



SEDAR 21 HMS Blacknose Shark

Guidelines for submitting written public comment

The intent of public comment is to allow interested parties the opportunity to address the draft reports of a SEDAR stock assessment before the report and assessment go to the Review Panel. Comments received will be reviewed by the appointed assessment panel and responded to as appropriate. The assessment panel reserves the right to make changes to the draft report in response to comments received. **These documents are a draft documents. Content and formatting may change between this draft and the version that will be released to the Review Panel on April 4th, 2011.**

The comment period will be open from 31 January 2011, to 14 February 2011. All comments must be in writing and submitted via US mail, fax, or by email to the appropriate address indicated below; comments sent by US mail must be postmarked by February 14, 2011. Comments will not be accepted by phone. Any comments received after **February 14, 2011** will not be forwarded to the panel. Please clearly indicate that you are commenting on the “SEDAR 21 Assessment reports” in your correspondence. Please indicate which assessment you are commenting on: blacknose Gulf of Mexico or blacknose Atlantic.

Comments for the SEDAR 21 HMS Blacknose stock assessments may be submitted to the following:

Email: Sedar21comments@safmc.net

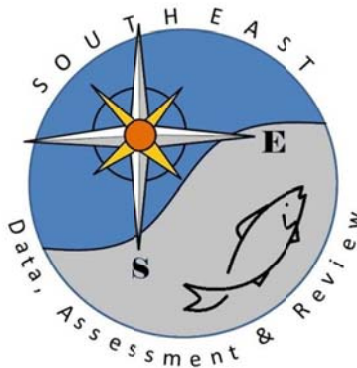
Fax: (843) 769-4520

Address:

SEDAR 21 AW Comments -
4055 Faber Place Dr., Suite 201
North Charleston, SC 29405

When preparing comments for submission please keep the following guidelines in mind:

1. **Relevancy.** Please keep your comments concise and relevant to the assessment documents presented for comment.
 - a) Target specific issues,
 - b) Include data and facts with references,
 - c) Propose specific ideas or suggestions for solving any problems you identify,
 - d) Please comment on the assessment decisions and inputs that lead to the results, not on the results of the assessment.
2. **No personal or slanderous remarks.** Please be respectful and avoid personal attacks.
3. Comments should be directed to ‘SEDAR 21 Assessment Panel’ not to individual panel members.
4. You may submit comments anonymously.
5. All comments are considered public documents in compliance with open meeting and public record laws. All public documents will be available to the general public.



SEDAR

Southeast Data, Assessment, and Review

SEDAR 21
Pre-Review Stock Assessment Report

HMS Atlantic Blacknose Shark

January 2011

SEDAR
4055 Faber Place Drive, Suite 201
North Charleston, SC 29405

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SEDAR



Southeast Data, Assessment, and Review

SEDAR 21

HMS Atlantic Blacknose Shark

SECTION I: Introduction

SEDAR

4055 Faber Place Drive, Suite 201

North Charleston, SC 29405

This information is distributed solely for the purpose of peer review. It does not represent and should not be construed to represent any agency determination or policy.

1. SEDAR PROCESS DESCRIPTION

SouthEast Data, Assessment, and Review (**SEDAR**) is a cooperative Fishery Management Council process initiated in 2002 to improve the quality and reliability of fishery stock assessments in the South Atlantic, Gulf of Mexico, and US Caribbean. SEDAR seeks improvements in the scientific quality of stock assessments and the relevance of information available to address fishery management issues. SEDAR emphasizes constituent and stakeholder participation in assessment development, transparency in the assessment process, and a rigorous and independent scientific review of completed stock assessments.

SEDAR is managed by the Caribbean, Gulf of Mexico, and South Atlantic Regional Fishery Management Councils in coordination with NOAA Fisheries and the Atlantic and Gulf States Marine Fisheries Commissions. Oversight is provided by a Steering Committee composed of NOAA Fisheries representatives: Southeast Fisheries Science Center Director and the Southeast Regional Administrator; Regional Council representatives: Executive Directors and Chairs of the South Atlantic, Gulf of Mexico, and Caribbean Fishery Management Councils; and Interstate Commission representatives: Executive Directors of the Atlantic States and Gulf States Marine Fisheries Commissions.

SEDAR is organized around two workshops and a series of webinars. First is the Data Workshop, during which fisheries, monitoring, and life history data are reviewed and compiled. The second stage is the Assessment Process, which is conducted via a series of webinars, during which assessment models are developed and population parameters are estimated using the information provided from the Data Workshop. Third and final is the Review Workshop, during which independent experts review the input data, assessment methods, and assessment products. The completed assessment, including the reports of all 3 workshops and all supporting documentation, is then forwarded to the Council SSC for certification as ‘appropriate for management’ and development of specific management recommendations.

SEDAR workshops are public meetings organized by SEDAR staff and the lead Cooperator. Workshop participants are drawn from state and federal agencies, non-government organizations, Council members, Council advisors, and the fishing industry with a goal of including a broad range of disciplines and perspectives. All participants are expected to contribute to the process by preparing working papers, contributing, providing assessment analyses, and completing the workshop report.

SEDAR Review Workshop Panels consist of a chair, 3 reviewers appointed by the Center for Independent Experts (CIE), and three reviewers appointed from the SSC of the Council having jurisdiction over the stocks being assessed. The Review Workshop Chair is appointed by the Council from their SSC. Participating councils may appoint additional representatives of their SSC, Advisory, and other panels as observers.

2. MANAGEMENT OVERVIEW

2.1 FISHERY MANAGEMENT PLAN AND AMENDMENTS

Given the interrelated nature of the shark fisheries, the following section provides an overview of shark management primarily since 1993 through 2009 for sandbar, dusky, and blacknose sharks. The following summary focuses only on those management actions that likely affect these three species. The latter part of the document is organized according to individual species. The management measures implemented under fishery management plans and amendments are also summarized in Table 1.

The U.S. Atlantic shark fisheries developed rapidly in the late 1970s due to increased demand for their meat, fins, and cartilage worldwide. At the time, sharks were perceived to be underutilized as a fishery resource. The high commercial value of shark fins led to the controversial practice of “finning,” or removing the valuable fins from sharks and discarding the carcasses. Growing demand for shark products encouraged expansion of the commercial fishery throughout the late 1970s and the 1980s. Tuna and swordfish vessels began to retain a greater proportion of their shark incidental catch and some directed fishery effort expanded as well.

Preliminary Fishery Management Plan (PMP) for Atlantic Billfish and Sharks

In January 1978, NMFS published the Preliminary Fishery Management Plan (PMP) for Atlantic Billfish and Sharks (43 FR 3818), which was supported by an Environmental Impact Statement (EIS) (42 FR 57716). This PMP was a Secretarial effort. The management measures contained in the plan were designed to:

1. Minimize conflict between domestic and foreign users of billfish and shark resources;
2. Encourage development of an international management regime; and
3. Maintain availability of billfishes and sharks to the expanding U.S. fisheries.

Primary shark management measures in the Atlantic Billfish and Shark PMP included:

- Mandatory data reporting requirements for foreign vessels;
- A hard cap on the catch of sharks by foreign vessels, which when achieved would prohibit further landings of sharks by foreign vessels;
- Permit requirements for foreign vessels to fish in the Fishery Conservation Zone (FCZ) of the United States;
- Radio checks by foreign vessels upon entering and leaving the FCZ;
- Boarding and inspection privileges for U.S. observers; and
- Prohibition on intentional discarding of fishing gears by foreign fishing vessels within the FCZ that may pose environmental or navigational hazards.

In the 1980s, the Regional Fishery Management Councils were responsible for the management of Atlantic highly migratory species (HMS). Thus, in 1985 and 1988, the five Councils finalized joint FMPs for swordfish and billfish, respectively. As catches accelerated through the 1980s, shark stocks started to show signs of decline. Peak commercial landings of large coastal and pelagic sharks were reported in 1989. In 1989, the five Atlantic Fishery Management Councils asked the Secretary of Commerce (Secretary) to develop a Shark Fishery Management Plan (FMP). The Councils were concerned about the late maturity and low fecundity of sharks, the increase in fishing mortality, and the possibility of the resource being overfished. The Councils requested that the FMP cap commercial fishing effort, establish a recreational bag limit, prohibit finning, and begin a data collection system.

On November 28, 1990, the President of the United States signed into law the Fishery Conservation Amendments of 1990 (Pub. L. 101-627). This law amended the Magnuson Fishery Conservation and Management Act (later renamed the Magnuson-Stevens Fishery Conservation and Management Act or Magnuson-Stevens Act) and gave the Secretary the authority (effective January 1, 1992) to manage HMS in the exclusive economic zone (EEZ) of the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea under authority of the Magnuson-Stevens Act (16 U.S.C. §1811). This law also transferred from the Fishery Management Councils to the Secretary, effective November 28, 1990, the management authority for HMS in the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea (16 U.S.C. §1854(f)(3)). At this time, the Secretary delegated authority to manage Atlantic HMS to NMFS.

1993 Fishery Management Plan for Sharks of the Atlantic Ocean (1993 FMP)

In 1993, the Secretary of Commerce, through NMFS, implemented the FMP for Sharks of the Atlantic Ocean. The management measures in the 1993 FMP included:

- Establishing a fishery management unit (FMU) consisting of 39 frequently caught species of Atlantic sharks, separated into three groups for assessment and regulatory purposes (Large Coastal Sharks (LCS), Small Coastal Sharks (SCS), and pelagic sharks)¹;
- Establishing calendar year commercial quotas for the LCS and pelagic sharks and dividing the annual quota into two equal half-year quotas that applied to the following two fishing periods – January 1 through June 30 and July 1 through December 31;
- Establishing a recreational trip limit of four sharks per vessel for LCS or pelagic shark species groups and a daily bag limit of five sharks per person for sharks in the SCS species group;
- Requiring that all sharks not taken as part of a commercial or recreational fishery be released uninjured;

¹ At that time, sandbar and dusky sharks were managed within the large coastal shark complex, and blacknose sharks were managed within the small coastal shark complex.

- Establishing a framework procedure for adjusting commercial quotas, recreational bag limits, species size limits, management unit, fishing year, species groups, estimates of maximum sustainable yield (MSY), and permitting and reporting requirements;
- Prohibiting finning by requiring that the ratio between wet fins/dressed carcass weight not exceed five percent;
- Prohibiting the sale by recreational fishermen of sharks or shark products caught in the Economic Exclusive Zone (EEZ);
- Requiring annual commercial permits for fishermen who harvest and sell shark products (meat products and fins);
- Establishing a permit eligibility requirement that the owner or operator (including charter vessel and headboat owners/operators who intend to sell their catch) must show proof that at least 50 percent of earned income has been derived from the sale of the fish or fish products or charter vessel and headboat operations or at least \$20,000 from the sale of fish during one of three years preceding the permit request;
- Requiring trip reports by permitted fishermen and persons conducting shark tournaments and requiring fishermen to provide information to NMFS under the Trip Interview Program; and,
- Requiring NMFS observers on selected shark fishing vessels to document mortality of marine mammals and endangered species.

At that time, NMFS identified LCS as overfished and established the quota at 2,436 metric tons (mt) dressed weight (dw) based on a 1992 stock assessment. Under the rebuilding plan established in the 1993 FMP, the LCS quota was expected to increase in 1994 and 1995 up to the MSY estimated in the 1992 stock assessment (3,800 mt dw).

In 1994, under the rebuilding plan implemented in the 1993 FMP, the LCS quota was increased to 2,570 mt dw. Additionally, a new stock assessment was completed in March 1994. This stock assessment focused on LCS, suggested that recovery to the levels of the 1970s could take as long as 30 years, and concluded that “increases in the [Total Allowable Catch (TAC)] for sharks [are] considered risk-prone with respect to promoting stock recovery.” A final rule that capped quotas for LCS at the 1994 levels was published on May 2, 1995 (60 FR 21468).

1999 Fishery Management Plan for Atlantic Tunas, Swordfish and Sharks (1999 FMP)

In June 1996, NMFS convened another stock assessment to examine the status of LCS stocks. The 1996 stock assessment found no clear evidence that LCS stocks were rebuilding and concluded that “[a]nalyse indicate that recovery is more likely to occur with reductions in effective fishing mortality rate of 50 [percent] or more.” In addition, in 1996, amendments to the Magnuson-Stevens Act modified the definition of overfishing and established new provisions to halt overfishing and rebuild overfished stocks, minimize bycatch and bycatch mortality to the extent practicable, and identify and protect essential fish habitat. Accordingly, in 1997, NMFS began the process of creating a rebuilding plan for overfished HMS, including LCS, consistent

with the new provisions. In addition, in 1995 and 1997, new quotas were established for LCS and SCS (see Section 2.0 below). In June 1998, NMFS held another LCS stock assessment. The 1998 stock assessment found that LCS were overfished and would not rebuild under 1997 harvest levels. Based in part on the results of the 1998 stock assessment, in April 1999, NMFS published the final 1999 FMP, which included numerous measures to rebuild or prevent overfishing of Atlantic sharks in commercial and recreational fisheries. The 1999 FMP amended and replaced the 1993 FMP. Management measures related to sharks that changed in the 1999 FMP included:

- Reducing commercial LCS and SCS quotas;
- Establishing ridgeback and non-ridgeback categories of LCS;
- Implementing a commercial minimum size for ridgeback LCS;
- Establishing blue shark, porbeagle shark, and other pelagic shark subgroups of the pelagic sharks and establishing a commercial quota for each subgroup;
- Reducing recreational retention limits for all sharks;
- Establishing a recreational minimum size for all sharks except Atlantic sharpnose;
- Expanding the list of prohibited shark species to 19 species, including dusky sharks²;
- Added deepwater sharks to the fishery management unit;
- Established EFH for 39 species of sharks;
- Implementing limited access in commercial fisheries;
- Establishing a shark public display quota;
- Establishing new procedures for counting dead discards and state landings of sharks after Federal fishing season closures against Federal quotas; and
- Establishing season-specific over- and underharvest adjustment procedures.

The implementing regulations were published on May 28, 1999 (64 FR 29090). However, in 1999, a court enjoined implementation of the 1999 regulations, as they related to the ongoing litigation on the 1997 quotas. As such, many of the regulations in the 1999 FMP had a delayed implementation or were never implemented. These changes are explained below under Section 2.0.

2003 Amendment 1 to 1999 FMP for Atlantic Tunas, Swordfish, and Sharks (Amendment 1)

In 2002, additional LCS and SCS stock assessments were conducted. Based on these assessments, NMFS re-examined many of the shark management measures in the 1999 FMP for Atlantic Tunas, Swordfish, and Sharks. The changes in Amendment 1 affected all aspects of

² In addition to white, basking, sand tiger, bigeye sand tiger, whale sharks, which were already prohibited, NMFS prohibited Atlantic angel, bigeye sixgill, bigeye thresher, bignose, Caribbean reef, Caribbean sharpnose, dusky, Galapagos, longfin mako, narrowtooth, night, sevengill, sixgill, and smalltail sharks.

shark management. The final management measures (December 24, 2003, 68 FR 74746) selected in Amendment 1 included, among other things:

- Aggregating the large coastal shark complex;
- Using maximum sustainable yield as a basis for setting commercial quotas;
- Eliminating the commercial minimum size;
- Establishing regional commercial quotas and trimester commercial fishing seasons, adjusting the recreational bag and size limits, establishing gear restrictions to reduce bycatch or reduce bycatch mortality;
- Establishing a time/area closure off the coast of North Carolina;
- Removing the deepwater/other sharks from the management unit;
- Establishing a mechanism for changing the species on the prohibited species list;
- Updating essential fish habitat identifications for five species of sharks; and,
- Changing the administration for issuing permits for display purposes.

2006 Consolidated HMS FMP

NMFS issued two separate FMPs in April 1999 for the Atlantic HMS fisheries. The 1999 Fishery Management Plan for Atlantic Tunas, Swordfish, and Sharks combined, amended, and replaced previous management plans for swordfish and sharks, and was the first FMP for tunas. Amendment 1 to the Billfish Management Plan updated and amended the 1988 Billfish FMP. The 2006 Consolidated HMS FMP consolidated the management of all Atlantic HMS into one comprehensive FMP, adjusted the regulatory framework measures, continued the process for updating HMS EFH, and combined and simplified the objectives of the previous FMPs.

In 2005, NMFS released the draft Consolidated HMS FMP. In July 2006, the final Consolidated HMS FMP was completed and the implementing regulations were published on October 2, 2006 (71 FR 58058). Measures that were specific to the shark fisheries included:

- Mandatory workshops and certifications for all vessel owners and operators that have pelagic longline (PLL) or bottom longline (BLL) gear on their vessels and that had been issued or were required to be issued any of the HMS limited access permits (LAPs) to participate in HMS longline and gillnet fisheries. These workshops provide information and ensure proficiency with using required equipment to handle release and disentangle sea turtles, smalltooth sawfish, and other non-target species;
- Mandatory Atlantic shark identification workshops for all federally permitted shark dealers to train shark dealers to properly identify shark carcasses;
- Differentiation between PLL and BLL gear based upon the species composition of the catch onboard or landed;

- The requirement that the 2nd dorsal fin and the anal fin remain on all sharks through landing; and,
- Prohibition on the sale or purchase of any HMS that was offloaded from an individual vessel in excess of the retention limits specified in §§ 635.23 and 635.24.

The 2006 Consolidated HMS FMP also included a plan for preventing overfishing of finetooth sharks by expanding observer coverage, collecting more information on where finetooth sharks are being landed, and coordinating with other fisheries management entities that are contributing to finetooth shark fishing mortality.

2008 Amendment 2 to the 2006 Consolidated HMS FMP

In 2005/2006, new stock assessments were conducted on the LCS complex, sandbar, blacktip, porbeagle, and dusky sharks. Based on the results of those assessments, NMFS amended the 2006 Consolidated HMS FMP. On April 10, 2008, NMFS released the Final EIS for Amendment 2 to the Consolidated HMS FMP. Assessments for dusky (*Carcharhinus obscurus*) and sandbar (*C. plumbeus*) sharks indicated that these species were overfished with overfishing occurring and that porbeagle sharks (*Lamna nasus*) were overfished. NMFS implemented management measures consistent with recent stock assessments for sandbar, porbeagle, dusky, blacktip (*C. limbatus*) and the LCS complex. The implementing regulations were published on June 24, 2008 (73 FR 35778; corrected version published July 15, 2008; 73 FR 40658). Management measures implemented in Amendment 2 included:

- Initiating rebuilding plans for porbeagle, dusky, and sandbar sharks consistent with stock assessments;
- Implementing commercial quotas and retention limits consistent with stock assessment recommendations to prevent overfishing and rebuild overfished stocks;
- Modifying recreational measures to reduce fishing mortality of overfished/overfishing stocks;
- Modifying reporting requirements;
- Modifying timing of shark stock assessments;
- Clarifying timing of release for annual Stock Assessment and Fishery Evaluation (SAFE) reports;
- Updating dehooking requirements for smalltooth sawfish;
- Requiring that all Atlantic sharks be offloaded with fins naturally attached;
- Collecting shark life history information via the implementation of a sandbar shark research program; and,
- Implementing time/area closures recommended by the South Atlantic Fishery Management Council.

2010 Amendment 3 to the 2006 Consolidated HMS FMP (Amendment 3)

An SCS stock assessment was finalized during the summer of 2007, which assessed finetooth, Atlantic sharpnose, blacknose, and bonnethead sharks separately. Based on these assessments, NMFS determined that blacknose sharks were overfished with overfishing occurring; however, Atlantic sharpnose, bonnethead, and finetooth sharks were not overfished and overfishing was not occurring, and NMFS issued a Notice of Intent (NOI) announcing its intent to amend the 2006 Consolidated HMS FMP in order to rebuild blacknose sharks, among other things (May 7, 2008, 73 FR 25665).

On July 24, 2009 (74 FR 36706 and 74 FR 36892), the draft EIS and proposed rule were released, which considered a range of alternative management measures from several different topics including small coastal sharks (SCS) commercial quotas, commercial gear restrictions, pelagic shark effort controls, recreational measures for SCS and pelagic sharks, and smooth dogfish management measures. In order to rebuild blacknose sharks, NMFS proposed to establish a new blacknose shark specific quota of 14.9 mt dw and establish a new non-blacknose SCS quota of 56.9 mt dw. In addition, NMFS proposed to prohibit the landings of all sharks from South Carolina south using gillnet gear, and prohibit the landing of blacknose sharks in the recreational shark fishery. However, based on additional data and analyzes and public comment, in the final EIS (75 FR 13276, March 19, 2010), NMFS preferred to implement a blacknose shark specific quota of 19.9 mt dw and establish a new non-blacknose SCS quota of 221.6 mt dw while allowing sharks to be landed with gillnet gear and recreational anglers to be able to retain blacknose sharks, as long as they meet the minimum recreational size limit. The final rule for this action is anticipated in early summer of 2010. Therefore, while these regulations will not be in place during the time series of data considered for the 2010 blacknose assessment; however, changes in fishing practices in 2009 by SCS fishermen, particularly in the gillnet fishery, may have occurred even in the absence of regulation due to the proposed actions in the draft EIS for Amendment 3.

Table 1 FMP Amendments and regulations affecting sandbar, dusky, and blacknose sharks

Effective Date	FMP/Amendment	Description of Action
January 1978	Preliminary Fishery Management Plan (PMP) for Atlantic Billfish and Sharks	<ul style="list-style-type: none"> • Mandatory data reporting requirements for foreign vessels; and, • Established a hard cap on the catch of sharks by foreign vessels, which when achieved would prohibit further landings of sharks by foreign vessels
<p>Most parts effective April 26, 1993, such as quotas, complexes, etc. Finning prohibition effective May 26, 1993. Need to have permit, report landings, and carry observers effective July 1, 1993.</p>	FMP for Sharks of the Atlantic Ocean	<ul style="list-style-type: none"> • Established a fishery management unit (FMU) consisting of 39 frequently caught species of Atlantic sharks, separated into three groups for assessment and regulatory purposes (LCS, SCS, and pelagic sharks); • Established calendar year commercial quotas for the LCS (2,436 mt dw) and pelagic sharks (580 mt dw) and divided the annual quota into two equal half-year quotas that apply to the following two fishing periods – January 1 through June 30 and July 1 through December 31; • Establishing a recreational trip limit of 4 LCS & pelagic sharks/vessel and a daily bag limit of 5 SCS/person; • Prohibited finning by requiring that the ratio between wet fins/dressed carcass weight not exceed five percent; • Prohibited the sale by recreational fishermen of sharks or shark products caught in the Economic Exclusive Zone (EEZ); • Required annual commercial permits for fishermen who harvest and sell shark (meat products and fins); and, • Requiring trip reports by permitted fishermen and persons conducting shark tournaments and requiring fishermen to provide information to NMFS under the Trip Interview Program. <p>Other management measures included: establishing a framework procedure for adjusting commercial quotas, recreational bag limits, species size limits, management unit, fishing year, species groups, estimates of maximum sustainable yield (MSY), and permitting and reporting requirements; establishing a permit eligibility requirement that the owner or operator (including charter vessel and headboat owners/operators who intend to sell their catch); and requiring NMFS observers on selected shark fishing vessels to document mortality of marine mammals and endangered species.</p>
<p>July 1, 1999</p> <p>-Limited access permits issued immediately; application and appeals processed over the next year</p> <p>(measures in italics were delayed)</p>	FMP for Atlantic Tunas, Swordfish and Sharks	<ul style="list-style-type: none"> • Implemented limited access in commercial fisheries; • Reduced commercial LCS and SCS quotas to 1,285 mt dw and 1,760 mt dw, respectively; • Reduced recreational retention limits for all sharks to 1 shark/vessel/trip except for Atlantic sharpnose (1 Atlantic sharpnose/person/trip); • Established a recreational minimum size for all sharks except Atlantic sharpnose (4.5 feet); • Established a shark public display quota (60 mt ww); • Expanded the list of prohibited shark species (in addition to sand tiger, bigeye sand tiger, basking, whale, and white sharks, prohibited Atlantic angel, bigeye sixgill, bigeye thresher, bignose, Caribbean reef, Caribbean sharpnose, dusky, galapagos, longfin mako, narrowtooth, night, sevengill, sixgill, smalltail sharks) (<i>effective July 1, 2000</i>); • Established blue shark, porbeagle shark, and other pelagic shark subgroups of the pelagic sharks and establishing a commercial quota for each subgroup (blue shark=273 mt dw; porbeagle shark=92 mt dw; other pelagics=488 mt dw) (<i>effective January 1, 2001</i>); • Established new procedures for counting dead discards and state landings

Effective Date	FMP/Amendment	Description of Action
		<p>of sharks after Federal fishing season closures against Federal quotas; and established season-specific over- and underharvest adjustment procedures (<i>effective January 1, 2003</i>);</p> <ul style="list-style-type: none"> • Established ridgeback and non-ridgeback categories of LCS (annual quotas of 783 mt dw for non-ridgeback LCS & 931 mt dw for ridgeback LCS; <i>effective January 1, 2003; suspended after 2003 fishing year</i>); and, • Implemented a commercial minimum size for ridgeback LCS (<i>suspended</i>).
<p>February 1, 2004, except LCS and SCS quotas, and recreational retention and size limits, which were delayed</p>	<p>Amendment 1 to the FMP for Atlantic Tunas, Swordfish and Sharks</p>	<ul style="list-style-type: none"> • Removed the deepwater/other sharks from the management unit; • Aggregated the large coastal shark complex; • Eliminated the commercial minimum size; • Established gear restrictions to reduce bycatch or reduce bycatch mortality (allowed only handline and rod and reel in recreational shark fishery); • Used maximum sustainable yield as a basis for setting commercial quotas (LCS quota=1,017 mt dw; SCS quota = 454 mt dw) (<i>effective December 30, 2003</i>); • Adjusted the recreational bag and size limits (allowed 1 bonnethead/person/trip in addition to 1 Atlantic sharpnose/person/trip with no size limit for bonnethead or Atlantic sharpnose) (<i>effective December 30, 2003</i>); • Established regional commercial quotas and trimester commercial fishing seasons (<i>trimesters not implemented until January 1, 2005; 69 FR 6964</i>); and, • Established a time/area closure off the coast of North Carolina (<i>effective January 1, 2005</i>). <p>Other management measures included: establishing a mechanism for changing the species on the prohibited species list; updating essential fish habitat identifications for five species of sharks; requiring the use of non-stainless steel corrodible hooks and the possession of line cutters, dipnets, and approved dehooking device on BLL vessels; requiring vessel monitoring systems (VMS) for fishermen operating near the time/area closures off North Carolina and on gillnet vessels operating during the right whale calving season and, changing the administration for issuing display permits.</p>
<p>November 1, 2006, except for workshops</p>	<p>Consolidated HMS FMP</p>	<ul style="list-style-type: none"> • Differentiation between PLL and BLL gear based upon the species composition of the catch onboard or landed; • The requirement that the 2nd dorsal fin and the anal fin remain on all sharks through landing; • Mandatory workshops and certifications for all vessel owners and operators that have PLL or BLL gear on their vessels for fishermen with HMS LAPs (<i>effective January 1, 2007</i>); and • Mandatory Atlantic shark identification workshops for all Federally permitted shark dealers (<i>effective January 1, 2007</i>).
<p>July 24, 2008</p>	<p>Amendment 2 to the 2006 Consolidated HMS FMP</p>	<ul style="list-style-type: none"> • Initiating rebuilding plans for porbeagle, dusky, and sandbar sharks consistent with stock assessments; • Established a shark research fishery which collects shark life history information; • Implemented commercial quotas and retention limits consistent with stock assessment recommendations to prevent overfishing and rebuild overfished stocks (sandbar research annual quota = 87.9 mt dw; non-sandbar LCS annual research quota = 37.5 mt dw; GOM regional non-sandbar LCS annual quota = 390.5 mt dw; ATL regional non-sandbar LCS annual quota = 187.8 mt dw; retention limit = 33 non-sandbar

Effective Date	FMP/Amendment	Description of Action
		<p>LCS/vessel/trip outside of shark research fishery with no sandbar shark retention; sandbar retention only allowed within shark research fishery. Trip limits within research fishery were as follows: 2008-2,750 lb dw/trip of LCS of which no more than 2,000 lb dw could be sandbar sharks; 2009-45 sandbar and 33 non-sandbar LCS/trip; 2010-33 sandbar/trip and 33 non-sandbar/trip;</p> <ul style="list-style-type: none"> • Modified recreational measures to reduce fishing mortality of overfished/overfishing stocks (prohibiting the retention of silky and sandbar sharks for recreational anglers); • Required that all Atlantic sharks be offloaded with fins naturally attached; and, • Implemented BLL time/area closures recommended by the South Atlantic Fishery Management Council. • Other management measures included: modifying reporting requirements (dealer reports must be received by NMFS within 10 days of the reporting period), and modifying timing of shark stock assessments.
Expected 2010	Amendment 3 to the 2006 Consolidated HMS FMP	<ul style="list-style-type: none"> • Preferred actions include establishing a non-blacknose SCS quota of 221.6 mt and a blacknose-specific quota of 19.9 mt; and, • Proposed a prohibition of landing sharks in gillnets from South Carolina south in July 2009.

Emergency and Other Major Rules

Rules in Relation to 1993 FMP

A number of difficulties arose in the initial year of implementation of the 1993 FMP that resulted in a short season and low ex-vessel prices. First, the January to June semi-annual LCS quota was exceeded shortly after implementation of the FMP, and that portion of the commercial fishery was closed on May 10, 1993. The LCS fishery reopened on July 1, 1993, with an adjusted quota of 875 mt dw (see Table 3 below). Derby-style fishing, coupled with what some participants observed to be an unusual abundance or availability of sharks, led to an intense and short fishing season for LCS, with the fishery closing within one month. Although fin prices remained strong throughout the brief season, the oversupply of shark carcasses led to reports of record low prices. The closure was significantly earlier than expected, and a number of commercial fishermen and dealers indicated that they were adversely affected. The intense season also complicated the task of monitoring the LCS quota and closing the season with the required advance notice.

To address these problems, a commercial trip limit of 4,000 lb for permitted vessels for LCS was implemented on December 28, 1993 (58 FR 68556), and a control date for the Atlantic shark fishery was established on February 22, 1994 (59 FR 8457). A final rule to implement additional measures authorized by the 1993 FMP published on October 18, 1994 (59 FR 52453), which:

- Clarified operation of vessels with a Federal commercial permit;

- Established the fishing year;
- Consolidated the regulations for drift gillnets;
- Required dealers to obtain a permit to purchase sharks;
- Required dealer reports;
- Established recreational bag limits;
- Established quotas for commercial landings; and
- Provided for commercial fishery closures when quotas were reached.

A final rule that capped quotas for LCS (2,570 mt dw) and pelagic sharks (580 mt dw) at the 1994 levels was published on May 2, 1995 (60 FR 21468).

In response to a 1996 LCS stock assessment, in 1997, NMFS reduced the LCS commercial quota by 50 percent to 1,285 mt dw and the recreational retention limit to two LCS, SCS, and pelagic sharks combined per trip with an additional allowance of two Atlantic sharpnose sharks per person per trip (62 FR 16648, April 2, 1997). In this same rule, NMFS established an annual commercial quota for SCS of 1,760 mt dw and prohibited possession of five LCS: sand tiger, bigeye sand tiger, whale, basking, and white sharks. On May 2, 1997, the Southern Offshore Fishing Association (SOFA) and other commercial fishermen and dealers sued the Secretary of Commerce (Secretary) on the April 1997 regulations.

In May 1998, NMFS completed its consideration of the economic effects of the 1997 LCS quotas on fishermen and submitted the analysis to the court. NMFS concluded that the 1997 LCS quotas may have had a significant economic impact on a substantial number of small entities and that there were no other available alternatives that would both mitigate those economic impacts and ensure the viability of the LCS stocks. Based on these findings, the court allowed NMFS to maintain those quotas while the case was settled in combination with litigation mentioned below regarding the 1999 FMP.

Rules in Relation to the 1999 FMP

The implementing regulations for the 1999 FMP were published on May 28, 1999 (64 FR 29090). At the end of June 1999, NMFS was sued several times by several different entities regarding the commercial and recreational management measures in the 1999 FMP. Due to the overlap of one of those lawsuits with the 1997 litigation, on June 30, 1999, NMFS received a court order enjoining it from enforcing the 1999 regulations with respect to Atlantic shark commercial catch quotas and fish-counting methods (including the counting of dead discards and state commercial landings after Federal closures), which were different from the quotas and fish counting methods prescribed by the 1997 Atlantic shark regulations. A year later, on June 12, 2000, the court issued an order clarifying that NMFS could proceed with implementation and enforcement of the 1999 prohibited species provisions (64 FR 29090, May 28, 1999).

On September 25, 2000, the United States District Court for the District of Columbia ruled against the plaintiffs regarding the commercial pelagic shark management measures,

stating that the regulations were consistent with the Magnuson-Stevens Act and the Regulatory Flexibility Act. On September 20, 2001, the same court ruled against different plaintiffs regarding the recreational shark retention limits in the 1999 FMP, again stating that the regulations were consistent with the Magnuson-Stevens Act.

On November 21, 2000, SOFA *et al.* and NMFS reached a settlement agreement for the May 1997 and June 1999 lawsuits. On December 7, 2000, the United States District Court for the Middle District of Florida entered an order approving the settlement agreement and lifting the injunction. The settlement agreement required, among other things, an independent (*i.e.*, non-NMFS) review of the 1998 LCS stock assessment. The settlement agreement did not address any regulations affecting the pelagic shark, prohibited species, or recreational shark fisheries. Once the injunction was lifted, on January 1, 2001, the pelagic shark quotas adopted in the 1999 FMP were implemented (66 FR 55). Additionally, on March 6, 2001, NMFS published an emergency rule implementing the settlement agreement (66 FR 13441). This emergency rule expired on September 4, 2001, and established the LCS (1,285 mt dw) and SCS commercial quotas (1,760 mt dw) at 1997 levels.

In late 2001, the Agency received the results of the independent peer review of the 1998 LCS stock assessment. These peer reviews found that the 1998 LCS stock assessment was not the best available science for LCS. Taking into consideration the settlement agreement, the results of the peer reviews of the 1998 LCS stock assessment, current catch rates, and the best available scientific information (not including the 1998 stock assessment projections), NMFS implemented another emergency rule for the 2002 fishing year that suspended certain measures under the 1999 regulations pending completion of new LCS and SCS stock assessments and a peer review of the new LCS stock assessment (66 FR 67118, December 28, 2001; extended 67 FR 37354, May 29, 2002). Specifically, NMFS maintained the 1997 LCS commercial quota (1,285 mt dw), maintained the 1997 SCS commercial quota (1,760 mt dw), suspended the commercial ridgeback LCS minimum size, suspended counting dead discards and state landings after a Federal closure against the quota, and replaced season-specific quota accounting methods with subsequent-season quota accounting methods. That emergency rule expired on December 30, 2002.

On May 28, 2002 (67 FR 36858), NMFS announced the availability of a modeling document that explored the suggestions of the CIE and NRC peer reviews on LCS. Then NMFS held a 2002 LCS stock assessment workshop in June 2002. On October 17, 2002, NMFS announced the availability of the 2002 LCS stock assessment and the workshop meeting report (67 FR 64098). The results of this stock assessment indicated that the LCS complex was still overfished and overfishing was occurring. Additionally, the 2002 LCS stock assessment found that sandbar sharks were no longer overfished but that overfishing was still occurring and that blacktip sharks were rebuilt and overfishing was not occurring. In addition, on May 8, 2002, NMFS announced the availability of a SCS stock assessment (67 FR 30879). The Mote Marine Laboratory and the University of Florida provided NMFS with another SCS assessment in

August 2002. Both of these stock assessments indicated that finetooth sharks were experiencing overfishing while the three other species in the SCS complex (Atlantic sharpnose, bonnethead, and blacknose) were not overfished and overfishing was not occurring.

Based on the results of both the 2002 SCS and LCS stock assessments, NMFS implemented an emergency rule to ensure that the commercial management measures in place for the 2003 fishing year were based on the best available science (67 FR 78990, December 27, 2002; extended 68 FR 31987, May 29, 2003). Specifically, the emergency rule implemented the LCS ridgeback/non-ridgeback split established in the 1999 FMP (the ridgeback quota was set at 783 mt dw and the non-ridgeback quota was set at 931 mt dw), suspended the commercial ridgeback LCS minimum size, and allowed both the season-specific quota adjustments and the counting of all mortality measures to go into place, and reduced the SCS annual commercial quota to 325 mt dw. Additionally, NMFS announced its intent to conduct an EIS and amend the 1999 FMP (67 FR 69180, November 15, 2002).

The emergency rule was an interim measure to maintain the status of LCS pending the re-evaluation of management measures in the context of the rebuilding plan through the amendment to the 1999 FMP. The emergency rule for the 2003 fishing year implemented for the first and only time the classification system (ridgeback/non-ridgeback LCS) finalized in the 1999 FMP. Table 5 indicates which LCS were considered ridgeback and which non-ridgeback. NMFS also implemented for the first time a provision to count state landings after a Federal closure and to count dead discards against the quota. To calculate the commercial quotas for these groups, NMFS took the average landings for individual species from 1999 through 2001 and either increased them or decreased them by certain percentages, as suggested by scenarios presented in the stock assessment. Because the stock assessment scenarios suggested that an increase in catch for blacktip sharks would not cause overfishing and that maintaining the sandbar sharks would not increase overfishing (the two primary species in the LCS fishery), this method resulted in an increase in the overall quota for the length of the emergency rule. During the comment period on the emergency rule and scoping for this amendment, NMFS received comments regarding, among other things, the quota levels under the rule, concern over secondary species and discards, the ability of fishermen to target certain species, and impacts of the different season length for ridgeback and non-ridgeback LCS. NMFS responded to these comments when extending the emergency rule and further considered these comments when examining the alternatives presented in the Amendment to the 1999 FMP.

NMFS received the results of the peer review of the 2002 LCS stock assessment in December 2002. These reviews were generally positive.

Rules in Relation to 2003 Amendment 1

Based on the 2002 LCS stock assessment, NMFS re-examined many of the shark management measures in the 1999 FMP for Atlantic Tunas, Swordfish, and Sharks. The changes in Amendment 1

affected all aspects of shark management. Shortly after the final rule for Amendment 1 was published, NMFS conducted a rulemaking that adjusted the percent quota for each region, changed the seasonal split for the North Atlantic based on historical landing patterns, finalized a method of changing the split between regions and/or seasons as necessary to account for changes in the fishery over time, and established a method to adjust from semi-annual to trimester seasons (November 30, 2004, 69 FR 6954).

Rules to Reduce Bycatch and Bycatch Mortality in the Atlantic PLL Fishery

Pelagic longline is not a primary gear used to target LCS or SCS; however, sandbar and dusky sharks, in particular, are often caught on PLL gear, which targets swordfish and tuna. Therefore, regulations affecting the PLL fishery could also result in changes in dusky and/or sandbar catches. In the 1999 FMP, NMFS committed to implement a closed area to PLL gear that would effectively protect small swordfish. NMFS began to work towards this goal shortly after the publication of the 1999 FMP. After the publication of the 1999 FMP, NMFS was sued by several entities who felt, among other things, that the Agency had not done enough to reduce bycatch in HMS fisheries. As a result, NMFS expanded the goal of the rule to reduce all bycatch and bycatch mortality, to the extent practicable, in the HMS PLL fishery. The following objectives were developed to guide agency action for this goal:

- Maximize the reduction in finfish bycatch;
- Minimize the reduction in the target catch of swordfish and other species;
- Consider impacts on the incidental catch of other species to minimize or reduce incidental catch levels; and
- Optimize survival of bycatch and incidental catch species.

NMFS published the final rule implementing the first regulatory amendment to the 1999 FMP on August 1, 2000 (65 FR 47214), which closed three large areas (DeSoto Canyon, Florida East Coast, and Charleston Bump) and prohibited the use of live bait in the Gulf of Mexico. The DeSoto Canyon closure was effective on November 1, 2000. The other closures were effective March 1, 2001.

During the course of this rulemaking, the PLL fleet exceeded the Incidental Take Statement (ITS) for sea turtles established during the Endangered Species Act (ESA) Section 7 Consultation for the 1999 FMP. That, combined with new information on sea turtles and the uncertainty regarding what the closures would mean for sea turtles, resulted in a new Biological Opinion (BiOp) (June 30, 2000) that concluded that the operation of the PLL fishery as proposed was likely to jeopardize the continued existence of ESA-listed leatherback and loggerhead sea turtles. As a result, NMFS implemented certain measures to avoid jeopardy by reducing sea turtle bycatch in the PLL fishery.

NMFS decided that further analyses of observer data and additional population modeling of loggerhead sea turtles were needed to determine more precisely the impact of the PLL fishery on turtles. Because of this, NMFS reinitiated consultation on the HMS fisheries on September 7, 2000. In the interim, NMFS implemented emergency regulations, based on historical data on sea

turtle interactions, to reduce the short-term effects of the PLL fishery on sea turtles. An emergency rule that closed a portion of the Northeast Distant Statistical Area (NED) and required dipnets and line clippers to be carried and used on PLL vessels to aid in the release of any captured sea turtle published on October 13, 2000 (65 FR 60889).

NMFS issued a BiOp on June 8, 2001 (revised on June 14, 2001), that again concluded that the operation of the Atlantic PLL fishery as proposed was likely to jeopardize the continued existence of loggerhead and leatherback sea turtles. Accordingly, the BiOp provided a reasonable and prudent alternative (RPA) to avoid jeopardy. This BiOp concluded “no jeopardy” for other HMS fisheries, but required additional management measures to reduce sea turtle takes in these fisheries. The RPA included the following elements: closing the NED area effective July 15, 2001, and conducting a research experiment in this area to reduce sea turtle bycatch and bycatch mortality in the PLL fishery; requiring gangions to be placed no closer than twice the average gangion length from the suspending floatlines effective August 1, 2001; requiring gangion lengths to be 110 percent of the length of the floatline in sets of 100 meters or less in depth effective August 1, 2001; and, requiring the use of corrodible hooks effective August 1, 2001. Also, the BiOp included a term and condition for the ITS that recommended that NMFS issue a regulation requiring that all vessels permitted for HMS fisheries, commercial and recreational, post the sea turtle guidelines for safe handling and release following longline interactions inside the wheelhouse by September 15, 2001. The requirement that all vessels permitted for HMS fisheries post sea turtle handling and release guidelines was modified to specify only BLL and PLL vessels by an August 31, 2001 memorandum from the Office of Protected Resources.

On July 13, 2001, NMFS published an emergency rule (66 FR 36711) to implement several of the BiOp recommendations. NMFS published an amendment to the emergency rule to incorporate the change in requirements for the handling and release guidelines that was published in the Federal Register on September 24, 2001 (66 FR 48812). On July 9, 2002, NMFS published the final rule (67 FR 45393) implementing measures required under the June 14, 2001 BiOp on Atlantic HMS to reduce the incidental catch and post-release mortality of sea turtles and other protected species in HMS Fisheries, with the exception of the gangion placement measure. The rule implemented the NED closure, required the length of any gangion to be 10 percent longer than the length of any floatline if the total length of any gangion plus the total length of any floatline is less than 100 meters, and prohibited vessels from having hooks on board other than corrodible, non-stainless steel hooks. In the HMS shark gillnet fishery, both the observer and vessel operator are responsible for sighting whales, the vessel operator must contact NMFS regarding any listed whale takes as defined under MMPA, and shark gillnet fishermen must conduct net checks every 0.5 to 2 hours to look for and remove any sea turtles or marine mammals caught in their gear. The final rule also required all HMS BLL and PLL vessels to post sea turtle handling and release guidelines in the wheelhouse. NMFS did not implement the gangion placement requirement because it appeared to result in an unchanged number of

interactions with loggerhead sea turtles and an apparent increase in interactions with leatherback sea turtles.

In 2001, 2002, and 2003, NMFS in conjunction with the fishing industry conducted an experiment in the NED to see if certain gear restrictions or requirements could reduce sea turtle captures and mortality. The results of this experiment indicated that certain gear types could reduce sea turtle interactions and mortality and that certain methods of handling and releasing turtles could further reduce mortality. For example, using 16/0 non-offset or 18/0 offset hooks of at least 10 degrees could reduce leatherback interactions by approximately 50 percent; however loggerhead sea turtle interactions were expected to stay the same. Using 18/0 hooks flat or offset up to 10 degrees could reduce leatherback and loggerhead sea turtle interactions by approximately 50 and 65 percent, respectively.

On November 28, 2003, based on the conclusion of the experiment in the NED, which examined ways to reduce bycatch and bycatch mortality of loggerhead and leatherback sea turtles in the PLL fishery, and based on preliminary data that indicated that the Atlantic PLL fishery may have exceeded the ITS in the June 14, 2001 BiOp, NMFS published a NOI to prepare a Supplemental Environmental Impact Statement (SEIS) to assess the potential effects on the human environment of proposed alternatives and actions under a proposed rule to reduce sea turtle bycatch (68 FR 66783).

In January 2004, NMFS reinitiated consultation after receiving data that indicated the Atlantic PLL fishery exceeded the incidental take statement for leatherback sea turtles in 2001 – 2002 and for loggerhead sea turtles in 2002. In the Spring of 2004, NMFS released a proposed rule that would require fishermen to use certain hook and bait types and take other measures to reduce sea turtle takes and mortality. The resulting June 1, 2004 BiOp considered these measures and concluded that the PLL fishery was not likely to jeopardize the continued existence of loggerhead sea turtles, but was still likely to jeopardize the continued existence of leatherback sea turtles. NMFS published a final rule implementing many gear and bait restrictions and requiring certain handling and release tools and methods on July 6, 2004 (69 FR 40734).

Shark Rules After 2006 Consolidated HMS FMP

On February 16, 2006, NMFS published a temporary rule (71 FR 8223) to prohibit, through March 31, 2006, any vessel from fishing with any gillnet gear in the Atlantic Ocean waters between 32°00' N. Lat. (near Savannah, GA) and 27°51' N. Lat. (near Sebastian Inlet, FL) and extending from the shore eastward out to 80°00' W. long under the authority of the Atlantic Large Whale Take Reduction Plan (ALWTRP) (50 CFR 229.32 (g)) and ESA. NMFS took this action based on its determination that a right whale mortality was the result of an entanglement by gillnet gear within the Southeast U.S. Restricted Area in January of 2006.

NMFS implemented the final rule on June 25, 2007 (72 FR 34632), that prohibits gillnet fishing, including shark gillnet fishing, from November 15 to April 15, between the NC/SC

border and 29° 00' N. The action was taken to prevent the significant risk to the wellbeing of endangered right whales from entanglement in gillnet gear in the core right whale calving area during calving season. Limited exemptions to the fishing prohibitions are provided for gillnet fishing for sharks and for Spanish mackerel south of 29°00' N. lat. Shark gillnet vessels fishing between 29° 00' N and 26° 46.5' N have certain requirements as outlined 50 CFR § 229.32 from December 1 through March 31 of each year. These include vessel operators contacting the Southeast Fisheries Science Center (SEFSC) Panama City Laboratory at least 48 hours prior to departure of a fishing trip in order to arrange for an observer.

In addition, a 2007 rule (October 5, 2007, 72 FR 57104) amended restrictions in the Southeast U.S. Monitoring Area from December 1 through March 31. In that area, no person may fish with or possess gillnet gear for sharks with webbing of 5" or greater stretched mesh unless the operator of the vessel is in compliance with the VMS requirements found in 50 CFR 635.69. The Southeast U.S. Monitoring Area is from 27°51' N. (near Sebastian Inlet, FL) south to 26°46.5' N. (near West Palm Beach, FL), extending from the shoreline or exemption line eastward to 80°00' W. In addition, NMFS may select any shark gillnet vessel regulated under the ALWTRP to carry an observer. When selected, the vessels are required to take observers on a mandatory basis in compliance with the requirements for at-sea observer coverage found in 50 CFR 229.7. Any vessel that fails to carry an observer once selected is prohibited from fishing pursuant to 50 CFR § 635. There are additional gear marking requirements that can be found at 50 CFR § 229.32.

In 2007, NMFS expanded the equipment required for the safe handling, release, and disentanglement of sea turtles caught in the Atlantic shark BLL fishery (72 FR 5633, February 7, 2007). As a result, equipment required for BLL vessels is now consistent with the requirements for the PLL fishery. Furthermore, this action implemented several year-round BLL closures to protect EFH to maintain consistency with the Caribbean Fishery Management Council.

Table 2. Chronological list of most of the Federal Register publications relating to Atlantic sharks.

Federal Register Cite	Date	Rule or Notice
<i>Pre 1993</i>		
48 FR 3371	1/25/1983	Preliminary management plan with optimum yield and total allowable level of foreign fishing for sharks
56 FR 20410	5/3/1991	NOA of draft FMP; 8 hearings
57 FR 1250	1/13/1992	NOA of Secretarial FMP
57 FR 24222	6/8/1992	Proposed rule to implement FMP
57 FR 29859	7/7/1992	Correction to 57 FR 24222
<i>1993</i>		
58 FR 21931	4/26/1993	Final rule and interim final rule implementing FMP
58 FR 27336	5/7/1993	Correction to 58 FR 21931
58 FR 27482	5/10/1993	LCS commercial fishery closure announcement
58 FR 40075	7/27/1993	Adjusts 1993 second semi-annual quotas
58 FR 40076	7/27/1993	LCS commercial fishery closure announcement
58 FR 46153	9/1/1993	Notice of 13 public scoping meetings
58 FR 59008	11/5/1993	Extension of comment period for 58 FR 46153
58 FR 68556	12/28/1993	Interim final rule implementing trip limits
<i>1994</i>		
59 FR 3321	1/21/1994	Extension of comment period for 58 FR 68556
59 FR 8457	2/22/1994	Notice of control date for entry
59 FR 25350	5/16/1994	LCS commercial fishery closure announcement
59 FR 33450	6/29/1994	Adjusts second semi-annual 1994 quota
59 FR 38943	8/1/1994	LCS commercial fishery closure announcement
59 FR 44644	8/30/1994	Reopens LCS fishery with new closure date
59 FR 48847	9/23/1994	Notice of public scoping meetings
59 FR 51388	10/11/1994	Rescission of LCS closure
59 FR 52277	10/17/1994	Notice of additional scoping meetings
59 FR 52453	10/18/1994	Final rule implementing interim final rule in 1993 FMP
59 FR 55066	11/3/1994	LCS commercial fishery closure announcement
<i>1995</i>		
60 FR 2071	1/6/1995	Proposed rule to adjust quotas
60 FR 21468	5/2/1995	Final rule indefinitely establishes LCS quota at 1994 level
60 FR 27042	5/22/1995	LCS commercial fishery closure announcement
60 FR 30068	6/7/1995	Announcement of Shark Operations Team meeting
60 FR 37023	7/19/1995	Adjusts second semi-annual 1995 quota
60 FR 38785	7/28/1995	ANPR - Options for Permit Moratoria
60 FR 44824	8/29/1995	Extension of ANPR comment period
60 FR 49235	9/22/1995	LCS commercial fishery closure announcement
60 FR 61243	11/29/1995	Announces Limited Access Workshop
<i>1996</i>		
61 FR 21978	5/13/1996	LCS commercial fishery closure announcement
61 FR 37721	7/19/1996	Announcement of Shark Operations Team meeting.

Federal Register Cite	Date	Rule or Notice
61 FR 39099	7/26/1996	Adjusts second semi-annual 1996 quota
61 FR 43185	8/21/1996	LCS commercial fishery closure announcement
61 FR 67295	12/20/1996	Proposed rule to reduce Quotas/Bag Limits
61 FR 68202	12/27/1996	Proposed rule to establish limited entry (Draft Amendment 1 to 1993 FMP)
<i>1997</i>		
62 FR 724	1/6/1997	NOA of Draft Amendment 1 to 1993 FMP
62 FR 1705	1/13/1997	Notice of 11 public hearings for Amendment 1
62 FR 1872	1/14/1997	Extension of comment period and notice of public hearings for proposed rule on quotas
62 FR 4239	1/29/1997	Extension of comment period for proposed rule on quotas
62 FR 8679	2/26/1997	Extension of comment period for Amendment 1 to 1993 FMP
62 FR 16647	4/7/1997	Final rule reducing quotas/bag limits
62 FR 16656	4/7/1997	LCS commercial fishery closure announcement
62 FR 26475	5/14/1997	Announcement of Shark Operations Team meeting
62 FR 26428	5/14/1997	Adjusts second semi-annual 1997 LCS quota
62 FR 27586	5/20/1997	Notice of Intent to prepare an supplemental environmental impact statement
62 FR 27703	5/21/1997	Technical Amendment regarding bag limits
62 FR 38942	7/21/1997	LCS commercial fishery closure announcement
<i>1998</i>		
63 FR 14837	3/27/1998	LCS commercial fishery closure announcement
63 FR 19239	4/17/1998	NOA of draft consideration of economic effects of 1997 quotas
63 FR 27708	5/20/1998	NOA of final consideration of economic effects of 1997 quotas
63 FR 29355	5/29/1998	Adjusts second semi-annual 1998 LCS quota
63 FR 41736	8/5/1998	LCS commercial fishery closure announcement
63 FR 57093	10/26/1998	NOA of draft 1999 FMP
<i>1999</i>		
64 FR 3154	1/20/1999	Proposed rule for draft 1999 FMP
64 FR 14154	3/24/1999	LCS commercial fishery closure announcement
64 FR 29090	5/28/1999	Final rule for 1999 FMP
64 FR 30248	6/7/1999	Fishing season notification
64 FR 37700	7/13/1999	Technical amendment to 1999 FMP final rule
64 FR 37883	7/14/1999	Fishing season change notification
64 FR 47713	9/1/1999	LCS fishery reopening
64 FR 52772	9/30/1999	Notice of Availability of outline for National Plan of Action for sharks
64 FR 53949	10/5/1999	LCS closure postponement
64 FR 66114	11/24/1999	Fishing season notification
<i>2000</i>		
65 FR 16186	3/27/2000	Revised timeline for National Plan of Action for sharks
65 FR 35855	6/6/2000	Fishing season notification and 2nd semi-annual LCS quota adjustment
65 FR 47214	8/1/2000	Final rule closing Desoto Canyon, Florida East Coast, and Charleston Bump and requiring live bait for PLL gear in Gulf of Mexico

Federal Register Cite	Date	Rule or Notice
65 FR 47986	8/4/2000	Notice of Availability of National Plan of Action for sharks
65 FR 38440	6/21/2000	Implementation of prohibited species provisions and closure change
65 FR 60889	10/13/2000	Final rule closed NED and required dipnets and line clippers for PLL vessels
65 FR 75867	12/5/2000	Fishing season notification
2001		
66 FR 55	1/2/2001	Implementation of 1999 FMP pelagic shark quotas
66 FR 10484	2/15/2001	NOA of Final National Plan of Action for the Conservation and Management of Sharks
66 FR 13441	3/6/2001	Emergency rule to implement settlement agreement
66 FR 33918	6/26/2001	Fishing season notification and 2nd semi-annual LCS quota adjustment
66 FR 34401	6/28/2001	Proposed rule to implement national finning ban
66 FR 36711	7/13/2001	Emergency rule implementing 2001 BiOp requirements
66 FR 46401	9/5/2001	LCS fishing season extension
66 FR 48812	9/24/2001	Amendment to emergency rule (66 FR 13441) to incorporate change in requirement for handling and release guidelines
66 FR 67118	12/28/2001	Emergency rule to implement measures based on results of peer review and fishing season notification
2002		
67 FR 6194	2/11/2002	Final rule implementing national shark finning ban
67 FR 8211	2/22/2002	Correction to fishing season notification 66 FR 67118
67 FR 30879	5/8/2002	Notice of availability of SCS stock assessment
67 FR 36858	5/28/2002	Notice of availability of LCS sensitivity document and announcement of stock evaluation workshop in June
67 FR 37354	5/29/2002	Extension of emergency rule and fishing season announcement
67 FR 45393	7/9/2002	Final rule to implement measures under 2001 BiOp (gangion placement measure not implemented), including HMS shark gillnet measures
67 FR 64098	10/17/2002	Notice of availability of LCS stock assessment and final meeting report
67 FR 69180	11/15/2002	Notice of intent to conduct an environmental impact assessment and amend the 1999 FMP
67 FR 72629	12/6/2002	Proposed rule regarding EFPs
67 FR 78990	12/27/2002	Emergency rule to implement measures based on stock assessments and fishing season notification
2003		
68 FR 1024	1/8/2003	Announcement of 4 public hearings on emergency rule
68 FR 1430	1/10/2003	Extension of comment period for proposed rule on EFPs
68 FR 3853	1/27/2003	Announcement of 7 scoping meetings and notice of availability of Issues and Options paper
68 FR 31983	5/29/2003	Emergency rule extension and fishing season notification
68 FR 45196	8/1/2003	Proposed rule and NOA for draft Amendment 1 to 1999 FMP
68 FR 47904	8/12/2003	Public hearing announcement for draft Amendment 1 to 1999 FMP
68 FR 51560	8/27/2003	Announcement of HMS AP meeting on draft Amendment 1 to 1999 FMP
68 FR 54885	9/19/2003	Rescheduling of public hearings and extending comment period for draft Amendment 1 to 1999 FMP

Federal Register Cite	Date	Rule or Notice
68 FR 64621	11/14/2003	NOA of availability of Amendment 1
68 FR 66783	11/28/2003	NOI for SEIS
68 FR 74746	12/24/2003	Final Rule for Amendment 1
2004		
69 FR 6621	02/11/04	Proposed rule for PLL fishery
69 FR 10936	3/9/2004	SCS fishery closure
69 FR 19979	4/15/2004	VMS type approval notice
69 FR 26540	5/13/2004	N. Atlantic Quota Split Proposed Rule
69 FR 28106	5/18/2004	VMS effective date proposed rule
69 FR 30837	6/1/2004	Fishing season notice
69 FR 33321	6/15/2004	N. Atlantic Quota Split Final Rule
69 FR 40734	07/06/04	Final rule for PLL fishery
69 FR 44513	07/26/04	Notice of sea turtle release/protocol workshops
69 FR 47797	8/6/2004	Technical amendment correcting changes to BLL gear requirements
69 FR 49858	08/12/04	Advanced notice of proposed rulemaking; reducing sea turtle interactions with fishing gear
69 FR 51010	8/17/2004	VMS effective date final rule
69 FR 56024	9/17/2004	Regional quota split proposed rule
69 FR 6954	11/30/2004	Regional quota split final rule and season announcement
69 FR 71735	12/10/2004	Correction notice for 69 FR 6954
2005		
70 FR 11922	3/10/2005	2nd and 3rd season proposed rule
70 FR 21673	4/27/2005	2nd and 3rd season final rule
70 FR 24494	5/10/2005	North Carolina Petition for Rulemaking
70 FR 29285	5/20/2005	Notice of handling and release workshops for BLL fishermen
70 FR 48804	8/19/2005	Proposed rule Draft Consolidated HMS FMP
70 FR 48704	8/19/2005	NOA of Draft EIS for Draft Consolidated HMS FMP
70 FR 52380	9/2/2005	Correction to 70 FR 48704
70 FR 53146	9/7/2005	Cancellation of hearings due to Hurricane Katrina
70 FR 54537	9/15/2005	Notice of LCS data workshop
70 FR 55814	9/23/2005	Cancellation of Key West due to Hurricane Rita
70 FR 58190	10/5/2005	Correction to 70 FR 54537
70 FR 58177	10/5/2005	Extension of comment period for Draft Consolidated HMS FMP
70 FR 58366	10/6/2005	1st season proposed rule
70 FR 72080	12/1/2005	1 st season final rule, fishing season notification
70 FR 73980	12/14/2005	Final Agency decision on petition for rulemaking to amend mid-Atlantic closed area
70 FR 76031	12/22/2005	Notice for Large Coastal Shark 2005/2006 Stock Assessment Workshop
70 FR 76441	12/27/2005	Rescheduling and addition of public hearings for Consolidated HMS FMP
2006		
71 FR 8223	2/16/2006	Temporary rule prohibiting gillnet gear in areas around the Southeast U.S. Restricted Area
71 FR 8557	2/17/2006	Proposed Rule for third and second trimester seasons
71 FR 12185	3/9/2006	Notice for Large Coastal Shark Review Workshop

Federal Register Cite	Date	Rule or Notice
71 FR 15680	3/29/2006	Proposed rule for gear operation and deployment for BLL and gillnet fishery and complementary closure
71 FR 16243	3/31/2006	Final rule for second and third trimester seasons
71 FR 26351	5/4/2006	Scientific research permit for pelagic shark research
71 FR 30123	5/25/2006	Notice of availability of stock assessment of dusky sharks
71 FR 41774	7/24/2006	Notice of availability of final stock assessment for Large Coastal Sharks
71 FR 58058	10/2/2006	Final Rule for the HMS Consolidated Fishery Management Plan
71 FR 58058	10/2/2006	1st season proposed rule
71 FR 62095	10/23/2006	Notice of shark dealer identification workshops and protected species safe handling and release workshops
71FR 64213	11/1/2006	Extension of comment period regarding the 2007 first trimester season proposed rule
71 FR 65086	11/7/2006	Notice of Intent to prepare Amendment 2 to the 2006 Consolidated HMS FMP and status determination for sandbar, blacktip, dusky, the LCS complex, and porbeagle sharks based on the latest stock assessments
71 FR 65087	11/7/2006	Notice of Intent to prepare Amendment 1 to the 2006 Consolidated HMS FMP for Essential Fish Habitat for Some Atlantic Highly Migratory Species
71 FR 66154	11/13/2006	Extension of comment period regarding the 2007 first trimester season proposed rule
71 FR 68561	11/27/2006	Notice of shark dealer identification workshops and protected species safe handling and release workshops
71 FR 75122	12/14/2006	Final Rule and Temporary Rule for the 2007 first trimester season and south Atlantic quota modification
71 FR 75714	12/18/2006	Notice of shark dealer identification workshops and protected species safe handling and release workshops
2007		
72 FR 123	1/3/2007	Notice of public hearings for scoping for Amendment 2 to the 2006 Consolidated HMS FMP
72 FR 5633	2/7/2007	Final rule for gear operation and deployment for BLL and gillnet fishery and complementary closures
72 FR 6966	2/14/2007	Notice of closure of the Small Coastal Shark fishery for the Gulf of Mexico
72 FR 7417	2/15/2007	Revised list of equipment models for careful release of sea turtles in the PLL and BLL fisheries
72 FR 8695	2/27/2007	Notice of new VMS type approval for HMS fisheries and other programs
72 FR 10480	3/8/2007	Proposed rule for second and third trimester seasons
72 FR 11335	3/13/2007	Schedule of public protected resources dehooking workshops and Atlantic shark identification workshops
72 FR 19701	4/19/2007	Notice of Small Coastal Shark stock assessment workshop
72 FR 20765	4/26/2007	Final rule for second and third trimester season
72 FR 32836	6/14/2007	Schedule of public protected resources dehooking workshops and Atlantic shark identification workshops
72 FR 34632	6/25/2007	Final rule prohibiting gillnet gear from November 15-April 15 between NC/SC border and 29°00'N.
72 FR 39606	7/18/2007	Notice of Small Coastal Shark 2007 peer review workshop
72 FR 41392	7/27/2007	Proposed rule for Amendment 2 to the Consolidated Atlantic Highly

Federal Register Cite	Date	Rule or Notice
		Migratory Species Fishery Management Plan
72 FR 52552	9/14/2007	Schedules for Atlantic shark identification workshops and protected species safe handling, release, and identification workshops
72 FR 55729	10/1/2007	Proposed rule for 2008 first trimester quotas
72 FR 56330	10/3/2007	Amendment 2 to the Consolidated FMP – extension of comment period
72 FR 57104	10/5/2007	Final rule amending restriction in the Southeast U.S. Monitoring Area
72 FR 63888	11/13/2007	Notice of Small Coastal Shark Stock Assessment - notice of availability
72 FR 67580	11/29/2007	Final rule for 2008 first trimester quotas
2008		
73 FR 11621	3/4/2008	Notice of Atlantic shark identification workshops and protected species safe handling, release, and identification workshops
73 FR 19795	4/11/2008	Proposed rule for renewal of Atlantic tunas longline limited access permits; and, Atlantic shark dealer workshop attendance requirements
73 FR 24922	5/6/2008	Proposed rule for Atlantic tuna fisheries; gear authorization and turtle control devices
73 FR 25665	5/7/2008	Stock Status Determinations; Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) for Amendment 3 to the 2006 Consolidated HMS FMP
73 FR 32309	6/6/2008	Notice of Atlantic shark identification workshops and protected species safe handling, release, and identification workshops
73 FR 35778	6/24/2008	Final rule for Amendment 2 to the 2006 Consolidated HMS FMP and fishing season notification
73 FR 35834	6/24/2008	Shark research fishery; Notice of intent; request for applications
73 FR 37932	7/2/2008	Notice of availability; notice of public scoping meetings; Extension of comment period for Amendment 3 to the 2006 Consolidated HMS FMP
73 FR 38144	7/3/2008	Final rule for renewal of Atlantic tunas longline limited access permits; and, Atlantic shark dealer workshop attendance requirements
73 FR 40658	7/15/2008	Final rule for Amendment 2 to the 2006 Consolidated HMS FMP and fishing season notification; correction/republishing
73 FR 47851	8/15/2008	Effectiveness of collection-of-information requirements to implement fins-on check box on Southeast dealer form
73 FR 51448	9/3/2008	Notice of Atlantic shark identification workshops and protected species safe handling, release, and identification workshops
73 FR 53408	9/16/2008	Notice of public meeting, public hearing, and scoping meetings regarding the AP meeting and various other hearings/meetings
73 FR 53851	9/17/2008	Atlantic Shark Management Measures; Changing the time and location of a scoping meeting
73 FR 54721	9/23/2008	Final rule for Atlantic tuna fisheries; gear authorization and turtle control devices
73 FR 63668	10/27/2008	Proposed rule for 2009 shark fishing season
73 FR 64307	10/29/2008	Extension of scoping comment period for Amendment 3 to the 2006 Consolidated HMS FMP
2009		
74 FR 8913	2/27/2009	Notice of Atlantic shark identification workshops and protected species safe handling, release, and identification workshops

Federal Register Cite	Date	Rule or Notice
74 FR26803	6/4/2009	Inseason action to close the commercial Gulf of Mexico non-sandbar large coastal shark fishery
74 FR 27506	6/10/2009	Notice of Atlantic shark identification workshops and protected species safe handling, release, and identification workshops
74 FR 30479	6/26/2009	Inseason action to close the commercial non-sandbar large coastal shark fisheries in the shark research fishery and Atlantic region
74 FR 36892	7/24/2009	Proposed rule for Amendment 3 to the 2006 Consolidated HMS FMP
74 FR 39914	8/10/2009	Extension of Comment Period for Amendment 3 to the 2006 Consolidated HMS FMP
74 FR 46572	9/10/2009	Notice of Atlantic shark identification workshops and protected species safe handling, release, and identification workshops
74 FR 51241	10/6/2009	Inseason action to close the commercial sandbar shark research fishery
74 FR 55526	10/28/2009	Proposed rule for 2010 shark fishing season
74 FR 56177	10/30/2009	Notice of intent for 2010 shark research fishery; request for applications

Table 3. List of Large Coastal Shark Seasons, 1993-2010

Year	Open dates	Adjusted Quota (mt dw)
1993	Jan. 1 - May 15	1,218
	July 1 - July 31	875
1994	Jan. 1 - May 17	1,285
	July 1 - Aug 10	1,318
	Sept. 1 - Nov. 4	
1995	Jan. 1 - May 31	1,285
	July 1 - Sept. 30	968
1996	Jan. 1 - May 17	1,285
	July 1 - Aug. 31	1,168
1997	Jan. 1 - April 7	642
	July 1 - July 21	326
1998	Jan. 1 - Mar. 31	642
	July 1 - Aug. 4	600
1999	Jan. 1 - Mar. 31	642
	July 1 - July 28	585
	Sept. 1 - Oct. 15	
2000	Jan. 1 - Mar. 31	642
	July 1 - Aug. 15	542
2001	Jan. 1 - Mar. 24	642
	July 1 - Sept. 4	697
2002	Jan. 1 - April 15	735.5
	July 1 - Sept. 15	655.5
2003	Jan. 1 - April 15 (Ridgeback LCS)	391.5 (Ridgeback LCS)
	Jan. 1 - May 15 (Non-ridgeback LCS)	465.5 (Non-ridgeback LCS)
	July 1 - Sept. 15 (All LCS)	424 (Ridgeback LCS) 498 (Non-ridgeback LCS)
2004	GOM: Jan. 1 - Feb. 29	190.3
	S. Atl: Jan 1 - Feb. 15	244.7
	N. Atl: Jan 1 - April 15	18.1
	GOM: July 1 - Aug. 15	287.4
	S. Atl: July 1 - Sept. 30	369.5
	N. Atl: July 1 - July 15	39.6
2005	GOM: Jan 1 - Feb 28	156.3
	S. Atl: Jan. 1 - Feb 15	133.3
	N. Atl: Jan. 1 - April 30	6.3
	GOM: July 6 - July 23	147.8
	S. Atl: July 6 - Aug 31	182
	N. Atl: July 21 - Aug 31	65.2
	GOM: Sept. 1 - Oct. 31	167.7
	S. Atl: Sept 1 - Nov. 15	187.5
	N. Atl: Sept 1 - Sept. 15	4.9
2006	GOM: Jan 1 - April 15	222.8
	S. Atl: Jan 1 - Mar. 15	141.3
	N. Atl: Jan 1 - April 30	5.3

Year	Open dates	Adjusted Quota (mt dw)
	GOM: July 6 – July 31 S. Atl: July 6 – Aug. 16 N. Atl: July 6 – Aug. 6	180 151.7 66.3
	GOM: Sept.1 – Nov. 7 S. Atl: Sept.1 – Oct. 3 N. Atl: Closed	225.6 50.3 Closed
2007	GOM: January 1 – January 15 S. Atl: Closed N. Atl: January 1 – April 30	62.3 Closed (-112.9) 7.9
	GOM: September 1 – September 22 S. Atl: July 15 – August 15 N. Atl: July 6 – July 31	83.1 163.1 69.0
	GOM: merged with 2 nd season S. Atl: merged with 2 nd season N. Atl: CLOSED	
2008	GOM: CLOSED to July 23 S. Atl: CLOSED to July 23 N. Atl: CLOSED to July 23	Closed (51) Closed (16.3) Closed (10.7)
All SHKs except LCS opened Jan 1; LCS opened July 24; Porbeagle closed Nov. 18	NSB GOM: July 24 - Dec. 31 NSB Atlantic: July 24 - Dec. 31 NSB Research: July 24 - Dec. 31 SB Research: July 24 - Dec. 31	390.5 187.5 37.5 87.9
2009	NSB GOM: Jan 23 - June 6 NSB Atl: Jan 23 - July 1 NSB Research: Jan 23 - July 1 SB: Jan 23 – Oct 14	390.5 187.8 37.5 87.9
2010	NSB GOM: Feb 4 – March 17 NSB Atl: July 15 – TBD NSB Research: Jan 5 – TBD SB: Jan 5 - TBD	390.5 169.7 37.5 87.9

Note: SB=sandbar shark; NSB=non-sandbar LCS

Table 4 List of Small Coastal Shark Seasons, 1993-2010

Year	Open Dates	Adjusted Quota (mt dw)	
1993	No season	No Quota	
1994	No season	No Quota	
1995	No season	No Quota	
1996	No season	No Quota	
1997	Jan. 1 – June 30	880	
	July 1 - Dec 31	880	
1998	Jan. 1 – June 30	880	
	July 1 - Dec 31	880	
1999	Jan. 1 – June 30	880	
	July 1 - Dec 31	880	
2000	Jan. 1 – June 30	880	
	July 1 - Dec 31	880	
2001	Jan. 1 – June 30	880	
	July 1 - Dec 31	880	
2002	Jan. 1 – June 30	880	
	July 1 - Dec 31	880	
2003	Jan. 1 – June 30	163	
	July 1 - Dec 31	163	
2004	GOM: Jan. 1 – March 18	11.2	
	S. Atl: Jan 1 - June 30	233.2	
	N. Atl: Jan 1 - June 30	36.5	
	GOM: July 1 – Dec. 31	10.2	
	S. Atl: July 1 – Dec. 31	210.2	
	N. Atl: July 1 – Dec. 31	33.2	
2005	GOM: Jan 1 – April 30	13.9	
	S. Atl: Jan. 1 - April 30	213.5	
	N. Atl: Jan. 1 - April 30	18.6	
	GOM: May 1 – Aug. 31	31	
	S. Atl: May 1 – Aug. 31	281	
	N. Atl: May 1 – Aug. 31	23	
	GOM: Sept. 1 – Dec. 31	32	
	S. Atl: Sept. 1 – Dec. 31	201.1	
	N. Atl: Sept. 1 – Dec. 31	16	
	2006	GOM: Jan 1 – April 30	14.8
		S. Atl: Jan 1 – April 30	284.6
		N. Atl: Jan 1 – April 30	18.7
GOM: May 1 – Aug. 31		38.9	
S. Atl: May 1 – Aug. 31		333.5	
N. Atl: May 1 – Aug. 31		35.9	
GOM: Sept. 1 – Dec. 31		30.8	
S. Atl: Sept. 1 – Dec. 31		263.7	
N. Atl: Sept. 1 – Dec. 31		28.2	

Year	Open Dates	Adjusted Quota (mt dw)
2007	GOM: Jan. 1 – Feb. 23	15.1
	S. Atl: Jan 1 – April 30	308.4
	N. Atl: Jan 1 – April 30	18.8
	GOM: May 1 – Aug. 31	72.6
	S. Atl: May 1 – Aug. 31	291.6
	N. Atl: May 1 – Aug. 31	36.2
	GOM: September 1 – Dec. 31	80.4
	S. Atl: September 1 – Dec. 31	297.5
	N. Atl: September 1 – Dec. 31	29.4
2008	GOM: Jan 1 – April 30, 2008	73.2
	S. Atl: Jan 1 – April 30, 2008	354.9
	N. Atl: Jan 1 – April 30, 2008	19.3
	GOM: May 1 – July 24, 2008	72.6
	S. Atl: May 1 – July 24, 2008	74.1
	N. Atl: May 1 – July 24, 2008	12.0
	July 24 – Dec. 31, 2008	454
2009	January 23, 2009	454
2010	Open upon effective date of final rule for Amendment 3	TBD

Table 5 List of species that are LCS, SCS and prohibited species

Common name	Species name	Notes
LCS		
<i>Ridgeback Species</i>		
Sandbar	<i>Carcharhinus plumbeus</i>	
Silky	<i>Carcharhinus falciformis</i>	
Tiger	<i>Galeocerdo cuvier</i>	
<i>Non-Ridgeback Species</i>		
Blacktip	<i>Carcharhinus limbatus</i>	
Spinner	<i>Carcharhinus brevipinna</i>	
Bull	<i>Carcharhinus leucas</i>	
Lemon	<i>Negaprion brevirostris</i>	
Nurse	<i>Ginglymostoma cirratum</i>	
Scalloped hammerhead	<i>Sphyrna lewini</i>	
Great hammerhead	<i>Sphyrna mokarran</i>	
Smooth hammerhead	<i>Sphyrna zygaena</i>	
SCS		
Atlantic sharpnose	<i>Rhizoprionodon terraenovae</i>	
Blacknose	<i>Carcharhinus acronotus</i>	
Bonnethead	<i>Sphyrna tiburo</i>	
Finetooth	<i>Carcharhinus isodon</i>	
Pelagic Sharks		
Blue	<i>Prionace glauca</i>	
Oceanic whitetip	<i>Carcharhinus longimanus</i>	
Porbeagle	<i>Lamna nasus</i>	
Shortfin mako	<i>Isurus oxyrinchus</i>	
Common thresher	<i>Alopias vulpinus</i>	
Prohibited Species		
Sand tiger	<i>Odontaspis taurus</i>	Part of LCS complex until 1997
Bigeye sand tiger	<i>Odontaspis noronhai</i>	Part of LCS complex until 1997
Whale	<i>Rhincodon typus</i>	Part of LCS complex until 1997
Basking	<i>Cetorhinus maximus</i>	Part of LCS complex until 1997
White	<i>Carcharodon carcharias</i>	Part of LCS complex until 1997
Dusky	<i>Carcharhinus obscurus</i>	Part of LCS complex until 1999
Bignose	<i>Carcharhinus altimus</i>	Part of LCS complex until 1999
Galapagos	<i>Carcharhinus galapagensis</i>	Part of LCS complex until 1999
Night	<i>Carcharhinus signatus</i>	Part of LCS complex until 1999
Caribbean reef	<i>Carcharhinus perezi</i>	Part of LCS complex until 1999
Narrowtooth	<i>Carcharhinus brachyurus</i>	Part of LCS complex until 1999
Atlantic angel	<i>Squatina dumerili</i>	Part of SCS complex until 1999
Caribbean sharpnose	<i>Rhizoprionodon porosus</i>	Part of SCS complex until 1999
Smalltail	<i>Carcharhinus porosus</i>	Part of SCS complex until 1999
Bigeye sixgill	<i>Hexanchus nakamurai</i>	Part of Pelagics complex until 1999
Bigeye thresher	<i>Alopias superciliosus</i>	Part of Pelagics complex until 1999
Longfin mako	<i>Isurus paucus</i>	Part of Pelagics complex until 1999

Common name	Species name	Notes
Sevengill	<i>Heptranchias perlo</i>	Part of Pelagics complex until 1999
Sixgill	<i>Hexanchus griseus</i>	Part of Pelagics complex until 1999

Requirement for Specific Fishery	Retention Limits	Quotas	Other Requirements
Inside the Commercial Shark Research Fishery	<p>Sandbar: Trip limit is specific to each vessel and owner(s) combination and is listed on the Shark Research Permit.</p> <p>Non-sandbar LCS: Trip limit is specific to each vessel and owner (s) combination and is listed on the Shark Research Permit.</p> <p>SCS & Pelagic Sharks: <u>Directed Permits:</u> No trip limit for pelagic sharks & SCS <u>Incidental Permits:</u> 16 pelagic sharks/SCS combined</p>	<p>Sandbar: <u>Quota from 2008-2012:</u> 87.9 mt dw <u>Quota starting in 2013:</u> 116.6 mt dw</p> <p>Non-sandbar LCS: <u>Quota from 2008-2012:</u> 37.5 mt dw <u>Quota starting in 2013:</u> 50 mt dw</p> <p>SCS:454 mt dw/year</p> <p>Pelagic Sharks: <u>Pelagic sharks (not blue and porbeagle):</u> 273 mt dw/year <u>Blue sharks:</u> 488 mt dw <u>Porbeagle sharks:</u> 1.7 mt dw/year</p>	<p>- Need Shark Research Fishery Permit</p> <p>-100 percent observer coverage when participating in research fishery</p> <p>- Adjusted quotas (established through Dec. 31, 2012) may be further adjusted based on future overharvests, if any.</p>
Outside the Commercial Shark Research Fishery	<p>Non-sandbar LCS Until Dec. 31, 2012: <u>Directed Permit:</u> 33 non-sandbar LCS/vessel/trip <u>Incidental Permit:</u> 3 non-sandbar LCS/vessel/trip</p> <p>Non-sandbar LCS As of Jan. 1, 2013: <u>Directed Permit:</u> 36 non-sandbar LCS/vessel/trip <u>Incidental Permit:</u> 3 non-sandbar LCS/vessel/trip</p> <p>SCS & Pelagic Sharks: <u>Directed Permits:</u> No trip limit for pelagic sharks & SCS <u>Incidental Permits:</u> 16 pelagic sharks/SCS combined</p>	<p>Non-sandbar LCS: <u>Quota from 2008-2012:</u> Gulf of Mexico Region: 390.5 mt dw/year; Atlantic Region: 187.8 mt dw/year <u>Quota starting in 2013:</u> Gulf of Mexico Region: 439.5 mt dw/year; Atlantic Region: 188.3 mt dw/year</p> <p>SCS: 454 mt dw/year</p> <p>Pelagic Sharks: <u>Pelagic sharks (not blue and porbeagle):</u> 273 mt dw/year <u>Blue sharks:</u> 488 mt dw <u>Porbeagle sharks:</u> 1.7 mt dw/year</p>	<p>-Vessels subject to observer coverage, if selected</p> <p>- Adjusted quotas (established through Dec. 31, 2012) may be further adjusted based on future overharvests, if any.</p>
All Commercial Shark Fisheries	<p>Gears Allowed: Gillnet; Bottom/Pelagic Longline; Rod and Reel; Handline; Bandit Gear</p> <p>Authorized Species: Non-sandbar LCS (silky, blacktip, spinner, bull, lemon, nurse, great hammerhead, scalloped hammerhead, smooth hammerhead, and tiger sharks), pelagic sharks (porbeagle, common thresher, shortfin mako, oceanic whitetip, and blue sharks), and SCS (bonnethead, finetooth, blacknose, and Atlantic sharpnose sharks)</p> <p>Landings condition: All sharks (sandbar, non-sandbar LCS, SCS, and pelagic sharks) must have <i>fins naturally attached</i> through offloading; fins can be cut slightly for storage but must remain attached to the carcass via at least a small amount of uncut skin; shark carcasses must remain in whole or log form through offloading. Sharks can have the heads removed but the tails must remain naturally attached.</p> <p>Permits Required: Commercial Directed or Incidental Shark Permit</p> <p>Reporting Requirements: All commercial fishermen must submit commercial logbooks; all dealers must report bi-weekly</p>		
All Recreational Shark Fisheries	<p>Gears Allowed: Rod and Reel; Handline</p> <p>Authorized Species: Non-ridgeback LCS (blacktip, spinner, bull, lemon, nurse, great hammerhead, scalloped hammerhead, smooth hammerhead); tiger sharks; pelagic sharks (porbeagle, common thresher, shortfin mako, oceanic whitetip, and blue sharks); and SCS (bonnethead, finetooth, blacknose, and Atlantic sharpnose sharks)</p> <p>Landing condition: Sharks must be landed with head, fins, and tail naturally attached</p> <p>Retention limits: 1 shark > 54" FL vessel/trip, plus 1 Atlantic sharpnose and 1 bonnethead per person/trip (no minimum size)</p> <p>Permits Required: HMS Angling; HMS Charter/Headboat; and, General Category Permit Holders (fishing in a shark tournament)</p> <p>Reporting Requirements: Participate in MRIP and LPS if contacted</p>		

Table 6 Summary of current shark regulations

JANUARY 2011

HMS ATLANTIC BLACKNOSE SHARK

Definitions of Acronyms in Table 1: Fork Length (FL); Highly Migratory Species (HMS); Large Coastal Sharks (LCS); Large Pelagic Survey (LPS); Marine Recreational Information Program (MRIP); Small Coastal Sharks (SCS).

Control Date Notices

February 22, 1994 (59 FR 8457)

Management Program Specifications

Table 7 General management information for the sandbar shark

Species	Sandbar shark (<i>Carcharhinus plumbeus</i>)
Management Unit	Atlantic Ocean, Gulf of Mexico, and Caribbean Sea
Management Unit Definition	All federal waters within U.S. EEZ of the western north Atlantic Ocean, including the Gulf of Mexico and the Caribbean Sea.
Management Entity	NMFS, Highly Migratory Species Management Division
Management Contacts SERO / Council	Karyl Brewster-Geisz N/A
Current stock exploitation status	Overfishing
Current stock biomass status	Overfished

Table 8 General management information for the dusky shark

Species	Dusky shark (<i>Carcharhinus obscurus</i>)
Management Unit	Atlantic Ocean, Gulf of Mexico, and Caribbean Sea
Management Unit Definition	All federal waters within U.S. EEZ of the western north Atlantic Ocean, including the Gulf of Mexico and the Caribbean Sea.
Management Entity	NMFS, Highly Migratory Species Management Division
Management Contacts SERO / Council	Karyl Brewster-Geisz N/A
Current stock exploitation status	Overfishing
Current stock biomass status	Overfished

Table 9 General management information for the blacknose shark

Species	Blacknose shark (<i>Carcharhinus acronotus</i>)
Management Unit	Atlantic Ocean, Gulf of Mexico, and Caribbean Sea
Management Unit Definition	All federal waters within U.S. EEZ of the western north Atlantic Ocean, including the Gulf of Mexico and the Caribbean Sea.
Management Entity	NMFS, Highly Migratory Species Management Division
Management Contacts SERO / Council	Karyl Brewster-Geisz N/A
Current stock exploitation status	Overfishing
Current stock biomass status	Overfished

Table 10 Specific management criteria for sandbar shark

Criteria	Sandbar - Current		Sandbar - Proposed	
	Definition	Value	Definition	Value
MSST	MSST = [(1-M)*B _{MSY} when M<0.5; 0.5*B _{MSY} when M≥0.5	4.75-5.35E+05	MSST = [(1-M)*B _{MSY} when M<0.5; 0.5*B _{MSY} when M≥0.5	SEDAR 21
MFMT	F _{MSY}	0.015	F _{MSY}	SEDAR 21
MSY	Yield at F _{MSY}	4.03E+05(kg)	Yield at F _{MSY}	SEDAR 21
F _{MSY}	MFMT	0.015	MFMT	SEDAR 21
OY	Yield at F _{OY}	Not Specified	Yield at F _{OY}	SEDAR 21
F _{OY}	0.75F _{MSY}	0.011	0.75F _{MSY}	SEDAR 21
F _{current}	Current Fishing Mortality rate	0.06	F _{current}	SEDAR 21
M	n/a	Varied (see SEDAR 11)	n/a	SEDAR 21
OFL	n/a	n/a	MFMT*B _{current}	SEDAR 21
ABC*	n/a	n/a	P*, probability level TBD	SEDAR 21
SSF ₂₀₀₄	Current Spawning Stock fecundity	4.28E+0.5	SSF _{current}	SEDAR 21
SSF _{MSY}	Spawning Stock fecundity at MSY	5.94E+05	SSF _{MSY}	SEDAR 21
B ₂₀₀₄	Current biomass	3.06E+07	B _{current}	SEDAR 21
B _{MSY}	Biomass at MSY	Not Specified	B _{MSY}	SEDAR 21

*Acceptable Biological Catch

Table 11 Specific management criteria for dusky shark.

Criteria	Dusky - Current		Dusky - Proposed	
	Definition	Value	Definition	Value
MSST	MSST = [(1-M)*B _{MSY} when M<0.5; 0.5* B _{MSY} when M≥0.5	Not Specified	MSST = [(1-M)*B _{MSY} when M<0.5; 0.5* B _{MSY} when M≥0.5	SEDAR 21
MFMT	F _{MSY}	0.00005-0.0115	F _{MSY}	SEDAR 21
MSY	Yield at F _{MSY}	152 (kg)	Yield at F _{MSY}	SEDAR 21
F _{MSY}	MFMT	0.00005-0.0115	MFMT	SEDAR 21
OY	Yield at F _{OY}	Not Specified	Yield at F _{OY}	SEDAR 21
F _{OY}	0.75F _{MSY}	0.000038-0.0086	0.75F _{MSY}	SEDAR 21
F ₂₀₀₃		0.0194 (BSP model)	F _{current}	SEDAR 21
M	n/a	Varied (see Cortés et al., 2006)	n/a	SEDAR 21
OFL	n/a	n/a	MFMT*B _{current}	SEDAR 21
ABC	n/a	n/a	P*; probability level TBD	SEDAR 21
B ₂₀₀₃	Current Biomass	687,290 lb dw (BSP model)	B _{current}	SEDAR 21
B _{MSY}	Biomass at MSY	4,409,144 (BSP model)	B _{MSY}	SEDAR 21

Table 12 Specific management criteria for blacknose shark.

Criteria	Blacknose - Current		Blacknose - Proposed	
	Definition	Value	Definition	Value
MSST	MSST = [(1-M)*B _{MSY} when M<0.5; 0.5* B _{MSY} when M≥0.5	4.3 E+05	MSST = [(1-M)*B _{MSY} when M<0.5; 0.5* B _{MSY} when M≥0.5	SEDAR 21
MFMT	F _{MSY}	0.07	F _{MSY}	SEDAR 21
MSY	Yield at F _{MSY}	89,415 (number of sharks)	Yield at F _{MSY}	SEDAR 21
F _{MSY}	MFMT	0.07	MFMT	SEDAR 21
OY	Yield at F _{OY}	Not Specified	Yield at F _{OY}	SEDAR 21
F _{OY}	0.75F _{MSY}	0.053	0.75F _{MSY}	SEDAR 21
F ₂₀₀₅		0.24	F _{current}	SEDAR 21
M	n/a	Varied (see SEDAR 13)	n/a	SEDAR 21
OFL	n/a	n/a	MFMT*B _{current}	SEDAR 21
ABC	n/a	n/a	P*; probability level TBD	SEDAR 21
N _{MSY}	Number of sharks at MSY	570,753 (number of sharks)	N _{MSY}	SEDAR 21
N ₂₀₀₅	Current number of sharks	349,308 (number of sharks)	N _{current}	SEDAR 21
SSF _{MSY}	Spawning Stock fecundity at MSY	349,060 (number of sharks)	SSF _{MSY}	SEDAR 21
SSF ₂₀₀₅	Current Spawning Stock fecundity	168,140 (number of sharks)	SSF _{current}	SEDAR 21

Stock Rebuilding Information

Sandbar Sharks

The following rebuilding information is requested:

- Include information regarding significance of catch-per-unit effort (CPUE) trend series for sandbar sharks. The HMS Management Division finds these series helpful for management;
- Estimate the acceptable biological catch (ABC) according to the control rule guidelines established by the SEFSC in both weight and numbers of sharks. A table showing different values of ABC at various P* levels is acceptable;
- Determine the probability of rebuilding sandbar sharks by 2070, which is the current rebuilding timeframe for sandbars under Amendment 2 to the 2006 Consolidated HMS FMP. Such projections should consider current harvest (including commercial landings, discards, and recreational landings) as well as the current total allowable catch (TAC) of 220 mt ww (158 mt dw);
- If the current TAC would not allow rebuilding by 2070, calculate the TAC corresponding to 50 and 70 percent probability of rebuilding by 2070 in both weight and number of sharks and the corresponding F value;
- If rebuilding could occur before 2070, please provide the appropriate TAC (in both weight and number of sharks) to ensure a 50 and 70 percent probability of rebuilding and the new timeframe. Please also estimate the corresponding F value;
- Provide the average weight of sandbar sharks caught in the commercial (by gear type) and recreational fisheries in 2008 and 2009; and,
- It is requested that the analysts provide estimates of the following items in both weight and numbers of sharks:
 - MSY;
 - Reduction in harvest needed to reach MSY (if harvest needs to be different from current management regime);
 - Commercial landings through 2009;
 - Dead discard estimates through 2009; and
 - Recreational harvest through 2009.

Dusky Sharks

The following rebuilding information is requested:

- Include information regarding significance of CPUE trend series for dusky sharks. The HMS Management Division finds these series helpful for management;
- Estimate the ABC according to the control rule guidelines established by the SEFSC in both weight and numbers of sharks. A table showing different values of ABC at various P* levels is acceptable;; although dusky sharks have been prohibited in the commercial and recreational fisheries since 2000, it would be helpful to have this estimate to determine if levels of discards are sustainable;

- Determine the probability of rebuilding within at least 100 years, which is the current rebuilding timeframe for dusky sharks under Amendment 2 to the 2006 Consolidated HMS FMP. Such projections should consider current harvest (including commercial landings, discards, and recreational landings). In addition, the HMS Management Division requests that the analysts investigate how decreased or increased landings/discards would affect rebuilding for this species;
- If rebuilding will not occur within at least 100 years, calculate the new rebuilding timeframe and an associated TAC (in both weight and number of sharks) and F value that would allow a 50 and 70 percent probability of rebuilding. Again, although dusky sharks have been prohibited since 2000, this information would be helpful for determining whether or not current discard levels are sustainable;
- Provide the average weight of dusky sharks caught in the commercial (by gear type) and recreational fisheries in 2008 and 2009; and,
- It is requested that the analysts provide estimates of the following items in both weight and numbers of sharks:
 - MSY;
 - Reduction in landings and discards needed to reach MSY (if harvest needs to be different from current management regime);
 - Commercial landings through 2009;
 - Dead discard estimates through 2009; and
 - Recreational harvest through 2009.

Blacknose Sharks

The following rebuilding information is requested:

- Include information regarding significance of CPUE trend series for blacknose sharks. The HMS Management Division finds these series helpful for management;
- Estimate the ABC according to the control rule established by the SEFSC in both weight and numbers of sharks;
- Determine the probability of rebuilding blacknose sharks by 2027, which is the current rebuilding timeframe for sandbars under Amendment 3 to the 2006 Consolidated HMS FMP. Such projections should consider current harvest (including commercial landings, discards, and recreational landings) as well as the current total allowable catch (TAC) of 19,200 blacknose sharks;
- If the current TAC would not allow rebuilding by 2027, calculate the TAC corresponding to 50 and 70 percent probability of rebuilding by 2027 in both weight and number of sharks and the corresponding F value;
- If rebuilding could occur before 2027, please provide the appropriate TAC (in both weight and number of sharks) to ensure a 50 and 70 percent probability of rebuilding and the new timeframe. Please also estimate the corresponding F value;
- Provide the average weight of blacknose sharks caught in the commercial (by gear type) and recreational fisheries in 2008 and 2009; and,
- It is requested that the analysts provide estimates of the following items in both weight and numbers of sharks:
 - MSY;

- Reduction in harvest needed to reach MSY (if harvest needs to be different from current management regime);
- Commercial landings through 2009;
- Dead discard estimates through 2009; and
- Recreational harvest through 2009.

Table 13 Stock Projection Information for Sandbar Sharks

Requested Information	Value
First year under current rebuilding program	2008
End year under current rebuilding program	2070
First Year of Management based on this assessment	2013
Projection Criteria during interim years should be based on (e.g., exploitation or harvest)	F=0; Fixed Exploitation; Modified Exploitation; Fixed Harvest*; F=220 mt ww (current TAC)
Projection criteria values for interim years should be determined from (e.g., terminal year, avg of X years)	Average landings of previous 2 years (2008, 2009)

Table 14 Stock Projection Information for Dusky Sharks

Requested Information	Value
First year under current rebuilding program	2008
End year under current rebuilding program	>2108
First Year of Management based on this assessment	2013
Projection Criteria during interim years should be based on (e.g., exploitation or harvest)	F=0; Fixed Exploitation; Modified Exploitation; Fixed Harvest*
Projection criteria values for interim years should be determined from (e.g., terminal year, avg of X years)	Average landings of previous 2 years (2008, 2009)

Table 15 Stock Projection Information for Blacknose Sharks

Requested Information	Value
First year under current rebuilding program	2010
End year under current rebuilding program	2027
First Year of Management based on this assessment	2013
Projection Criteria during interim years should be based on (e.g., exploitation or harvest)	F=0; Fixed Exploitation; Modified Exploitation; Fixed Harvest*; F=19,200 blacknose sharks (current TAC)
Projection criteria values for interim years should be determined from (e.g., terminal year, avg of X years)	Average landings of previous 2 years (2008, 2009)

*Fixed Exploitation would be $F=F_{MSY}$ (or $F<F_{MSY}$) that would rebuild overfished stock to B_{MSY} in the allowable timeframe. Modified Exploitation would be allow for adjustment in $F\leq F_{MSY}$, which would allow for the largest landings that would rebuild the stock to B_{MSY} in the allowable timeframe. Fixed harvest would be maximum fixed harvest with $F\leq F_{MSY}$ that would allow the stock to rebuild to B_{MSY} in the allowable timeframe.

First year of Management: Earliest year in which management changes resulting from this assessment are expected to become effective

Interim years: Those years between the terminal assessment year and the first year that any management could realistically become effective.

Projection Criteria: The parameter which should be used to determine population removals, typically either an exploitation rate or an average landings value or a pre-specified landings target.

Quota Calculations

Sandbar Sharks

Table 16 Quota calculation details for sandbar sharks.

Current Quota Value	Commercial Quota = 87.9 mt dw (2008-2012)
Next Scheduled Quota Change	2013; commercial quota = 116.6 mt dw
Annual or averaged quota ?	Annual quota
If averaged, number of years to average	-
Does the quota include bycatch/discard ?	No, but the quota is a subset of overall TAC of 158.3 mt dw; the rest of the TAC is partitioned between dead discards and recreational landings

How is the quota calculated - conditioned upon exploitation or average landings?

The quota was determined based on the TAC calculated during SEDAR 11 (158.3 mt dw). Based on that TAC, the HMS Management Division subtracted average annual recreational landings from 2003-2005 (27 mt dw) and discards from 2003-2005 (14.7 mt dw), resulting in a commercial quota of 116.6 mt dw. However, large overharvests during 2007 resulted in the HMS Management Division reducing the commercial quota to 87.9 mt dw during 2008-2012 to account for the overharvests. The quota is scheduled to increase to 116.6 mt dw in 2013.

Does the quota include bycatch/discard estimates? If so, what is the source of the bycatch/discard values? What are the bycatch/discard allowances?

The commercial quota does not include bycatch/discards estimates.

Are there additional details of which the analysts should be aware to properly determine quotas for this stock?

The quota is adjusted each year through a season rule. Overharvests are deducted from the following year. No overharvests have been experienced for sandbar sharks since implementation of Amendment 2 in 2008. Table 3 shows the history of shark quotas adjusted for under and overharvest. Underharvests are no longer applied to stocks that have been determined to be overfished, have overfishing occurring, or an unknown stock status.

Dusky Sharks

Table 17 Quota calculation details for dusky sharks.

Current Quota Value	0
Next Scheduled Quota Change	N/A
Annual or averaged quota?	N/A
If averaged, number of years to average	-
Does the quota include bycatch/discard ?	N/A

How is the quota calculated - conditioned upon exploitation or average landings?

Dusky sharks have been prohibited from commercial and recreational harvest since 2000. The commercial quota set for this species is 0 mt dw; however, they are caught and discarded in the shark fisheries, and also show up in the commercial logbooks and in recreational landings.

Does the quota include bycatch/discard estimates? If so, what is the source of the bycatch/discard values? What are the bycatch/discard allowances?

As mentioned above, there is no commercial quota.

Are there additional details of which the analysts should be aware to properly determine quotas for this stock?

The HMS Management Division requests the analysts to estimate discards of dusky sharks in both the shark fisheries and other fisheries and how discards may have changed since the implementation of Amendment 2 (July 2008).

Blacknose Sharks

Table 18 Quota calculation details for blacknose sharks.

Current Quota Value	Commercial Quota = (SCS complex) 454 mt dw
Next Scheduled Quota Change	Summer 2010; preferred commercial quota = 19.9 mt dw (blacknose specific)
Annual or averaged quota?	Annual quota

If averaged, number of years to average	-
Does the quota include bycatch/discard ?	Current quota does not include discards

How is the quota calculated - conditioned upon exploitation or average landings?

The quota was determined in 2003 for the SCS complex under Amendment 1 to the 1999 FMP. The quota was based upon 75 percent of the average MSY for the complex, multiplied by the percent contribution of the commercial catch to total catch of the SCS complex.

Does the quota include bycatch/discard estimates? If so, what is the source of the bycatch/discard values? What are the bycatch/discard allowances?

The commercial quota does not include bycatch/discards estimates.

Are there additional details of which the analysts should be aware to properly determine quotas for this stock?

The HMS Management Division requests that the analysts keep in mind that Amendment 3 will be implemented for the SCS fishery during the summer of 2010, and blacknose sharks will be subject to a new quota of 19.9 mt dw, which is a 64 percent reduction in blacknose shark landings relative to average landings from 2004-2008.

Management and Regulatory Timeline

The following tables provide a timeline of Federal management actions by fishery. It should be noted that federally permitted fishermen must follow federal regulations unless state regulations are more restrictive.

Table 19 Annual commercial sandbar shark regulatory summary (managed in the LCS complex until 2008 when separate quota and sandbar shark research fishery established under Amendment 2 except in 2003 where it was managed as a ridgeback).

Year	Base Quota (LCS complex)	Fishing Year			Possession Limit
		N. Atlantic	S. Atlantic	Gulf	All regions
1993	2,436 mt dw	One region; calendar year with two fishing periods			No trip limit
1994	2,346 mt dw	One region; calendar year with two fishing periods			4,000 lb dw LCS combined/trip
1995	2,570 mt dw	One region; calendar year with two fishing periods			4,000 lb dw LCS combined/trip
1996	2,570 mt dw	One region; calendar year with two fishing periods			4,000 lb dw LCS combined/trip
1997	1,285 mt dw	One region; calendar year with two fishing periods			4,000 lb dw LCS combined/trip
1998	1,285 mt dw	One region; calendar year with two fishing periods			4,000 lb dw LCS combined/trip
1999	1,285 mt dw	One region; calendar year with two fishing periods (but fishing season open and closed twice during 2 nd season-see Table 3)			4,000 lb dw LCS combined/trip; 5 LCS for incidental permit holders*
2000	1,285 mt dw	One region; calendar year with two fishing periods			4,000 lb dw LCS combined/trip; 5 LCS for incidental permit holders
2001	1,285 mt dw	One region; calendar year with two fishing periods			4,000 lb dw LCS combined/trip; 5 LCS for incidental permit holders
2002	1,285 mt dw	One region; calendar year with two fishing periods			4,000 lb dw LCS combined/trip; 5 LCS for incidental permit holders
2003	783 mt dw	One region; calendar year with two fishing periods but ridgeback and non-ridgeback split-see Table 3)			4,000 lb dw LCS combined/trip; 5 LCS for incidental permit holders
2004	1,107 mt dw	Regions† with two fishing seasons	Regions† with two fishing seasons	Regions† with two fishing seasons	4,000 lb dw LCS combined/trip; 5 LCS for incidental permit holders
2005	1,107 mt dw	Trimesters/Regions†	Trimesters/Regions†	Trimesters/Regions†	4,000 lb dw LCS combined/trip; 5 LCS for incidental permit holders
2006	1,107 mt dw	Trimesters/Regions†	Trimesters/Regions†	Trimesters/Regions†	4,000 lb dw LCS combined/trip; 5 LCS for incidental permit holders
2007	1,107 mt dw	Trimesters/Regions†	Trimesters/Regions†	Trimesters/Regions†	4,000 lb dw LCS combined/trip; 5 LCS for incidental permit holders
2008**	87.9 mt dw	One region; calendar year			2,750 lb dw of LCS/trip of which no more than 2,000 lb dw could be sandbar inside research fishery; trip limit= 0 outside research fishery
2009**	87.9 mt dw	One region; calendar year			45 sandbar/trip inside research fishery; trip limit= 0 outside research fishery

*Limited Access Permits (LAPs) were implemented for the shark and swordfish fisheries under 1999 FMP; †Regions = Gulf of Mexico, South Atlantic, and North Atlantic.

**Sandbar specific quota; Sharks required to be offloaded with all fins naturally attached under Amendment 2.

Table 20 Annual commercial dusky shark regulatory summary (managed in LCS complex until 2000 when placed on the prohibited species complex).

<i>Year</i>	<i>Base Quota (LCS complex)</i>	<i>Fishing Year</i>	<i>Possession Limit</i>
1993	2,436 mt dw	One region; calendar year with two fishing periods	No trip limit
1994	2,346 mt dw	One region; calendar year with two fishing periods	4,000 lb dw LCS combined/trip
1995	2,570 mt dw	One region; calendar year with two fishing periods	4,000 lb dw LCS combined/trip
1996	2,570 mt dw	One region; calendar year with two fishing periods	4,000 lb dw LCS combined/trip
1997	1,285 mt dw	One region; calendar year with two fishing periods	4,000 lb dw LCS combined/trip
1998	1,285 mt dw	One region; calendar year with two fishing periods	4,000 lb dw LCS combined/trip
1999	1,285 mt dw	One region; calendar year with two fishing periods (but fishing season open and closed twice during 2 nd season-see Table 3)	4,000 lb dw LCS combined/trip; 5 LCS for incidental permit holders*
2000	0-prohibited	None	0-prohibited
2001	0-prohibited	None	0-prohibited
2002	0-prohibited	None	0-prohibited
2003	0-prohibited	None	0-prohibited
2004	0-prohibited	None	0-prohibited
2005	0-prohibited	None	0-prohibited
2006	0-prohibited	None	0-prohibited
2007	0-prohibited	None	0-prohibited
2008	0-prohibited	None	0-prohibited
2009	0-prohibited	None	0-prohibited

*Limited Access Permits (LAPs) were implemented for the shark and swordfish fisheries under 1999 FMP

Table 21 Annual commercial blacknose shark regulatory summary (managed within the SCS complex).

Note: Regions = Gulf of Mexico, South Atlantic, and North Atlantic

Year	Base Quota (SCS complex)	Fishing Year			Possession Limit
		N. Atlantic	S. Atlantic	Gulf	All regions
1993	No quota	One region; calendar year with two fishing periods			No trip limit
1994	No quota	One region; calendar year with two fishing periods			No trip limit
1995	No quota	One region; calendar year with two fishing periods			No trip limit
1996	No quota	One region; calendar year with two fishing periods			No trip limit
1997	1,760 mt dw	One region; calendar year with two fishing periods			No trip limit
1998	1,760 mt dw	One region; calendar year with two fishing periods			No trip limit
1999	1,760 mt dw	One region; calendar year with two fishing periods			No trip limit for SCS/pelagics for directed permit holders; 16 SCS & pelagic sharks combined/trip for incidental permit holders*
2000	1,760 mt dw	One region; calendar year with two fishing periods			No trip limit for SCS/pelagics for directed permit holders; 16 SCS & pelagic sharks combined/trip for incidental permit holders
2001	1,760 mt dw	One region; calendar year with two fishing periods			No trip limit for SCS/pelagics for directed permit holders; 16 SCS & pelagic sharks combined/trip for incidental permit holders
2002	1,760 mt dw	One region; calendar year with two fishing periods			No trip limit for SCS/pelagics for directed permit holders; 16 SCS & pelagic sharks combined/trip for incidental permit holders
2003	326 mt dw	One region; calendar year with two fishing periods but ridgeback and non-ridgeback split-see Table 3)			No trip limit for SCS/pelagics for directed permit holders; 16 SCS & pelagic sharks combined/trip for incidental permit holders
2004	454 mt dw	Regions with two fishing seasons	Regions with two fishing seasons	Regions with two fishing seasons (fishery closed on March 18, 2004 – see Table 4)	No trip limit for SCS/pelagics for directed permit holders; 16 SCS & pelagic sharks combined/trip for incidental permit holders
2005	454 mt dw	Trimesters/Regions	Trimesters/Regions	Trimesters/Regions	No trip limit for SCS/pelagics for directed permit holders; 16 SCS & pelagic sharks combined/trip for incidental permit holders
2006	454 mt dw	Trimesters/Regions	Trimesters/Regions	Trimesters/Regions	No trip limit for SCS/pelagics for directed permit holders; 16 SCS & pelagic sharks combined/trip for incidental permit holders
2007	454 mt dw	Trimesters/Regions	Trimesters/Regions	Trimesters/Regions (fishery closed on Feb. 23, 2007 – see Table 4)	No trip limit for SCS/pelagics for directed permit holders; 16 SCS & pelagic sharks combined/trip for incidental permit holders
2008**	454 mt dw	One region; calendar year			No trip limit for SCS/pelagics for directed permit holders; 16 SCS & pelagic sharks combined/trip for incidental permit holders

2009**†	454 mt dw	One region; calendar year	No trip limit for SCS/pelagics for directed permit holders; 16 SCS & pelagic sharks combined/trip for incidental permit holders
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*Limited Access Permits (LAPs) were implemented for the shark and swordfish fisheries under 1999 FMP

**Sharks required to be offloaded with all fins naturally attached under Amendment 2.

†DEIS for Amendment 3 proposed a blacknose-specific quota of 14.9 mt dw and a non-blacknose SCS quota of 56.9 mt dw and prohibition of landing sharks with gillnet gear from South Carolina south.

Table 22. Annual recreational sandbar shark regulatory summary (managed in the LCS complex until 2008 recreational retention prohibited under Amendment 2).

Year	Fishing Year	Size Limit	Bag Limit
1993	Calendar Year	No size limit	4 LCS or pelagic sharks/vessel
1994	Calendar Year	No size limit	4 LCS or pelagic sharks/vessel
1995	Calendar Year	No size limit	4 LCS or pelagic sharks/vessel
1996	Calendar Year	No size limit	4 LCS or pelagic sharks/vessel
1997	Calendar Year	No size limit	2 LCS/SCS/pelagic sharks combined/vessel
1998	Calendar Year	No size limit	2 LCS/SCS/pelagic sharks combined/vessel
1999	Calendar Year	No size limit	2 LCS/SCS/pelagic sharks combined/vessel
2000	Calendar Year	Minimum size =4.5 ft	1 LCS/SCS/pelagic shark combined/vessel/trip
2001	Calendar Year	Minimum size =4.5 ft	1 LCS/SCS/pelagic shark combined/vessel/trip
2002	Calendar Year	Minimum size =4.5 ft	1 LCS/SCS/pelagic shark combined/vessel/trip
2003	Calendar Year	Minimum size =4.5 ft	1 LCS/SCS/pelagic shark combined/vessel/trip
2004	Calendar Year	Minimum size =4.5 ft	1 LCS/SCS/pelagic shark combined/vessel/trip
2005	Calendar Year	Minimum size =4.5 ft	1 LCS/SCS/pelagic shark combined/vessel/trip
2006	Calendar Year	Minimum size =4.5 ft	1 LCS/SCS/pelagic shark combined/vessel/trip
2007	Calendar Year	Minimum size =4.5 ft	1 LCS/SCS/pelagic shark combined/vessel/trip
2008*	Prohibited	N/A	0
2009*	Prohibited	N/A	0

*Retention prohibited in recreational fishery under Amendment 2.

Table 23. Annual recreational dusky shark regulatory summary (managed within the LCS complex until 2000 when prohibited in commercial and recreational fisheries).

Year	Fishing Year	Size Limit	Bag Limit
1993	Calendar Year	No size limit	4 LCS or pelagic sharks/vessel
1994	Calendar Year	No size limit	4 LCS or pelagic sharks/vessel
1995	Calendar Year	No size limit	4 LCS or pelagic sharks/vessel
1996	Calendar Year	No size limit	4 LCS or pelagic sharks/vessel
1997	Calendar Year	No size limit	2 LCS/SCS/pelagic sharks combined/vessel
1998	Calendar Year	No size limit	2 LCS/SCS/pelagic sharks combined/vessel
1999	Calendar Year	No size limit	2 LCS/SCS/pelagic sharks combined/vessel
2000	Prohibited	N/A	0
2001	Prohibited	N/A	0
2002	Prohibited	N/A	0
2003	Prohibited	N/A	0
2004	Prohibited	N/A	0
2005	Prohibited	N/A	0
2006	Prohibited	N/A	0
2007	Prohibited	N/A	0
2008	Prohibited	N/A	0
2009	Prohibited	N/A	0

Table 24. Annual recreational blacknose shark regulatory summary (managed within the SCS complex).

Year	Fishing Year	Size Limit	Bag Limit
1993	Calendar Year	No size limit	5 SCS sharks/person
1994	Calendar Year	No size limit	5 SCS sharks/person
1995	Calendar Year	No size limit	5 SCS sharks/person
1996	Calendar Year	No size limit	5 SCS sharks/person
1997	Calendar Year	No size limit	2 LCS/SCS/pelagic sharks combined/vessel
1998	Calendar Year	No size limit	2 LCS/SCS/pelagic sharks combined/vessel
1999	Calendar Year	No size limit	2 LCS/SCS/pelagic sharks combined/vessel
2000	Calendar Year	Minimum size =4.5 ft	1 LCS/SCS/pelagic shark combined/vessel/trip
2001	Calendar Year	Minimum size =4.5 ft	1 LCS/SCS/pelagic shark combined/vessel/trip
2002	Calendar Year	Minimum size =4.5 ft	1 LCS/SCS/pelagic shark combined/vessel/trip
2003	Calendar Year	Minimum size =4.5 ft	1 LCS/SCS/pelagic shark combined/vessel/trip
2004	Calendar Year	Minimum size =4.5 ft	1 LCS/SCS/pelagic shark combined/vessel/trip
2005	Calendar Year	Minimum size =4.5 ft	1 LCS/SCS/pelagic shark combined/vessel/trip
2006	Calendar Year	Minimum size =4.5 ft	1 LCS/SCS/pelagic shark combined/vessel/trip
2007	Calendar Year	Minimum size =4.5 ft	1 LCS/SCS/pelagic shark combined/vessel/trip
2008	Calendar Year	Minimum size =4.5 ft	1 LCS/SCS/pelagic shark combined/vessel/trip
2009	Calendar Year	Minimum size =4.5 ft	1 LCS/SCS/pelagic shark combined/vessel/trip

Table 7. State Regulatory History

Alabama (not confirmed by state):

Pre-1995: No shark regulations

1996: First shark regulations implemented: state shark fishery closes with the federal shark fishery

1998: By 1998: only short lines in state waters; time/area and size restrictions on the recreational use of gillnets

2004: By Feb 2004: Recreational daily bag limit - 2 sharpnose/person/day; all other species - 1 fish/person/day; Recreational minimum size all sharks (except sharpnose) - 54" FL

2006: By May 2006: Recreational & Commercial non-sharpnose min size – 54" FL or 30" dressed; Prohibition: Atlantic angel, bigeye thresher, dusky, longfin make, sand tiger, basking, whale, white, and nurse sharks

2007: No new shark regulations

2008: No new shark regulations

2009: Recreational & commercial sharpnose bag limit dropped to 1 sharpnose per person per day; no shark fishing on weekends, Memorial Day, Independence Day, or Labor Day

Connecticut (confirmed by state):

Pre-1995 - 2008: No shark regulations

2009: July: No possession or landing of large coastal shark species by any commercial fishing gear or for commercial purposes.

2010: Feb: Commercial possession of prohibited Small Coastal Sharks: Atlantic sharpnose, finetooth, blacknose, bonnethead until a 2010 quota is set by NMFS; Sandbar shark take prohibited in the commercial and recreational fisheries per ASMFC FMP except under Scientific Collection Permit

Delaware (confirmed by state):

Pre-1995: No shark regulations

1998: Commercial shark fishermen must hold a federal shark permit even when fishing in state waters, therefore, state regulations match federal regulations; sharks must be landed with meat and fins intact, but head can be removed; any shark not kept must be released in a manner that maximizes survival; taking of basking, white, whale, sand tiger, and bigeye

sand tiger prohibited; seasonal gillnet restrictions. Recreational regulations: no more than two sharks per vessel except that 2 sharpnose can also be landed; prohibition on finning and filleting or taking of the 5 prohibited species

2000: Creel limit on regulated sharks of 1 shark per vessel per day; creel limit for sharpnose is 2 sharks per day; minimum size on regulated sharks is 54 inches FL; fins must be naturally attached; 14 prohibited species added (Atlantic angel shark, bigeye sixgill shark, bigeye thresher, bignose shark, Caribbean reef shark, Caribbean sharpnose shark, dusky shark, Galapagos shark, longfin mako, narrowtooth shark, night shark, sevengill shark, sixgill shark, smalltail shark)

2009: ASMFC Plan

Florida (confirmed by state):

Pre-1995: 1992: first shark-specific regulations: must hold federal shark permit; commercial and recreational possession limit of 1 shark per person per day or 2 sharks per vessel per day, whichever is less (virtually no commercial shark fishery in state waters); prohibition on landing fins without corresponding carcass; released sharks should be released in a manner that maximizes survival; recreationally caught sharks cannot be transferred at sea; recreationally caught sharks cannot be sold; prohibition on harvest, landing and sale of basking and whale sharks; state shark fishery closes with federal shark fishery; 1994: prior to landing, fins cannot be removed from a shark harvested in state waters; fishermen returning from federal waters with sharks or shark parts harvested in federal waters, cannot fish in state waters; 1995: ban on the use of entanglement nets larger than 500 square feet

1998: By 1998: ban on longlines; 1998: Added sand tiger, bigeye sandtiger, and white sharks to prohibited species list; prohibition on filleting sharks at sea.

2006: March: Same prohibited species as federal regulations, except Caribbean sharpnose is not included

2010: Jan: Commercial/recreational min size – 54” except no min. size on blacknose, blacktip, bonnethead, smooth dogfish, finetooth, Atlantic sharpnose; Allowable gear – hook and line only; prohibition on the removal of shark heads and tails in state waters; prohibition on harvest of sandbar, silky, and Caribbean sharpnose sharks in state waters; March: prohibition on all harvest of lemon sharks in state waters.

Georgia (confirmed by state):

Pre-1995: 1950s: ban on gillnets and longlines; All finfish spp. must be landed with head and fins intact

- 1998:** First shark regulation: prohibition on taking sand tiger sharks; Small Shark Composite (Atl. Sharpnose, bonnethead, spiny dogfish) 30"TL min. size; Creel: 2/person/day; All other sharks 2/person/day or 2 /boat/day, whichever is less. 54"TL min. size, only one shark over 84" TL
- 2000:** Sharks may not be landed in Georgia if harvested using gillnets
- 2009:** Recreational: 1 shark from the Small Shark Composite (bonnethead, sharpnose, and spiny dogfish, min size 30" FL; All other sharks - 1 shark/person or boat, whichever is less, min size 54" FL, Prohibited Species: sand tiger sharks, sandbar, silky, bigeye sandtiger, whale, basking, white, dusky, bignose, Galapagos, night, reef, narrowtooth, Caribbean sharpnose, smalltail, Atlantic angel, longfin mako, bigeye thresher, sharpnose sevengill, bluntnose sixgill, and bigeye sixgill.

Louisiana (not confirmed by state):

Pre-1995:

- 1997:** Ban on entanglement nets
- 1998:** No new shark regulations
- 2004:** By Feb 2004: Minimum size - 54" except sharpnose; Possession limit - 1 fish/vessel/trip; Trip limit 4,000 lbs dw LCS; Reference to federal regulations; State waters closed to rec/commercial April 1 through June 30
- 2006:** By May 2006: Recreational: min size – 54" FL, except Atlantic sharpnose and bonnethead; bag limit - 1 sharpnose/person/day; all other sharks – 1 fish/person/day; Commercial: 4,000 lb LCS trip limit, no min size; Com & Rec Harvest Prohibited: 4/1-6/30; Prohibition: same as federal regulations
- 2008:** By Oct 2008: Commercial: 33 per vessel per trip limit, no min size

Maine (not confirmed by state):

Pre-1995: No shark regulations

- 1998:** By 1998: large state water closures to gillnets resulting in virtually no gillnet fishery; 1998: no shark regulations
- 2009:** Maximum 5 % fin-to-carcass ratio

Maryland (not confirmed by state):

- 1996:** 4000 lb shark limit per person per day; fins must accompany carcass and not exceed 5% fin-to-carcass ratio, state shark fishery closes with federal shark fishery

1998: Size limit of 58 inches FL or a carcass less than 31 inches; recreational bag limit of one shark per person per day; by 1998: maximum gillnet mesh size of 6 inches; no longlining in tidal waters.

2004: By Feb 2004: minimum FL reduced to 54 inches, carcass length the same (31 inches); recreational catch limit of 1 shark per person per day; reference to federal regs 50 CFR 635.

2009: ASMFC Plan

Massachusetts (not confirmed by state):

Pre-1995 - 2006: No shark regulations

2006: By May 2006: Prohibition on harvest, catch, take, possession, transportation, selling or offer to sell any basking, dusky, sand tiger, or white sharks.

Mississippi (not confirmed by state):

1997: Prohibit taking and possession of sand tiger, bigeye sand tiger, whale, basking, and white sharks; Recreational: bag limit of 4 small coastal sharks (Atlantic sharpnose, Caribbean sharpnose, finetooth, blacknose, smalltail, bonnethead and Atlantic angel shark) per person per day; limit of 3 large coastal and pelagic sharks, in aggregate per vessel per day, same prohibited species as commercial fishers; minimum size of 25 inches total length for small coastal sharks and 37 inches total length for large coastal sharks

2008: By Oct 2008: Recreational bag limit - LCS/Pelagics 1/person up to 3/vessel; SCS 4/person; Commercial & Prohibited Species - Reference to federal regulations

New Hampshire (not confirmed by state):

Pre-1995-2008: No shark regulations

2009: No commercial take of porbeagle

New Jersey (not confirmed by state):

Pre-1995: No shark regulations

1998: No shark-specific regulations; by 1998: no longline fishing; restrictions on the use of gillnets

2004: By Feb 2004: commercial/recreational possession limit of 2 sharks per vessel; prohibition on finning; dorsal fin to pre-caudal pit must be at least 23 inches in length; total length must be 48 inches in length

2006: By May 2006: no sale during federal closures; Finning prohibited; Prohibited Species: basking, bigeye sand tiger, sand tiger, whale and white sharks

New York (not confirmed by state):

1998: By 1998: prohibition on finning sharks; no other shark regulations

2004: By Feb 2004: reference to federal regs 50 CFR part 635; prohibited sharks listed

North Carolina (confirmed by state):

Pre-1995: 1990: prohibition on finning 1990 – 7500 lbs per trip, dogfish exempt; unlawful to land fins without carcass; fins no more than 10%; unlawful to land dried fins; required record keeping; Recreational - bag limit is 2 per day

1992: Reduced fins to no more than 7%

1997: No sharks, except Atlantic sharpnose and pelagic sharks, can be taken by commercial gear in state waters; fins must be landed with the carcass; maximum 5% fin-to-carcass ratio; fishers cannot possess or land dried shark fins

2000: One shark per vessel per day with commercial gear (except Atlantic sharpnose and dogfish) while federal waters are open for species group; 84 inch maximum size limit except for tiger, thresher, bigeye thresher, shortfin mako and hammerhead species; must be landed with head, tail and fins intact; Recreational – bag limit is 1 per person per day with a minimum size of 54” (none on Atlantic sharpnose) and a maximum of 84” (except for tiger, thresher, bigeye thresher, shortfin mako and hammerhead species); Prohibited species – basking, white, sand tiger and whale sharks

2003: April: Prohibited ridgebacks (sandbar, silky, and tiger sharks) from Large Coastal Group

2006: Open seasons and species groups same as federal; 4000 lb trip limit for LCS; retain fins with carcass through point of landing; longline shall only be used to harvest LCS during open season, shall not exceed 500 yds or have more than 50 hooks (state waters reopened to commercial fishing); Recreational: LCS (54” FL min size) - no more than 1 shark/vessel/day or 1 shark/person/day, SCS (no min size) – no more than 1 finetooth or blacknose shark/vessel/day and no more than 1 Atlantic sharpnose and 1 bonnethead/person/day, pelagics (no min size) -1 shark/vessel/day; Same prohibited shark species as federal regulations

2008: July: Adopted federal regulations of 33 Large Coastal sharks per trip and fins must be naturally attached to carcass

2009: Fins must be naturally attached to shark carcass

Puerto Rico (confirmed by state):

Pre-1995-2004: No shark regulations

2004: Year-round closed season on nurse sharks Shark "finning" is prohibited. PR regulations indicate the need for compliance by local fishers with federal shark regulations.

Rhode Island (not confirmed by state):

No shark regulations

South Carolina (not confirmed by state):

1998: By 1998: federal regs adopted by reference; use of gillnets prohibited in the shark fishery

2004: By Feb 2004: retention limit of 2 Atlantic sharpnose per person per day and 1 bonnethead per person per day; no min size for recreationally caught bonnethead sharks; reference to federal commercial regulations and closures

2006: By May 2006: non-Atlantic sharpnose/bonnethead sharks – 1 shark/boat/trip, min size – 54" FL

Texas (confirmed by state):

Pre-1995: Sept. 1989: Bag limit set at five sharks per day for both rec and commercial anglers; Sept 1992: Bag limit increased to ten sharks per day. Trotlines were added as allowable gear for sharks.

1997: Commercial bag limit of 5 sharks; possession limit of 10 sharks; no min or max size. Recreational bag, possession, and lack of size restrictions same as commercial

1998: Commercial fishing for sharks can only be done with rod and reel; no entanglement nets

2004: Sept: Commercial/Recreational retention limit 1 fish/person/day; Commercial/Recreational possession limit is twice the daily bag limit (i.e., 1 fish/person/day); Commercial/Recreational minimum size 24 in TL

2009: Sept: Min size 24" TL for Atlantic sharpnose, blacktip, and bonnethead sharks and 64" TL for all other lawful sharks. Prohibited species: same as federal regulations

Virginia (not confirmed by state):

Pre-1995: 1991: no longlines in state waters; recreational bag limit of 1 shark per person per day; established a commercial trip limit of ___; 1993: mandatory reporting of all shark landings

1997: 7500 lb commercial trip limit; minimum size of 58 inches FL or 31 inches carcass length (but can keep up to 200 lbs dw of sharks per day less than 31 inches carcass length); prohibition on finning; recreational: possession limit of 1 shark per person per day

1998: By 1998: no longlining in state waters

2006: By May 2006: Recreational: bag limit – 1 LCS, SCS, or pelagic shark/vessel/day with a min size of 54" FL or 30" CL; 1 Atlantic sharpnose and bonnethead/person/day with no min size; Commercial: possession limit - 4000 lb dw/day, min size - 58" FL or 31" CL west of the COLREGS line and no min size limit east of the COLREGS line; Prohibitions: fillet at sea, finning, longlining, same prohibited shark species as federal regulations

2009: ASMFC Plan

3. ASSESSMENT HISTORY AND REVIEW

The blacknose shark was first assessed individually in 2002 (Cortés 2002) and later in 2006. Prior to that, it was part of the Small Coastal Shark complex, which was first assessed in 1991 and not again until 2002. In 2002, results of Bayesian surplus production and lagged recruitment, survival and growth models determined that the stock was not overfished and overfishing was not occurring. However, the 2002 report noted that results for blacknose and finetooth sharks were more uncertain than those for the other two species of small coastal sharks assessed (Atlantic sharpnose and bonnethead) due to shorter catch and CPUE series, lack of bycatch estimates and no catches reported in some years, and that findings should be viewed with caution.

The first assessment of blacknose sharks under the SEDAR framework took place in 2007 (SEDAR 13, NMFS 2007). Although three models were initially presented, it was decided that an age-structured production model would be used as the base model given that catch and age-specific biological and selectivity information had become available. The 2007 assessment concluded that the stock was overfished ($SSF_{2005}/SSF_{MSY}=0.43-0.60$; range of base and sensitivity model runs) with overfishing occurring ($F_{2005}/F_{MSY}=2.12-5.68$; range of base and sensitivity model runs). The main changes between the 2002 and 2006 assessments included differences in the CPUE series used, inclusion of bycatch estimates from the shrimp trawl fishery

as well as fleet-specific catch streams, the use of age-specific biological and selectivity information, and the use of different assessment methods.

References

Cortés, E. 2002. Stock assessment of small coastal sharks in the U.S. Atlantic and Gulf of Mexico. Sustainable Fisheries Division Contribution SFD-01/02-152. 133 pp.

NMFS (National Marine Fisheries Service). 2007. Southeast Data, Assessment and Review (SEDAR) 13. Small Coastal Shark complex, Atlantic sharpnose, blacknose, bonnethead, and finetooth shark stock assessment report. NOAA/NMFS Highly Migratory Species Division, Silver Spring, MD.

4. ASSESSMENT SUMMARY

The Summary Report provides a broad but concise view of the salient aspects of the stock assessment. It recapitulates: (a) the information available to and prepared by the Data Workshop; (b) the application of those data, development and execution of one or more assessment models, and identification of the most reliable model configuration as the base run by the Assessment Process (AP); and (c) the findings and advice determined during the Review Workshop.

TO BE COMPLETED FOLLOWING THE REVIEW WORKSHOP

Stock Status and Determination Criteria

Table 1. Summary of stock status determination criteria.

Criteria	Recommended Values from SEDAR 21	
	Definition	Value
M (Instantaneous natural mortality; per year)	Average of Lorenzen M (if used)	
F ₂₀₀₉ (per year)	Apical Fishing mortality in 2009	

F_{current} (per year)	Geometric mean of the directed fishing mortality rates in 2007 - 2009	
F_{MSY} (per year)	F_{MSY}	
B_{MSY} (metric tons)	Biomass at MSY	
SSB_{2009} (metric tons)	Spawning stock biomass in 2009	
SSB_{MSY} (metric tons)	SSB_{MSY}	
MSST (metric tons)	$(1-M)*SSB_{\text{MSY}}$	
MFMT (per year)	F_{MSY}	
MSY (1000 pounds)	Yield at MSY	
OY (1000 pounds)	Yield at F_{OY}	OY (65% F_{MSY})= OY (75% F_{MSY})= OY (85% F_{MSY})=
F_{OY} (per year)	$F_{\text{OY}} = 65\%, 75\%, 85\% F_{\text{MSY}}$	65% F_{MSY} = 75% F_{MSY} = 85% F_{MSY} =
Biomass Status	$SSB_{2009}/MSST$	
Exploitation Status	$F_{\text{current}}/F_{\text{MSY}}$	

***All weights are whole weight

Stock Identification and Management Unit

Species Distribution:

Stock Life History - summary of life history characteristics of the stock under assessment

Assessment Methods

Assessment Data

Release Mortality

Catch Trends

Fishing Mortality Trends

Stock Abundance and Biomass Trends - summary of abundance, biomass, and recruitment over time

Projections - results of model runs conducted to estimate stock conditions under various potential future levels of fishing mortality

Scientific Uncertainty

Significant Assessment Modifications

Sources of Information

Tables

- Table 1: Summary of stock status and determination criteria (above)
- Table 2: Summary of life history parameters by age
- Table 3: Catch and discards by fishery sector
- Table 4: Fishing mortality estimates
- Table 5: Stock abundance and biomass
- Table 6: Spawning stock biomass and Recruitment

Figures

- Figure 1: Landings by fishery sector
- Figure 2: Discards by fishery sector
- Figure 3: Fishing Mortality
- Figure 4: Stock Biomass
- Figure 5: Abundance Indices
- Figure 6: Stock-Recruitment
- Figure 7: Yield per Recruit
- Figure 8: Stock Status and Control Rule
- Figure 9: Projections

Table 2: Summary of Life History Parameters:

Table 3: Catch and discards by fishery sector

Table 4: Fishing mortality estimates

Table 5: Stock abundance and biomass

Table 6: Spawning stock biomass and recruitment

Figure 1: Landings by fishery sector

Figure 2: Discards by fishery sector

Figure 3: Fishing Mortality

Figure 4: Stock Biomass

Figure 5: Abundance Indices

Figure 6: Stock-Recruitment

Figure 7: Yield per Recruit

Figure 8: Stock Status and Control Rule

Figure 9: Projections

5. SEDAR ABBREVIATIONS

ABC	Allowable Biological Catch
ACCSP	Atlantic Coastal Cooperative Statistics Program
ADMB	AD Model Builder software program
ALS	Accumulated Landings System; SEFSC fisheries data collection program
ASMFC	Atlantic States Marine Fisheries Commission
B	stock biomass level
BMSY	value of B capable of producing MSY on a continuing basis
CFMC	Caribbean Fishery Management Council
CIE	Center for Independent Experts
CPUE	catch per unit of effort
F	fishing mortality (instantaneous)
F_{MAX}	fishing mortality that maximizes the average weight yield per fish recruited to the fishery
F_{MSY}	fishing mortality to produce MSY under equilibrium conditions
F_{OY}	fishing mortality rate to produce Optimum Yield under equilibrium
$F_{XX\% SPR}$	fishing mortality rate that will result in retaining XX% of the maximum spawning production under equilibrium conditions
F_0	a fishing mortality close to, but slightly less than, F_{max}
FL FWCC	Florida Fish and Wildlife Conservation Commission
FWRI	(State of) Florida Fisheries and Wildlife Research Institute
GA DNR	Georgia Department of Natural Resources
GLM	general linear model
GMFMC	Gulf of Mexico Fishery Management Council
GSMFC	Gulf States Marine Fisheries Commission
GULF FIN	GSMFC Fisheries Information Network
M	natural mortality (instantaneous)
MARMAP	Marine Resources Monitoring, Assessment, and Prediction
MFMT	maximum fishing mortality threshold, a value of F above which overfishing is deemed to be occurring
MRFSS	Marine Recreational Fisheries Statistics Survey; combines a telephone survey of households to estimate number of trips with creel surveys to estimate catch and effort per trip
MRIP	Marine Recreational Information Program
MSST	minimum stock size threshold, a value of B below which the stock is deemed to be overfished

MSY	maximum sustainable yield
NC DMF	North Carolina Division of Marine Fisheries
NMFS	National Marine Fisheries Service
NOAA	National Oceanographic and Atmospheric Administration
OY	optimum yield
SAFMC	South Atlantic Fishery Management Council
SAS	Statistical Analysis Software, SAS Corporation
SC DNR	South Carolina Department of Natural Resources
SEDAR	Southeast Data, Assessment and Review
SEFSC	Fisheries Southeast Fisheries Science Center, National Marine Fisheries Service
SERO	Fisheries Southeast Regional Office, National Marine Fisheries Service
SPR	spawning potential ratio, stock biomass relative to an unfished state of the stock
SSB	Spawning Stock Biomass
SSC	Science and Statistics Committee
TIP	Trip Incident Program; biological data collection program of the SEFSC and Southeast States.
Z	total mortality, the sum of M and F