congressionally-mandated exception to allow smooth dogfish fins to be removed at sea and would establish smoothhound shark quotas based on the SEDAR 39 stock assessments as well as implement the requirements of the 2012 Shark BiOp as required under the ESA and the ALWTRP, all of which do not involve unique or unknown risks.

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

No. This action is not related to other actions with individually insignificant but cumulatively significant ecological, economic, or social impacts. The actions would consider how to implement the smooth dogfish-specific fin removal exception in the SCA, establishment of smoothhound shark quotas based on the SEDAR 39 stock assessments, and implementation of measures to comply with the 2012 Shark BiOp and ALWTRP. The management measures are not expected to significantly increase fishing effort, or cause significant ecological, economic, or social impacts. The alternatives analyzed in this EA would continue to prevent overfishing without affecting the sustainability of the smoothhound shark stock or the stock of any incidentally encountered non-target species.

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

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 significant change in fishery patterns or behaviors previously analyzed in the 2006 Consolidated HMS FMP. Most vessels in the smoothhound shark fishery 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. Amendment 9 is primarily in response to legislation that is directly applicable to the smooth dogfish fishery. Therefore, this action does not set a precedent or represent a formal policy direction. Since the SEDAR 39 stock assessments have been finalized, Alternative B4 considers implementing TACs and quotas based on these results. Under Alternative B4, NMFS would establish separate TACs and commercial quotas for smoothhound sharks in the Atlantic and Gulf of Mexico regions, based on the finalized results from the 2015 assessments for smoothhound sharks. As described in Chapters 1 and 3, NMFS completed benchmark stock assessments on smoothhound shark stocks in the Atlantic and Gulf of Mexico and found that both stocks are not overfished with no overfishing occurring. Therefore, since the smoothhound quotas are based on SEDAR 39, they would not establish a new precedent, but rather follow an existing one that does not have significant impacts.

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 § 635. The action would not be expected to violate any Federal, state, or local law or requirement imposed for the protection of the environment. The Coastal Zone Management Act (CZMA) requires that Federal agency activities be consistent to the maximum extent practicable with the enforceable policies of federally-approved state coastal management program (CMP). NMFS has determined that the preferred alternatives would be implemented in a manner consistent to the maximum extent practicable with the enforceable policies of the coastal states in the Atlantic, Gulf of Mexico, and Caribbean that have federally approved CMPs. In August 12, 2014, NMFS provided all coastal states along the eastern seaboard and the Gulf of Mexico (21 states), including Puerto Rico and the U.S. Virgin Islands with a consistency determination under CZMA § 307(c) and NMFS published a proposed rule in the Federal Register on August 7, 2014 (79 FR 46217), addressing implementation of Amendment 9 to the 2006 Consolidated HMS FMP. 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)). Nine states replied within the response time period that the proposed regulations were consistent, to the extent practicable, with the enforceable policies of their CMPs (Alabama, Delaware, Florida, Louisiana, Mississippi, New Hampshire, Rhode Island, South Carolina, and Virginia). Another ten states (Connecticut, Maine, Maryland, Massachusetts, New York, Puerto Rico, Texas, and the U.S. Virgin Islands) did not respond within the response time period, nor did they request an extension in the comment period; therefore, NMFS presumes their concurrence. The States of Georgia, New Jersey, and North Carolina replied that the proposed rule was not consistent with the enforceable policies of their respective state's CMPs. NMFS responded to the letters from the States of Georgia, New Jersey and North Carolina in Chapter 4 (Section 4.8). NMFS has determined that, based on the new preferred alternatives in the Final EA that were developed based on public comments, updated data, and data analyses, the measures in Amendment 9 are consistent to the

maximum extent practicable with the enforceable policies of the coastal states in the Atlantic, Gulf of Mexico, and Caribbean.


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 a significant increase in fishing effort in the Atlantic shark and smoothhound fisheries and therefore, would not have substantial effect on the target species. With regards to non-target species, NMFS anticipates that fishermen in the smoothhound and 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.

DETERMINATION

In view of the information presented in this document and the analysis contained in the attached EA that was prepared to address the landing condition of smooth dogfish as required in the SCA, establishment of smoothhound shark quotas, implementation of the Terms and Conditions of the 2012 Shark BiOp, and modification of the VMS measures consistent with the ALWTRP requirements, 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.

SEP 22 2015



for Alan Risenhoover
Director, Office of Sustainable Fisheries, NOAA

Date

APPENDIX A: RESPONSE TO COMMENTS

Implementation of the Smooth-Dogfish Specific Provisions of the Shark Conservation Act

Comment 1: NMFS received comments in support of Alternative A1, which would not implement the smooth dogfish-specific measures in the Shark Conservation Act of 2010 and would require fins and tails of all smooth dogfish to remain naturally attached through offloading. Commenters felt that these exceptions to the U.S. ban on at-sea shark fin removal would jeopardize our nation's reputation as a shark conservation champion, and hurt U.S. arguments in support of Regional Fishery Management Organizations' adoption of fins attached requirements. Commenters also felt that the fins naturally attached method was widely recognized as the best practice for accurate data collection and enforcement of finning bans. Commenters felt that adopting a fins attached exception for smooth dogfish would undermine state bans on finning and would widen loopholes in certain state bans on the trade in shark fin products.

Response: The Shark Conservation Act of 2010, which includes the smooth dogfish-specific exception, became Federal law upon Presidential signature on January 4, 2011. Thus, NMFS must implement the law in a manner that reflects Congressional intent. The Congressional provision clearly creates an exception that allows removal of smooth dogfish shark fins at sea under certain circumstances and did not leave the Agency discretion to forego implementation of the exception.

Comment 2: NMFS received a comment stating that the 12 percent fin-to-carcass ratio included in the smooth dogfish-specific provision of the SCA was too high and should be lower.

Response: The 12 percent fin-to-carcass ratio is explicitly included in the smooth dogfish-specific provision of the SCA. Thus, NMFS must implement the provision as mandated. Nevertheless, some data support that a 12 percent fin-to-carcass ratio may be a close approximation of the true ratio for smooth dogfish. In the Atlantic States Marine Fisheries Commission (ASMFC) Shark Board briefing materials prepared for a May 21, 2013 meeting, the States of New Jersey and New Carolina provided analyses of smooth dogfish fin-to-carcass ratios using both landings data and direct measurements of processed sharks. Those analyses found a range of fin-to-carcass ratios from 7.5 percent to 13 percent, depending on the level of processing (e.g. whether the belly flaps were removed, whether the tail was retained).

Comment 3: NMFS received a large volume of comments expressing concern that the smooth dogfish-specific provision of the Shark Conservation Act allows finning of sharks. These commenters asked NMFS not to implement this provision and many of the comments provided information about the negative ecological impacts of sharks finning.

Response: The large volume of comments opposing finning of smooth dogfish appears to be based on a misunderstanding on this action. Finning, which is the removal of shark fins and disposal of the carcass at sea, has been prohibited in Atlantic U.S. shark fisheries since 1993, and will continue to be prohibited in all Atlantic shark fisheries. The exception in the SCA allows for the removal of the fins at sea rather than requiring the sharks to be landed with their fins attached as the SCA requires for other shark species. The fins and the carcasses still must be landed together.

Sub-Alternatives – Issue 1: Catch Composition

Comment 4: NMFS received several comments, including from the SAFMC, MAFMC, and the States of New Jersey, North Carolina and Maryland, opposing the proposed sub-alternative A2-1c that smooth dogfish must make up at least 75 percent of the retained catch (no other sharks can be retained). Commenters felt that the 75 percent catch composition would be difficult to enforce and burdensome for fishermen. Some felt that the 75 percent would lead to waste and discarding in cases where fishermen found that their catch percentages did not qualify them for the at-sea processing allowance. Others emphasized that the smoothhound fishery is a mixed fishery, and that fishermen needed more flexibility if the SCA exception were to have any utility. NMFS also received comments that the 75 percent catch composition was inconsistent with ASMFC requirements and that the new federal requirements might push fishermen into state waters where there are no catch composition requirements. Commenters felt that as a consequence, fishermen may avoid obtaining a federal smoothhound shark permit, leading to less data for federal managers. NMFS received support from the MAFMC and the state of New Jersey for sub-alternative A2-1b, which would require that smooth dogfish to make up at least 25 percent of the retained catch. NMFS also received some limited support for the 75 percent catch composition.

Response: In the Draft EA and proposed rule, NMFS interpreted the phrase “fishing for smooth dogfish” to mean fishing with the object of commercially harvesting smooth dogfish, but also emphasized that the SCA had specified that the exception applies when an individual is fishing “for” smooth dogfish as opposed to fishing “for” other species and incidentally catching smooth dogfish or simply stating that it applies “when fishing.” We then preferred a sub-alternative that smoothhound sharks must make up 75 percent of the retained catch on board a vessel to constitute a trip fishing “for” smooth dogfish and stated that this would preclude fishermen on trips for other species but who incidentally catch smooth dogfish from removing smooth dogfish fins at sea. The catch composition threshold of 75 percent is used in other fisheries that interact with HMS (e.g., incidental swordfish catch in the squid trawl fishery) to distinguish between directed and incidental fisheries and NMFS felt this high level of retention was an appropriate way to identify those fishing “for” smooth dogfish.

Based on public comments, however, it has become apparent that the 75 percent level used in other fisheries is not appropriate in the smooth dogfish fishery and does not accurately reflect fishing practices in that fishery. To verify the feedback from commenters, NMFS reviewed data on the mixed nature of the smoothhound shark fishery and how well catch composition reflects the fishery and discovered that, as asserted by the commenters, the smooth dogfish fishery is far more mixed than NMFS assumed in the proposed rule. As a result, implementing a 75 percent catch composition requirement would make the exception largely meaningless. Thus, while NMFS’ objective for the implementation of the smooth dogfish-specific provision of the SCA remains the same as described in the Draft EA, and NMFS still needs to give meaning to the phrase “fishing for smooth dogfish” as opposed to simply “fishing,” NMFS agrees with the majority of the commenters that a catch composition requirement of 25 percent is more appropriate. This is consistent with the smooth dogfish-specific provision in the SCA that limits the exception to those fishermen that are fishing “for” smooth dogfish while acknowledging the need for enhanced flexibility in a mixed fishery. The reasons for the change include the four following factors, which were reflected in public comment on the proposed rule:

- Sink gillnet gear, the predominant gear used in the directed smooth dogfish fishery, often catches other species along with the targeted species. If a fisherman retains other legal species in an amount greater than 25 percent of the total retained catch, it does not necessarily mean that effort was not being directed on smooth dogfish, it could simply mean that other species were encountered in a greater amount than anticipated.
- Although a 75 percent catch composition is an appropriate indicator of target species in other HMS fisheries, such as the squid trawl fishery, it is not appropriate at this time in the smooth dogfish fishery. In the squid trawl fishery, swordfish caught in squid trawls can only be retained if at least 75 percent of the retained catch is squid, indicating that squid is the targeted fishery. In that fishery, the catch is predominantly squid but swordfish that are feeding on the squid are sometimes inadvertently caught. The smooth dogfish fishery is a more mixed fishery and the target species is often co-located with other species, resulting in less certainty of target species catch levels
- When fishermen decide to remove fins from smooth dogfish while at sea, the fins are not removed at the end of the trip. Rather, the fins are removed shortly after the smooth dogfish is brought on board in order to maintain the highest quality product. This processing method negates the benefits of a high catch composition requirement. For example: if a fisherman is directing effort on smooth dogfish and removing the fins as the smooth dogfish are brought on board, that fisherman does not know what the final catch composition will be. The first part of the trip could be 100 percent smooth dogfish, but if the catch transitions to predominantly other species, the fishermen may have found that he no longer meets the high catch composition requirement. In that case, the fisherman has two options: to either discard all the smooth dogfish carcasses and fins that have been processed or discard the non-smooth dogfish catch in an amount that will meet the catch composition requirement. Either way, a high catch composition could lead to unnecessary regulatory discards. Although this last example could also pertain to the preferred 25 percent catch composition, the lower threshold provides a greater amount of flexibility and reduces the instances of regulatory discards, consistent with National Standard 9.
- Smooth dogfish, and the fishery that targets them, closely follow specific water temperature gradients. Fisherman intending to land primarily smooth dogfish may find their gear in sub-optimal water temperatures leading to lower smooth dogfish catch despite the intention to directly target the species and resulting in a lower catch composition than expected.

Comment 5: NMFS received comments that NMFS was interpreting the smooth dogfish-specific provisions in the SCA incorrectly because the provision does not specify its application to the directed or incidental smooth dogfish fishery and that limiting fishermen to a directed fishery would only serve to inflict financial hardships on fishermen.

Response: The SCA does not explicitly state that it applies only to directed fisheries; however, the relevant SCA statutory text, (“an individual engaged in commercial fishing for smooth dogfish (*Mustelus canis*)”) included descriptive language such as “engaged in” and “for” that NMFS understood to be more limiting than if the statute had simply said “while fishing.” We thus interpreted “fishing for smooth dogfish” to limit the exception to those fishing primarily for

smooth dogfish, as reflected by the 75 percent retention requirement. Had Congress intended to allow all trips to remove smooth dogfish fins at sea, this qualifying language and emphasis on fishing "for" smooth dogfish would not have been included. As explained in the previous response, the final rule's lower percentage requirement for smooth dogfish catch composition (25 percent v. 75 percent) should address some of the concerns about the practicality of the proposed rule's catch composition requirements in light of the very mixed nature of the fishery, while still ensuring that the exception is limited to those fishing "for" smooth dogfish.

Comment 6: NMFS received comments, including from the SAFMC, MAFMC, NCDMR, and the States of New Jersey and Maryland opposing the "no other sharks on board" provision. The commenters stated that this provision would be burdensome for fishermen and would lead to unnecessary waste and discards of other valuable shark species since it is a mixed, variable fishery. Others noted that NMFS is interpreting the smooth dogfish-specific provisions of the SCA incorrectly because "no other sharks on board" is never mentioned in the statute and that it is inconsistent with ASMFC requirements. Additionally, NMFS received comments stating that a large number of common thresher sharks are often caught with smooth dogfish and if these species had to be discarded, this would be wasteful and could lead to economic impacts to shark fishermen.

Response: After considering public comment, NMFS has determined that it is more appropriate and consistent with the SCA to implement Sub-Alternative A2-1e, which allows other sharks to be retained when removing smooth dogfish fins at seas, provided those sharks are maintained in a condition where the fins and tail remain naturally attached to the carcass through landing. This measure is included in the new sub-alternative based on public comment and additional analyses, and in recognition that a prohibition on having other sharks on board would likely increase regulatory discards, contrary to National Standard 9. The smooth dogfish fishery is more mixed than previously thought, and other sharks, particularly spiny dogfish and common thresher sharks, make up a portion of the catch and contribute considerable revenue to fishermen participating in the smooth dogfish fishery. Under the new preferred sub-alternative, fishermen would not have to choose whether to land smooth dogfish with the fins removed or another species of shark. This is change from the proposed rule, which would have prohibited retention of other sharks when removing the fins from smooth dogfish at sea. As proposed, a fisherman who wanted to remove fins of smooth dogfish at sea would have had to discard all non-smooth dogfish sharks even if they were dead and were otherwise legal to retain based on species, size, and permits. Alternatively, as proposed, a fisherman could decide to retain non-smooth dogfish sharks and discard any smooth dogfish carcasses and fins that had already been processed. In either situation, as proposed, dead discards would likely increase given the mixed catches in the smooth dogfish fishery.

Allowing other sharks onboard is consistent with the objective of Amendment 9 to narrowly focus the at-sea fin removal allowance for the smooth dogfish fishery and would not undermine the enforcement of the limited smooth dogfish exception or impact the conservation of non-smooth dogfish sharks because smooth dogfish carcasses can be readily differentiated from other non-smoothhound shark carcasses by the presence of a pre-dorsal ridge. As a practical matter, smooth dogfish and other smoothhound species are indistinguishable in the field. But geographically, smooth dogfish largely are the only smoothhound species found in the Atlantic, which is the only place where smooth dogfish fins can be removed, thus largely

alleviating that identification concern. Under the new preferred sub-alternative, other sharks would be allowed on board while removing smooth dogfish fins at sea as long as the fins of non-smooth dogfish sharks remain naturally attached through offloading as currently required. NMFS will monitor all shark catches and discards and dead discards to ensure the conservation of all shark species and will take the additional action, as necessary, to address any conservation or management issues that may arise.

Sub-Alternatives – Issue 2: State Fishing Permit

Comment 7: NMFS received several comments, including from the MAFMC and the States of New Jersey and Maryland, supporting the preferred Sub-Alternative A2-2b to require any state commercial fishing permit appropriate for the retention of smoothhound sharks when removing smooth dogfish fins at sea. Some of these comments noted the non-preferred sub-alternative, which would require a smoothhound-specific state commercial fishing permit, could require new regulations and may necessitate cost recovery of permit administration.

Response: NMFS agrees that requiring a smoothhound-specific state fishing permit could be burdensome to states and fishermen. In the Draft EA and proposed rule, NMFS asked for comment on this issue, particularly from the states that would need to develop and administer a smoothhound-specific permit. Of the states that commented on this issue, they were unanimously opposed to a smoothhound-specific permit and favored the preferred Sub-Alternative A2-2b. For these reasons, NMFS will implement Sub-Alternative A2-2b as proposed.

Sub-Alternatives – Issue 3: Geographic Applicability

Comment 8: NMFS received comments, including from the MAFMC and the State of Florida, in support of the preferred Sub-Alternative A2-3b to apply the exception for smooth dogfish along the Atlantic Coast and not to Florida's coast in the Gulf of Mexico. Conversely, NMFS also received a comment stating that the exception should be applicable in the Gulf of Mexico so that the historical boundaries between the Gulf and South Atlantic Councils are honored and the State of Florida can manage the fishery in a balanced way.

Response: As a practical matter, smooth dogfish and other smoothhound species are indistinguishable in the field. The best available scientific information indicates that smooth dogfish are the predominant smoothhound shark species along the Atlantic coast (only a handful of Florida smoothhound have ever been recorded in the Atlantic and those have been near southern Florida). In the Gulf of Mexico, however, there are at least three different smoothhound species, with no practical way to readily distinguish among them. By limiting the exception to the Atlantic region, as specified at § 635.27 (b)(1), this sub-alternative will ensure that the exception only applies where the population is almost entirely smooth dogfish, reducing identification problems and inadvertent finning violations. Furthermore, the State of Florida found the preferred sub-alternative to limit the exception to the Atlantic consistent with the Florida Coastal Management Program.

Commercial Quota Adjustment for the Smoothhound Shark Fishery

Comment 9: Multiple commenters, including the SAFMC, the States of Maryland, New Jersey, Georgia, and the Commonwealth of Virginia, suggested that none of the landings-based methodologies should be used to establish and smoothhound shark quota. Instead, NMFS should base the quota on the SEDAR 39 smoothhound shark stock assessment that was underway at that time, and which was proposed as an alternative, although the results had not yet been finalized at the time of proposed rule publication. NMFS also received comments opposing the preferred alternative B3, establishing a smoothhound quota equal to the maximum annual landings from 2004-2013 plus two standard deviations because some commenters thought this quota was too high and seemed contrary to a risk adverse approach.

Response: NMFS agrees that it is preferable to establish scientifically-based quotas using results from the SEDAR 39 stock assessments. Since publication of the proposed rule, the SEDAR 39 stock assessments have been completed. Based on the availability of the stock assessment results and public comments, NMFS no longer prefers the alternative to establish a landings-based quota and now is basing the quotas on the results of the stock assessments. Thus, NMFS is establishing a smoothhound shark TAC of 1,430.6 mt dw and a commercial quota of 1,201.7 mt dw in the Atlantic region, and a TAC of 509.6 mt dw and commercial quota of 336.4 mt dw in the Gulf of Mexico region, based on results of SEDAR 39. Section 2 of the Final EA provides a summary of the calculations used to determine these quotas.

Comment 10: NMFS received a comment asking NMFS not to wait until the stock assessment was completed and to implement Alternative B1, the smoothhound quota of 715.5 mt dw established in Amendment 3 to the 2006 Consolidated HMS FMP.

Response: NMFS recognizes the benefits of establishing a quota to limit mortality in the commercial fisheries. However, based on the timing of both this action and the SEDAR 39 stock assessments, NMFS determined that establishing scientifically-based quotas using results of the stock assessments outweigh benefits of implementing a landings-based quota. Since the stock assessments are now available, NMFS is establishing quotas based on those stock assessments.

Biological Opinion Implementation

Comment 11: NMFS received support for the preferred alternative C4 to establish a 24-hour soak time limit for sink gillnets and a 0.5 to 2 hour net check requirement for drift gillnet gear. The MAFMC and State of New Jersey also expressed support for the preferred alternative but asked that the definitions of sink and drift gillnets be clarified so that a sink gillnet cannot be mistaken for a net that is drifting in the water column. The State of Maryland expressed support for alternative C3 (24-hour soak time for smoothhound permit holders) stating that net checks are not enforceable. NMFS also received comments suggesting that gillnet fishermen should be required to do both net checks and limit soak time to 24 hours. Other commenters asked NMFS to consider a reduced soak time because they felt that 24 hours was too long and would not reduce the risk of large what interactions.

Response: NMFS agrees that a 24-hour soak time limit for sink gillnets and a 0.5 to 2 hour net check requirement for drift gillnet gear are appropriate ways to implement the Term and Condition 4 of the 2012 Shark BiOp. NMFS also agrees that the definitions of sink and drift

gillnet need to be clear so as not to confuse fishery participants and enforcement officials. As detailed in the Final EA, most smoothhound shark gillnet fishermen will be required to limit soak times to 24 hours since they primarily use sink gillnet gear. This requirement will not significantly change smoothhound shark fishing practices. With regard to other Atlantic shark fishermen, fishermen who use sink gillnet gear will be required to limit soak times to 24 hours and those that use drift gillnets will be required to perform net checks at least every 2 hours. Currently, all Atlantic shark fishermen that use gillnet gear to fish for or who are in possession of any large coastal, small coastal, or pelagic shark, regardless of gillnet type, are required to perform net checks at least every 2 hours (see § 635.21(e)(3)(v)). During the net checks, fishermen are required to look for and remove any sea turtles, marine mammals, or smalltooth sawfish. In the 2012 Shark BiOp, the requirement to use either net checks or the 24-hour set limitation was determined to ensure that any incidentally taken ESA-listed species are detected and released in a timely manner, reducing the likelihood of mortality. As such, NMFS has determined that this alternative will likely have short and long-term minor beneficial ecological impacts on protected resources since it will implement one of the Terms and Conditions of the 2012 Shark BiOp to minimize impacts on protected resources. Since this alternative complies with the 2012 Shark BiOp, has beneficial ecological impacts to protected species, and allows all smoothhound shark gillnet fishermen to continue current fishing practices, NMFS will implement soak time limits for sink gillnets and net checks for drift gillnets, as proposed, in the final rule.

Comment 12: NMFS received a comment stating that NMFS has not received authorization of the incidental take of endangered large whales that may result due to the operation of the fishery. The comment stated that without incidental take of endangered whales authorized under both the MMPA and ESA, federal management violates those laws. The commenter stated that NMFS must acquire take authorization under the MMPA section 101(a)(5)(E) for the expected whale takes associated with the smoothhound fishery and that NMFS must delay Amendment 9 until completion of a negligible impact analysis for North Atlantic right whale, humpback whale and fin whale. NMFS also received comments stating that since the completion of the BiOp, critical habitat has been designated for loggerhead sea turtles, which triggers the requirement to reinitiate consultation in the shark fishery and that the Draft EA fails to discuss effects of the fishery on loggerhead critical habitat.

Response: As required by section 7(a)(2) of the ESA, the HMS Management Division of NMFS Office of Sustainable Fisheries consulted with the NMFS Protected Resources Division (PRD) over proposed Atlantic shark fishery management measures in December 2009. That consultation was completed in 2012, and the Shark BiOp was issued in December 2012. The Biological Opinion concluded that the actions as proposed – including the operation of the smoothhound fishery - were not likely to jeopardize the continued existence of Atlantic sturgeon, smalltooth sawfish or any species of ESA-listed large whales or sea turtles.

Section 9 and regulations implementing section 4(d) of the ESA prohibit the “take” or incidental take of listed species without an exemption. Under the terms of Section 7(b)(4) and Section 7(o)(2), otherwise prohibited take that is incidental to and not intended as part of the agency action may be permitted if it complies with reasonable and prudent measures (RPMs) and terms and conditions of an incidental take statement (ITS). Two RPMs were included in the 2012 Shark BiOp to minimize the effects of the action on sea turtles, smalltooth sawfish, and Atlantic

sturgeon by the smoothhound and Atlantic shark fisheries and to monitor the level of incidental take: 1) Minimize the Potential Effects to Sea Turtles, Smalltooth Sawfish, Atlantic Sturgeon and Marine Mammals, and 2) Monitor the Frequency and Magnitude of Incidental Take. One remaining term and condition will be implemented in this final rule and will require gillnet fishermen to conduct net checks and limit gillnet soak times mitigating or reducing interactions with protected species.

Since finalizing the 2012 BiOp, 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 reinitiation of ESA section 7 consultation on the continued operation and use of HMS gear types (bandit gear, bottom longline, buoy gear, handline, and rod and reel) 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 existing biological opinions 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 reasonable and prudent alternative measures for these species.

Regarding marine mammals, the final 2014 MMPA List of Fisheries classified the southeastern Atlantic shark gillnet fishery as Category II (occasional serious injuries and mortalities). The southeastern Mid-Atlantic and Gulf of Mexico shark BLL shark fishery is classified as Category III (remote likelihood or no known serious injuries or mortalities). Commercial passenger fishing vessel (charter/headboat) fisheries are subject to Section 118 and are listed as a Category III fishery. This action would not significantly increase fishing effort rates, levels, or locations or fishing mortality. The preferred alternatives would not increase effort because the smoothhound quotas are based on the most recent smoothhound shark stock assessments (SEDAR 39). In addition, final management measures are not expected to alter interactions with protected species.

Atlantic Shark Gillnet Vessel Monitoring System Requirements

Comment 13: NMFS received support for the preferred alternative of requiring directed shark permit holders with gillnet gear on board to use VMS only in the Southeast U.S. Monitoring Area, including from the States of North Carolina, New Jersey, and Maryland, and the MAFMC. NMFS also received comments preferring the status quo stating that VMS should be required regardless of where the vessel is fishing.

Response: Currently, under Federal HMS regulations, Atlantic shark gillnet fishermen are required to use VMS at certain times of the year regardless of where they are fishing. However, per 50 CFR 229.32 (h) (2)(i), the implementing regulations for the Atlantic Large Whale Take Reduction Plan (ALWTRP), Atlantic shark gillnet fishermen are only required to have VMS if they are fishing in the Southeast U.S. Monitoring Area. Since NMFS has determined that VMS is not necessary for Atlantic shark gillnet fishermen in the other ALWTRP restricted areas through the implementation of the ALWTRP regulations, NMFS believes it is best to maintain consistency with these regulations. Maintaining consistency between the Atlantic HMS and ALWTRP regulations will reduce confusion, help fishermen comply with these regulations more easily, and will avoid unnecessary economic burdens on shark fishery participants.

Effective date for smoothhound shark measures in Amendment 3 and the HMS Trawl Rule

Comment 14: NMFS received a comment stating that smoothhound sharks should be managed by the Regional Fishery Management Councils in cooperation with ASMFC.

Response: As detailed in Amendment 3 to the 2006 Consolidated Atlantic HMS FMP, smoothhound sharks are “oceanic sharks” as defined by the Magnuson-Stevens Act and are subject to management by the Secretary of Commerce under that Act. Please refer to Amendment 3 to the 2006 Consolidated Atlantic HMS FMP for a detailed explanation of why smoothhound sharks are appropriately subject to federal management.

Comment 15: NMFS received a comment stating that the federal smoothhound permit could trigger an increase in directed smooth dogfish effort. A comment was also received suggesting that the fishery, once permitted, should not be open access and that a control date should be set to discourage new entrants.

Response: Based on the nature of the fishery, which is labor-intensive and high-volume, additional management burdens such as permit requirements are unlikely to result in an increase in effort. In fact, a slight reduction is more likely. Since effort increases are not expected, NMFS does not believe that introducing a limited access permit in this fishery is necessary at this time. Nevertheless, this action will implement scientifically-based quotas and landings will be closely monitored to ensure that total mortality does not exceed scientifically-determined limits. If, in fact, directed smooth dogfish effort increases, protections will be in place to ensure that fishing pressure does not exceed sustainable levels while NMFS considers if additional measures are necessary.

Comment 16: NMFS received a comment from the State of Maryland stating that they are concerned about the measure to close the fishery when 80 percent of the smoothhound quota has been caught. They feel that this measure may limit access to some states later in the year. The

State of Maryland recommends working with the other Atlantic states to close each state's smoothhound fishery once 80 percent of the state's allocation has been harvested.

Response: In all quota-managed Atlantic shark fisheries, NMFS closes the applicable quota when landings reach, or are expected to reach, 80 percent of the quota. This measure mitigates for possible late reporting, which could result in quota overharvests. Based on the success of this measure in the other shark fisheries, NMFS prefers to implement the 80-percent accountability measure (AM) in the smoothhound shark fisheries as finalized in Amendment 3 to the 2006 Consolidated HMS FMP rather than risk exceeding the quotas in the smoothhound fisheries.

Through Addendum II to the Coastal Sharks Interstate FMP, the ASMFC instituted state shares of the Federal smoothhound shark quota. Although this system was finalized in May 2013 before the Federal smoothhound shark quota was effective, Addendum II proactively divided the quota among several of the Atlantic states in an amount that would total 100 percent of the Federal quota. This agreement among the Atlantic states to limit each state's harvest does not impact nor influence the Federal quota. Although NMFS recognizes that closing the fishery when landings reach, or are expected to reach, 80 percent of the quota could prevent some states from harvesting their full state share of the quota per the ASMFC plan, the measure is an important and effective way to ensure that the sustainability of the smoothhound shark fishery is not jeopardized by overharvests.

Comment 17: NMFS received a comment stating that NMFS should not implement the smoothhound retention allowance from the 2011 HMS Trawl Rule because the increased retention will lead to increased fishing mortality and this mortality will not be adequately quantified and counted against the quota. There are no reporting requirements with open access permits and fisheries tend to underreport incidental catches.

Response: Since January 1, 2013, all commercial landings of Atlantic HMS, regardless of gear type or permit, are required to be reported on a weekly basis. Through these weekly reports, NMFS monitors commercial landings of Atlantic HMS, which will include smoothhound sharks upon implementation of this action. Trawl gear and open access permits do not present unique reporting concerns. Allowing smoothhound sharks to be landed by fishermen that use trawl gear or possess an open access permit does not raise unique concerns about the sustainability of the fishery.

General Comments:

Comment 18: NMFS received comments that Amendment 9 is too narrowly focused on smoothhound sharks and should instead consider all species managed under the 2006 Consolidated HMS FMP. The commenter asserts that a multispecies management approach is preferable. Furthermore, the commenter noted that NMFS' decision to include all HMS in a single, consolidated FMP effectively categorizes all HMS fisheries as a single "fishery." Thus, all National Standards (NS) under the Magnuson-Stevens Act must be considered in the context of all HMS, not just smoothhound sharks and Atlantic sharks. Specifically, the commenter suggested that NS 3 ("To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination") requires NMFS to optimize access and management of all HMS, not just smoothhound sharks and Atlantic sharks. Additionally, the commenter felt that NS 1, which

mandates achieving optimum yield from each fishery, should be applied across all HMS since all HMS should be categorized as one single fishery.

Response: While a multispecies management approach is advantageous in some instances, NMFS disagrees that Amendment 9 should broadly consider all HMS (including tunas, billfish, and swordfish) as a single fishery. . In 2006, NMFS merged all Atlantic HMS management into a single, consolidated FMP. In the 2006 Consolidated Atlantic HMS FMP, NMFS noted that the interrelated nature of HMS fisheries and the need to consider management actions together necessitated merging the two existing HMS FMPs into one FMP. In addition, NMFS identified some adverse ramifications stemming from separation of the plans, including unnecessary administrative redundancy and complexity, loss of efficiency, and public confusion over the management process. It is important to note that NMFS consolidated management of all HMS under one FMP because of the interrelated nature of some of the fisheries and to streamline administration, not because all HMS constitute a single fishery.. As appropriate, NMFS analyzes the impacts of management actions for each HMS fishery and optimizes management for all affected HMS fisheries. The Environmental Assessment appropriately considers any effects on the environment, including effects on other fish stocks or fisheries that may result from the actions in Amendment 9. The analyses show that the actions considered in Amendment 9 are unlikely to affect non-smoothhound shark fisheries or Atlantic shark fisheries. The management objectives are narrowly focused on smoothhound sharks, smooth dogfish, and/or Atlantic sharks caught in gillnet gear, the predominant gear type used in the directed smoothhound shark fishery. None of fisheries considered in this action are likely to encounter other non-smoothhound shark or Atlantic shark in large numbers. Billfish, swordfish, tunas, and pelagic sharks are unlikely to co-occur with the smoothhound sharks nor can swordfish or tunas be retained if caught in gillnet gear. The one exception is the measure to establish an effective date for the 2011 HMS Trawl Rule. Trawl gear does have the potential to interact with a variety of HMS, including smoothhound sharks, Atlantic sharks, and swordfish. The 2011 HMS Trawl rule, recognizing the potential interaction between trawl gear and some HMS, considered an allowance for the limited retention of incidentally caught swordfish and smoothhound sharks. As such, that action considered impacts and explicitly optimized access to affected HMS. With respect to consistency with NS 1 and 3, each HMS management action considers all National Standards in the context of the affected HMS. For detailed information about Amendment 9's consistency with National Standards, please see Section 10 of the Final EA.