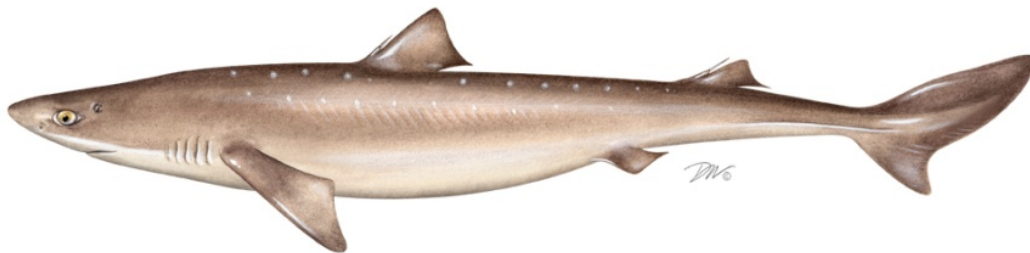


**2013 REVIEW OF THE  
ATLANTIC STATES MARINE FISHERIES COMMISSION  
FISHERY MANAGEMENT PLAN FOR**

**SPINY DOGFISH**  
*(Squalus acanthias)*

2012/2013 FISHING YEAR



**Spiny Dogfish Plan Review Team**

Dr. Gregory Skomal, Massachusetts Department of Marine Fisheries  
Tina Moore, North Carolina Department of Environment and Natural Resources  
Marin Hawk, Atlantic States Marine Fisheries Commission, Chair

**Table of Contents**

- I. Status of the Fishery Management Plan
- II. Status of the Stock and Assessment Advice
- III. Status of the Fishery
- IV. Status of Research and Monitoring
- V. Status of Management Measures and Issues
- VI. Implementation of FMP Compliance Requirements for 2009
- VII. Recommendations of the Plan Review Team
- VIII. References

## I. Status of the Fishery Management Plan

<u>Date of FMP Approval:</u>	November 2002
<u>Amendments</u>	None
<u>Addenda</u>	Addendum I (November 2005) Addendum II October 2008) Addendum III (April 2011) Addendum IV (August 2012)
<u>Management Unit:</u>	Entire coastwide distribution of the resource from the estuaries eastward to the inshore boundary of the EEZ
<u>States With Declared Interest:</u>	Maine - Florida
<u>Active Boards/Committees:</u>	Spiny Dogfish and Coastal Shark Management Board, Advisory Panel, Technical Committee, and Plan Review Team

### a) Goals and Objectives

The Interstate Fishery Management Plan for Spiny Dogfish (FMP) established the following goals and objectives.

#### 2.2. GOALS

*The goal of the Interstate Fishery Management Plan for Spiny Dogfish is:  
“To promote stock rebuilding and management of the spiny dogfish fishery in a manner that is biologically, economically, socially, and ecologically sound.”*

#### 2.3 OBJECTIVES

*In support of this goal, the following objectives are recommended for the Interstate FMP:*

- 1. Reduce fishing mortality and rebuild the female portion of the spawning stock biomass to prevent recruitment failure and support a more sustainable fishery.*
- 2. Coordinate management activities between state, federal and Canadian waters to ensure complementary regulations throughout the species range.*
- 3. Minimize the regulatory discards and bycatch of spiny dogfish within state waters.*
- 4. Allocate the available resource in biologically sustainable manner that is equitable to all the fishers.*
- 5. Obtain biological and fishery related data from state waters to improve the spiny dogfish stock assessment that currently depends upon data from the federal bottom trawl survey.*

**b) Fisheries Management Plan Summary**

In 1998, NMFS declared spiny dogfish overfished and initiated the development of a joint fishery management plan (FMP) between the Mid-Atlantic (MAFMC) and New England Fishery Management Councils (NEFMC) in 1999. NMFS partially approved the federal Fishery Management Plan in September 1999, but implementation did not begin until May 2000, the start of the 2000-2001 fishing year.

In August 2000, ASMFC took emergency action to close state waters to the commercial harvest, landing, and possession of spiny dogfish when the federal waters closed in response to the quota being fully harvested. With the emergency action in place, the Commission had time to develop an interstate FMP, which prevented the undermining of the federal FMP and prevented further overharvest of the coastwide spiny dogfish population. Needing additional time to complete the interstate FMP, the ASMFC extended the emergency action twice through January 2003. During that time, the majority of spiny dogfish landings were from state waters because states had either no possession limits or less conservative possession limits than those of the federal FMP. The Interstate FMP for Spiny Dogfish was approved by ASMFC in November 2002 and was implemented for the 2003-2004 fishing year. In general, the ASMFC and Council FMP's strive to promote stock rebuilding and management of the spiny dogfish fishery in a manner that is biologically, economically, socially, and ecologically sound.

Both the ASMFC and Council FMP's established an annual quota that gets allocated seasonally between two periods (57.9% from May 1 to October 31 and 42.1% from November 1 to April 30). The seasonal periods can have separate possession limits that are specified on an annual basis. Both the Council and ASMFC FMP's also include paybacks for quota overages, allow for a five percent quota rollover once the stock is rebuilt, and allow for up to 1,000 spiny dogfish to be harvested for biomedical supply.

In November 2005, the Spiny Dogfish and Coastal Sharks Management Board approved Addendum I to the Interstate FMP for Spiny Dogfish. Addendum I provides the Board with the authority, but not the requirement, to establish spiny dogfish specifications (quota and possession limits) for up to five years. The Mid-Atlantic and New England Fishery Management Councils took similar action under Framework 1, recommending the adoption of multi-year management measures without the requirement of annual review to NOAA Fisheries for final approval. Framework 1 to the federal Spiny Dogfish FMP, which will allow the specification of commercial quotas and other management measures for up to five years, became effective February 21, 2006.

Addendum II, approved October 2008, established regional quotas in place of the FMP's seasonal allocation. Under Addendum II, the annual quota is divided regionally with 58% allocated to the states of Maine to Connecticut, 26% allocated to the states of New York to Virginia, and the remaining 16% allocated to North Carolina. The Board allocated a specific percentage to North Carolina because spiny dogfish are not available to their fishermen until late into the fishing season when most of the quota has already been harvested. The North Carolina allocation will allow fishermen and processors to plan fishing operations based on a specific amount of dogfish. Regional overage paybacks were also included in Addendum II to maintain

the conservation goals of the plan. Any overage of a region and/or state quota is subtracted from that region/state the subsequent fishing year.

The Commission’s Spiny Dogfish and Coastal Sharks Management Board (Board) approved Addendum III to the Interstate Fishery Management Plan for Spiny Dogfish (Addendum III) in March 2011. Addendum III did not apply to the 2009/2010 fishing season and was not effective until the 2011/2012 fishing season. The Addendum divided the southern region annual quota of 42% into state-specific shares. It also allowed for quota transfer between states, rollovers of up to five percent, state-specified possession limits, and includes a three-year reevaluation of the measures. The Addendum’s provisions apply only to states in the southern region (New York through North Carolina) and do not modify the northern region allocation. The states of Maine to Connecticut continue to share 58% of the annual quota as specified in Addendum II.

Addendum IV to the Interstate Fishery Management Plan for Spiny Dogfish (Addendum IV) was approved in August 2012. This Addendum addressed the differences in the definitions of overfishing between the NEFMC, MAFMC and the ASMFC. The Board adopted the fishing mortality threshold to be consistent with the federal plan. Overfishing is defined as an F rate that exceeds the Fthreshold. The Fthreshold is defined as FMSY (or a reasonable proxy thereof) and based upon the best available science. The maximum fishing mortality threshold (FMSY) or a reasonable proxy may be defined as a function of (but not limited to): total stock biomass, SSB, total pup production, and may include males, females, both, or combinations and ratios thereof which provide the best measure of productive capacity for spiny dogfish. This definition is consistent with the federal Spiny Dogfish FMP. Currently  $FMSY = 0.2439$ .

## II. Status of the Stock and Assessment Advice

Overfishing definition:  $F_{target} = 0.244$ ; allows for the production of 1.5 female pups per female that will recruit to the spawning stock biomass (SSB).

$F_{threshold} = 0.325$ ; allows for the production of one female pup per female that will recruit to the SSB.

Overfished Definition:  $SSB_{target} = 159,288 \text{ mt}$  (351 million pounds); level of biomass that would maximize recruitment to the population (100% SSBmax).

$SSB_{threshold} = 79,644 \text{ mt}$  (175 million pounds); 50% of SSBmax

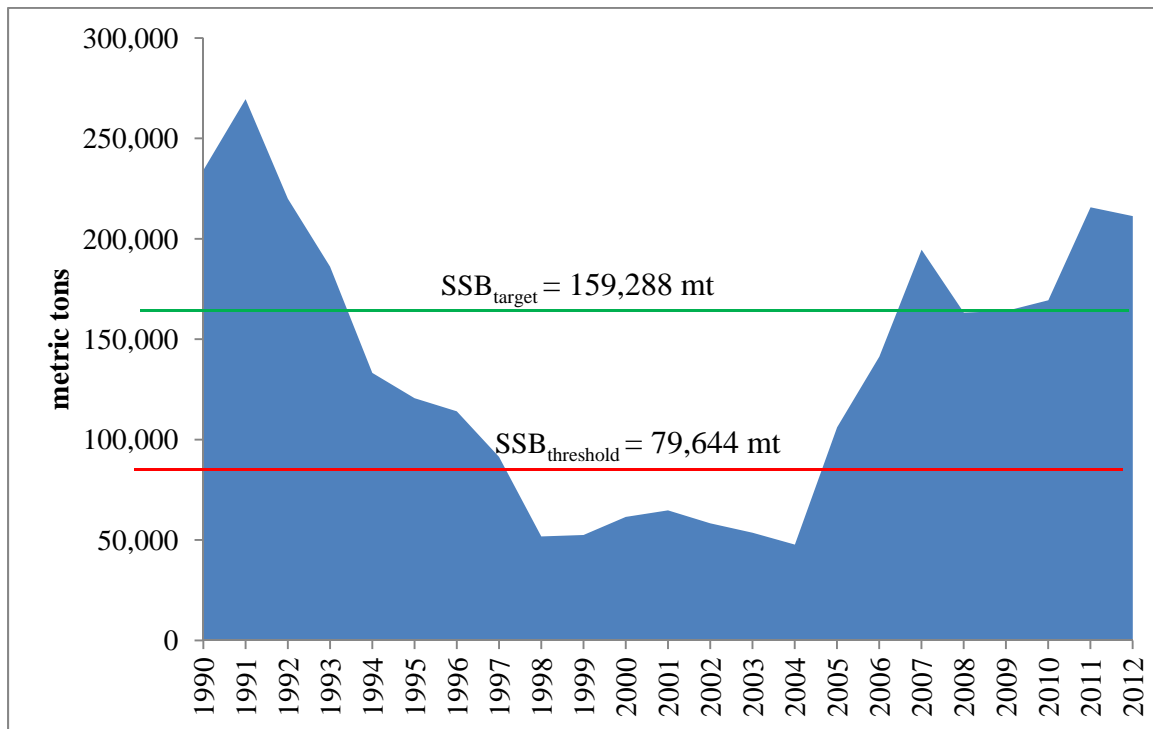
*Spiny dogfish are not overfished and overfishing is not occurring:*

Spiny dogfish was declared ‘rebuilt’ in 2008 when SSB exceeded the target for the first time since the ASMFC began managing spiny dogfish in 2002. Prior to the ‘rebuilt’ status, quotas were based on the short term target  $F_{rebuild} = 0.11$ . The FMP allows for quotas based on  $F_{target}$  (as opposed to the more conservative  $F_{rebuild}$ ) “once the mature female portion of the spawning stock has reached the target”.

## 2013 SPINY DOGFISH FMP REVIEW

The most recent estimates of SSB are from the NEFSC Update on the Status of Spiny Dogfish in 2013 and Projected Harvests at the Fmsy Proxy and Pstar of 40% report. The 2013 NEFSC report estimates that SSB continued to exceed the target in 2013 (for the fifth year in a row) at 211,372 metric tons.

The NEFSC report also provides the most recent estimate of  $F$ .  $F$  was 0.15 in 2012 and has been consistently below the fishing mortality target in recent years. As such, spiny dogfish are not overfished and overfishing is not occurring. Unfortunately, record low pup production from 1997 to 2003 has left a recruitment deficit that will cause SSB to drop soon. The amplitude of this drop increases as fishing mortality increases and still occurs when fishing mortality is hypothetically zero.

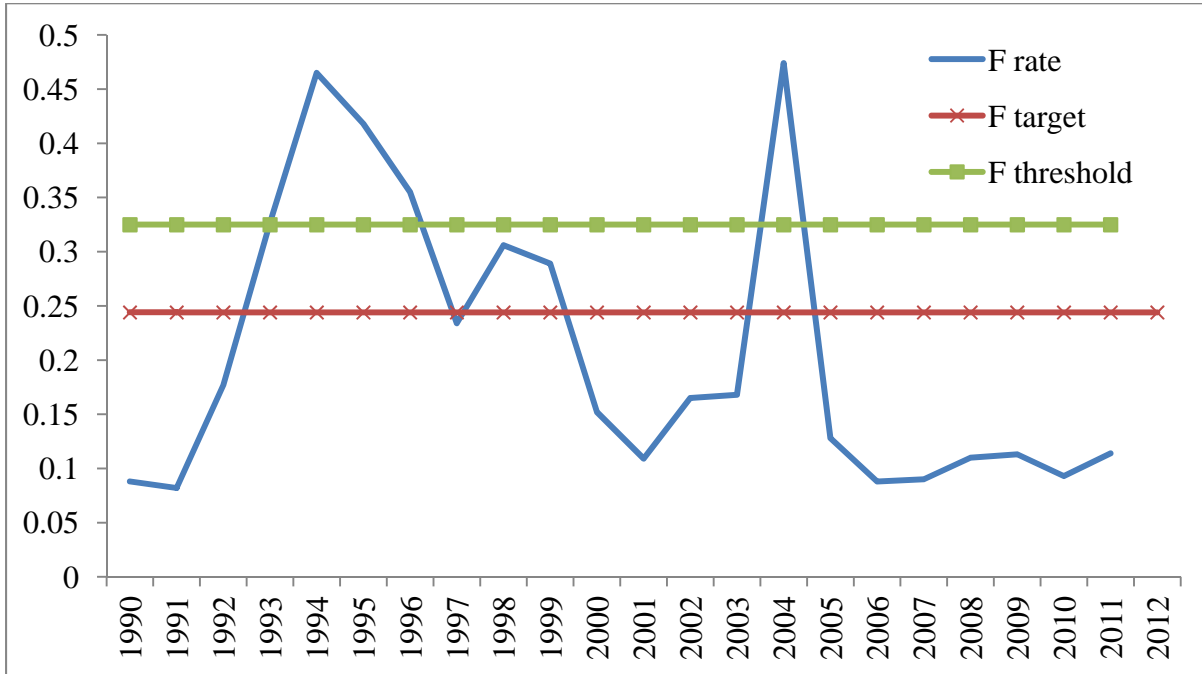


**Figure 1: Spiny dogfish spawning stock biomass, 1990 – 2012. Source: NEFSC Update on the Status of Spiny Dogfish in 2013 and Projected Harvests at the Fmsy Proxy and Pstar of 40%.**

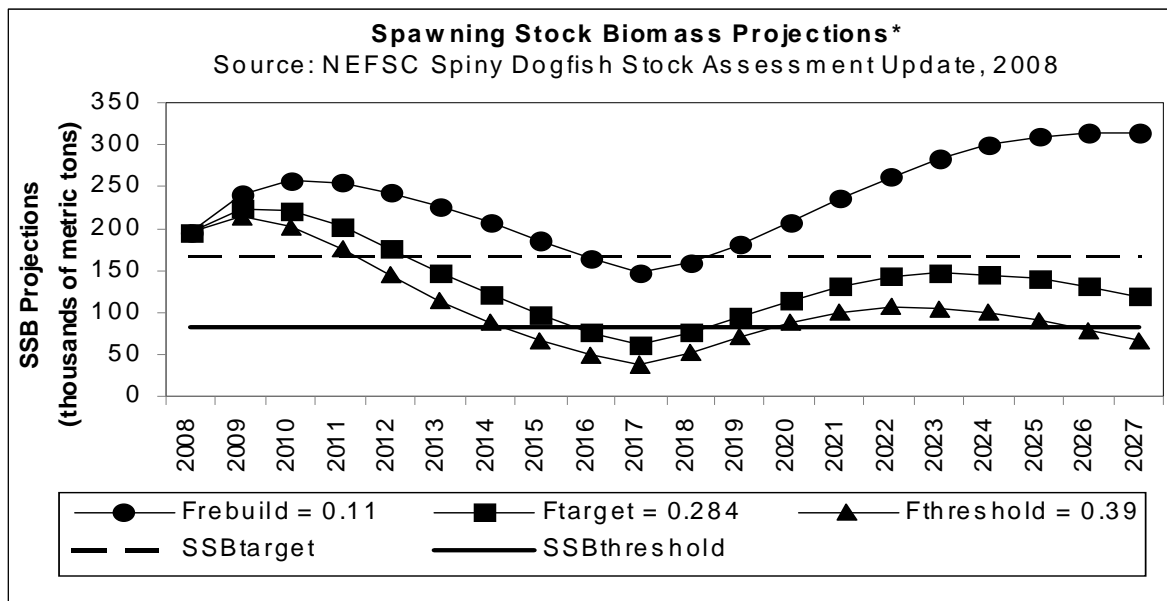
2013 SPINY DOGFISH FMP REVIEW

**Table 1: Spawning stock biomass and fishing mortality in the spiny dogfish fishery, 1990 – 2013. Source: NEFSC Update on the Status of Spiny Dogfish in 2013 and Projected Harvests at the Fmsy Proxy and Pstar of 40%.**

<b>Year</b>	<b>Female SSB (mt)</b>	<b>F rate</b>
1991	234,229	0.082
1992	269,624	0.177
1993	220,002	0.327
1994	186,132	0.465
1995	133,264	0.418
1996	120,664	0.355
1997	114,091	0.234
1998	91,458	0.306
1999	51,821	0.289
2000	52,562	0.152
2001	61,552	0.109
2002	64,844	0.165
2003	58,376	0.168
2004	53,625	0.474
2005	47,719	0.128
2006	106,180	0.088
2007	141,351	0.09
2008	194,616	0.11
2009	163,256	0.113
2010	164,066	0.093
2011	169,415	0.114
2012	215,744	0.149
2013	211,372	--



**Figure 2: Fishing mortality rates in the spiny dogfish fishery, 1990 – 2012. Source: NEFSC Update on the Status of Spiny Dogfish in 2013 and Projected Harvests at the Fmsy Proxy and Pstar of 40%.**



**Figure 3: Spawning stock biomass (SSB) projections for the spiny dogfish fishery, 2008-2027. Source: NEFSC Update on the Status of Spiny Dogfish in 2010 and Initial Evaluation of Harvest Strategies.**

**III. Status of the Fishery**



2013 SPINY DOGFISH FMP REVIEW

*Specifications*

The spiny dogfish commercial fishery runs from May 1 – April 30. The coastwide quota was set at 30 million pounds with a maximum of 3,000 pound possession limits for the 2012/2013 fishing season (May 1, 2012 – April 30, 2013).

*Quotas*

Prior to adjustments for overages and rollovers in the 2011/2012 fishing season, the 2012/2013 35.6 million pound coastwide quota was allocated with 20,702,520 pounds (58%) to states from Maine – Connecticut (Northern Region), 966,237 pounds (2.707%) to New York, 2,728,449 pounds (7.644%) to New Jersey, 319,818 pounds (0.896 %) to Delaware, 2,113,085 pounds (5.920%) to Maryland, 3,853,167 pounds (10.795%) to Virginia and the remaining 5,010,010 pounds (14.036%) to North Carolina. Addendum II specifies that when the quota allocated to a region or state is exceeded in a fishing season, the amount over the allocation will be deducted from the corresponding region or state in the subsequent fishing season. The overages for the 2011/2012 season (Northern region, New Jersey, and Virginia) are outlined in Table 2.

**Table 2: Regional quotas for May 1, 2012 - April 30, 2013 fishing season.**

<b>Region/State</b>	<b>2012/2013 Quotas</b>	<b>2011/2012 Overages (-) and Rollovers (+)</b>	<b>2012/2013 Adjusted Quotas</b>
<b>Northern</b>	20,702,520	-1,359,053	19,343,467
<b>New York</b>	966,237	+26,935	993,171
<b>New Jersey</b>	2,728,449	-101,508	2,626,941
<b>Delaware</b>	319,818	+3,915	323,734
<b>Maryland</b>	2,113,085	+13,113	2,126,197
<b>Virginia</b>	3,853,167	-88,435	3,764,732
<b>North Carolina</b>	5,010,010	+20,844	5,030,854

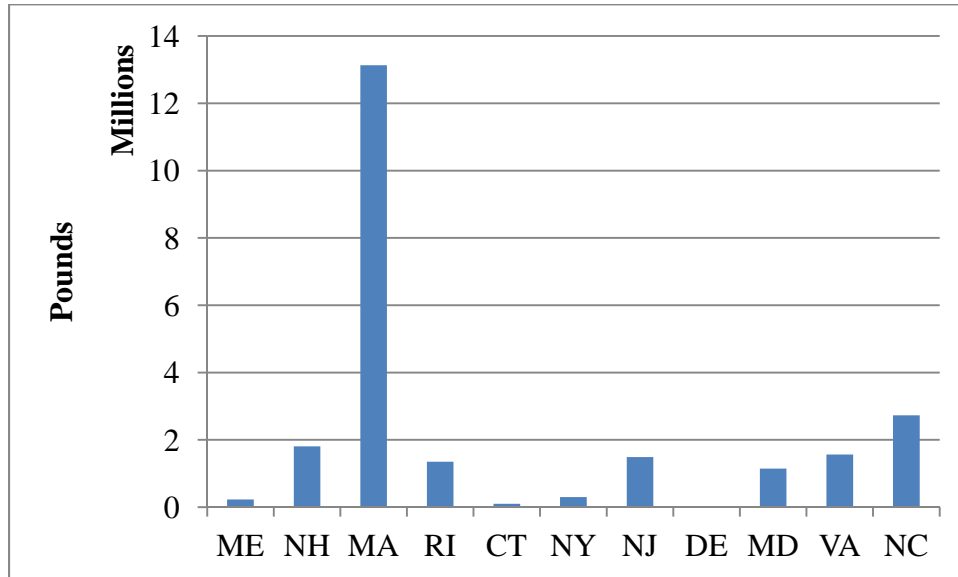
*Landings*

There were three overages during the 2011/2012 fishing season. The Northern region overharvested 1,359,053 pounds, New Jersey overharvested 101,508 pounds and Virginia overharvested 88,435 pounds. Overages from the 2010/2011 fishing season were primarily the result of late reports.

Commercial landings totaled 207,979,613 pounds during the 2012/2013 fishing season (Table 3). The increase coincides with the increased commercial quota set by the Board for that fishing season. Massachusetts (13,253,935 pounds), North Carolina (4,180,440 pounds), and Virginia (3,324,959 pounds) had the most significant commercial landings during the 2012/2013 fishing season.

**Table 3: Commercial landings of spiny dogfish on the Atlantic coast, 2012/2013 fishing year. Source: ACCSP Data Warehouse, September 23, 2013.**

State Landed	Pounds
ME	226,770
NH	1,805,494
MA	13,130,538
RI	1,351,254
CT	97,312
NY	299,385
NJ	1,489,790
DE	12,654
MD	1,146,921
VA	1,565,651
NC	2,728,882
<b>Total</b>	<b>23,854,651</b>



**Figure 4: Commercial landings of spiny dogfish on the Atlantic coast, 2012/2013. Source: ACCSP Data Warehouse, September 23, 2013.**

Recreational landings of spiny dogfish on the Atlantic coast for the 2012/2013 fishing year remained insignificant at 41,887 pounds. This is less than 1% of total landings of spiny dogfish.

Canadian landings have averaged about 65 mt per year since 2010, with landings of 65 mt in 2012. The Canadian and foreign fleets in 2012 collectively accounted for only 202 mt.

**Table 4: Landings of spiny dogfish off the Atlantic coast by Canada and foreign fleets, 1991-2011.**

<b>Year</b>	<b>Canada (mt)</b>	<b>Foreign Fleets (mt)</b>	<b>Total (mt)</b>
1991	307	234	541
1992	868	67	935
1993	1,435	27	1462
1994	1,820	2	1822
1995	956	14	970
1996	431	236	667
1997	446	214	660
1998	1,055	607	1662
1999	2,091	554	2645
2000	2,741	402	3143
2001	3,820	677	4497
2002	3,584	474	4058
2003	1,302	643	1945
2004	2,362	330	2692
2005	2,270	330	2600
2006	2,439	10	2449
2007	2,384	31	2415
2008	1,572	131	1703
2009	113	82	195
2010	6	127	133
2011	124	143	267
2012	65	137	202

Total dead discards were 4,848 metric tons (10,687,900 pounds) in 2012. Total dead discards have been between 4,000 and 6,000 metric tons since 1996 (Table 5) despite significant management changes and large fluctuations in annual landings.

**Table 5: Dead discards (metric tons) in the spiny dogfish commercial fishery on the Atlantic coast of the United States, 1981-2012. Source: NEFSC Update on the Status of Spiny Dogfish in 2013 and Projected Harvests at the Fmsy Proxy and Pstar of 40%.**

Year	Otter trawl	Sink gill net	Scallop dredge	Line gear	Total dead discards
1981	18,180	1,608	na	na	19,847
1982	21,455	1,336	na	na	22,861
1983	21,094	1,213	na	na	22,415
1984	19,813	1,475	na	na	21,373
1985	16,677	1,362	na	na	18,232
1986	15,873	1,465	na	na	17,575
1987	14,525	1,459	na	na	16,195
1988	14,476	1,540	na	na	16,190
1989	14,143	1,608	na	na	16,020
1990	17,121	1,819	na	na	19,174
1991	9,661	3,309	24	10	13,274
1992	16,309	1,786	620	65	18,983
1993	8,642	2,944	157	4	11,969
1994	6,954	866	542	na	8,556
1995	8,499	2,019	284	na	10,932
1996	4,701	1,167	91	na	6,025
1997	3,352	698	149	na	4,366
1998	2,634	590	90	na	3,435
1999	3,843	602	31	na	4,581
2000	1,364	1,405	11	na	2,917
2001	2,460	2,161	23	na	5,063
2002	2,770	1,499	44	402	5,049
2003	1,927	1,624	77	0	4,225
2004	4,150	1,209	40	50	6,146
2005	3,758	1,001	11	118	5,589
2006	3,886	1,011	10	13	5,688
2007	4,058	1,540	45	7	6,510
2008	2,802	1,459	178	26	5,088
2009	3,505	1,462	273	84	5,897
2010	2,782	716	147	51	4,081
2011	3,270	849	170	36	4,787
2012	3,344	888	324	17	4,848

Total commercial landings in 2012 are estimated to be 97% female. Females composed an average of 93% of commercial catch since 2003 (NEFSC Update 2013).

#### **IV. Status of Research and Monitoring**

Under the Interstate Fishery Management for Spiny Dogfish, the states are not required to conduct any fishery dependent or independent studies. The Interstate FMP requires an annual review of recruitment, spawning stock biomass, and fishing mortality. The annual review relies heavily on the NEFSC's spring trawl survey data to determine the annual status of the stock. States are encouraged to submit any spiny dogfish information collected while surveying for other species. Research and monitoring information from state reports follows. States that are did not include research/monitoring information in their reports are not listed below. Please see individual reports for more information.

##### *Maine*

The spring portion of the 2012 Maine-New Hampshire Inshore Trawl Survey was conducted in the near shore waters of the Gulf of Maine. A total of 94 spiny dogfish were collected, 77 females and 17 males were caught. Males ranged from 26 to 57 cm and the females 25 to 88 cm.

The fall portion of the 2012 Trawl survey saw 119 dogfish. There were 65 males at lengths ranging from 26 cm to 82 cm. A total of 54 females were sampled at lengths ranging between 26 and 80 cm, numbers were distributed fairly evenly within the ranges for both sexes.

Mike Kersula, a student at the University of Maine, collected some dogfish stomach and tissue samples for a diet and condition study. Approximately 50 - 60 dogfish were sampled in 2012. All other dogfish collected in the survey were released alive.

##### *Connecticut*

Spiny dogfish abundance has been monitored in the Long Island Sound Trawl Survey since 1984. Spring (April, May and June) and fall (September and October) surveys are conducted each year.

Spiny dogfish are most consistently taken in the spring portion of the survey with between 0 and 123 fish caught per survey. Dogfish were more commonly taken in the early years of the survey (between 14 and 123 fish per survey from 1985 through 1991). Fewer than 10 fish per year were taken in 9 of the last 19 years. No spiny dogfish were taken during the spring survey in 1995, 1996 and 2000. The 2012 spring survey catch was 15 fish.

##### *Delaware*

Delaware has two fisheries independent trawl surveys that have the potential for taking spiny dogfish. The Adult Finfish Survey used a 30-foot bottom trawl and to monthly sample nine fixed stations in Delaware Bay from March through December in 2012. This survey has been conducted annually since 1990, and before that from 1966-1971 and 1979-1984 using essentially the same gear type. Ninety three spiny dogfish were taken in 2012 during 90 tows. Most of these were taken in April (56) with the others being taken in November (26) and December (11). Spiny dogfish catch per nautical mile in 2012 was 2% higher than in 2011. Female catch per nautical mile was 33% higher in 2012 than in 2011, but male catch dropped 60% during the same period.

## 2013 SPINY DOGFISH FMP REVIEW

The second fishery independent survey that has the potential for taking spiny dogfish is the 16-foot bottom trawl which is deployed monthly at 39 fixed stations in Delaware River and Delaware Bay and at 12 fixed stations in Delaware's Inland Bays. This survey is conducted from April through October. This gear includes a 0.5-inch mesh liner in the cod end of the trawl and it targets primarily juvenile fishes. There were no spiny dogfish taken with this gear in 2012 from either the Delaware Bay or Delaware's Inland Bays.

### *Maryland*

There was limited biological sampling of catch onboard a commercial offshore trawler targeting horseshoe crabs on November 5, 2012. The 18.3 m (60 foot) trawl had a 15.24 cm (6 inch) mesh body with a 13.97 cm (5.5 inches) cod end. Dogfish were measured and sexed from the sub-sampled catch from the first two sets. Four Spiny Dogfish were measured from set 1 and eight from set 2. Females accounted for 11 dogfish and one was male. Lengths ranged in size from 775 mm TL (31 in.) to 921 mm TL (36 in.) and averaged 866 mm TL ( $\pm 15$ ; 34 in.).

### *North Carolina*

Spiny dogfish were sampled from December 8 – 16, 2012 as part of the Cooperative Winter Tagging Cruise for Atlantic Striped Bass and Affiliated Species. The main goal of the cooperative winter tagging cruise is to tag striped bass in the Atlantic Ocean but occasionally tows contain few striped bass. Information is collected on striped bass and other affiliated species from each tow. Spiny dogfish captured in each tow were enumerated by sex and a subsample was measured. A total of 9,073 spiny dogfish were observed and total length was recorded on 5,985 individuals. Sampling occurred in near shore waters northeast of Diamond Shoals to the mouth of the Chesapeake Bay. Spiny dogfish were collected from 245 tows. Females represented 92% of the total catch. Length measurements were collected on 5,529 females and 456 males. No spiny dogfish were tagged during this year's cruise. The spiny dogfish work conducted during the cruises was in cooperation with the ASMFC, Mid-Atlantic Fishery Management Council, the National Marine Fisheries Service-Northeast Fisheries Science Center, the North Carolina Division of Marine Fisheries and East Carolina University.

The NCDMF initiated a fisheries independent gill net survey in 2001 and expanded its coverage in 2008 to include the Cape Fear River and the near shore (0-3 miles) Atlantic Ocean from New River Inlet south to the South Carolina state line. The objective of this project is to provide annual, independent, relative-abundance indices for key estuarine species in the near shore Atlantic Ocean, Pamlico Sound, Pamlico, Pungo, Neuse, and Cape Fear rivers. These indices can also be incorporated into stock assessments and used to improve bycatch estimates, evaluate management measures, and evaluate habitat usage. Results from this project will be used by the NCDMF and other Atlantic coast fishery management agencies to evaluate the effectiveness of current management measures and to identify additional measures that may be necessary to conserve marine and estuarine stocks. Developing fishery independent indices of abundance for target species allows the NCDMF to assess the status of these stocks without relying solely on commercial and recreational fishery dependent data. The survey employs a stratified random

sampling design and utilizes multiple mesh gill nets (3.0 inch to 6.5 inch stretched mesh, by ½ inch increments). A total of 110 spiny dogfish were caught in the Pamlico Sound portion of the independent gill net study from May 2012 to April 2013. A total of 1 male and 109 females were sampled. Total length ranged from 620 to 1010 millimeters and averaged 876 millimeters. Catches of spiny dogfish in the Cape Fear River were minimal with only one fish being captured. In the near shore Atlantic Ocean sampling, 1,137 individuals were captured from May 2012 to April 2013. A total of 101 males and 1,035 females were sampled. Total length ranged from 541 to 912 millimeters with an average total length of 775 millimeters. It should be noted that the independent gill net data is preliminary and has been updated only to March 2013.

#### *South Carolina*

The SCDNR's on-going nearshore bottom longline survey program documents the annual presence of spiny dogfish in South Carolina's nearshore coastal waters, typically beginning in mid-November. Relative abundance and residence time of spiny dogfish along the coast in general may be related to winter water temperatures along the east coast, with colder winters resulting in larger spiny dogfish populations and longer residence times in South Carolina waters than in more moderate temperature years. Adult females, many being pregnant, seem to make up a majority of the fish taken by sampling gear in this program, suggesting that South Carolina waters may play a role as valuable over-wintering grounds for this species.

#### *Georgia*

Each month, a 40-foot flat otter trawl with neither a turtle excluder device nor bycatch reduction device is deployed at 42 stations across six estuaries. At each station, a standard 15 minute tow is made. During this report period, 494 tows/observations were conducted, totaling 125 hours of tow time. Two spiny dogfish were captured in two separate trawls during January. Lengths for these fish were 845 mm TL and 963 mm TL.

### **V. Status of Management Measures and Issues**

#### *Fishery Management Plan*

Interstate Specifications for the 2012/2013 fishing season (See III Status of the Fishery on page 7 of this report for more details):

Coastwide quota: 30 million pounds

Maximum possession limit: 3,000 pounds

#### *Federal specifications*

Coastwide quota: 30 million pounds; Maximum possession limit: 3,000 pounds; Regional allocation.

#### *Canadian Regulations*

Spiny dogfish is listed as a "groundfish" in the Canada Department of Fisheries and Oceans (DFO) Atlantic Fishery Regulations and managed under their groundfish plan. In the Canadian Maritimes region (New Brunswick, Nova Scotia, and Prince Edward Island), a total allowable catch (TAC) of 2,500 mt has been established for a directed spiny dogfish using fixed gears

(longline, handline and gillnet) and Canadian landings have been significantly below this level for the past few years.

Other groundfish fleets are permitted bycatch only. The inshore and offshore dragger fleets are permitted to retain bycatch in the amount of 25 mt for vessels less than 65 feet and vessels larger in size have an annual cap of 10 mt. With the re-opening of the US east coast fishery and the subsequent reduction in market demand from US buyers, there is very little targeting of spiny dogfish in Canadian waters at this time.

## **VI. Implementation of FMP Compliance Requirements**

The mandatory components of the Interstate Fishery Management Plan are:

- States must close the fishery when the commercial quota is projected to be harvested in their region. *(4.1.2 Semi-Annual Quota Allocation of FMP)*
- Possession limits cannot exceed the maximum specified by the Board during the annual specification setting process. *(4.1.2.1 Annual Process for Setting Fishery Specifications of FMP)*
- States may issue exempted fishing permits for the purpose of biomedical supply not to exceed 1,000 spiny dogfish per year. States must report the amount of dogfish harvested under special permits annually. *(4.1.6 Biomedical Supply of FMP)*
- Up to 1,000 spiny dogfish may be taken for biomedical harvest per year.
- Finning is prohibited. *(4.1.7 Prohibition of Finning of FMP)*
- State permitted dealers must report weight weekly. *(4.1.4 Data Collection and Reporting Requirements of FMP)*
- States must report weight weekly to NMFS. *(4.1.4.2 Quota Monitoring of FMP)*

### *Biomedical Harvest*

In 2012, Mount Desert Island Biological Labs (MDIBL) in Maine was the only special license holder that collected dogfish for biomedical supply. A total of 232 spiny dogfish were purchased from a commercial fisherman from July 26 – August 25, 2012 from Maine coastal waters. Average length was 76 centimeters. All dogfish were used for biomedical research at MDIBL.

### *Scientific/Educations Permits*

Maine Department of Marine Resources (ME DMR) operates a public aquarium at its Boothbay Harbor laboratory facility. The Marine Resources Aquarium did not receive any spiny dogfish during the 2012 season.

Seventy scientific or educational collection permits were issued in North Carolina during the 2012-2013 fishing season. Of these seventy permits only three spiny dogfish were captured and released alive. Two spiny dogfish were caught in a trawl and one was caught in a dredge.

## **VII. PRT Recommendations**

### *State Compliance*

All states with a declared interest in the management of spiny dogfish have submitted reports, and have regulations in place that meet or exceed the requirements of the Interstate Fisheries Management Plan for Spiny Dogfish.



*De Minimis*

The ASMFC Interstate Fisheries Management Program Charter defines *de minimis* as “a situation in which, under the existing condition of the stock and scope of the fishery, conservation, and enforcement actions taken by an individual state would be expected to contribute insignificantly to a coastwide conservation program required by a Fishery Management Plan or amendment” (ASMFC 2000).

Under the Spiny Dogfish FMP, a state may be granted *de minimis* status if a state’s commercial landings of spiny dogfish are less than 1% of the coastwide commercial total. If a state meets this criterion, the state will be exempt from biological monitoring of the commercial spiny dogfish fishery. All states, including those granted *de minimis* status, will continue to report any spiny dogfish commercial or recreational landings within their jurisdiction.

When the spiny dogfish Interstate FMP was implemented in 2003, Maine, Delaware, South Carolina, Georgia, and Florida were granted *de minimis* status. To achieve *de minimis* status the FMP requires, “a state’s commercial landings of spiny dogfish to be less than 1% of the coastwide commercial total.” When given *de minimis* status, a state is exempted from biological monitoring of the commercial spiny dogfish fishery, but must continue to report both commercial and recreational spiny dogfish landings.

Delaware, South Carolina, Georgia, and Florida are requesting *de minimis* status for the 2013/2014 fishing season and meet the FMP requirements for achieving this status (Table 6). The PRT recommends granting all of these states *de minimis* status.

2013 SPINY DOGFISH FMP REVIEW

**Table 6: Percent landings by state during 2012/2013 fishing season. \* indicates a state that qualifies for *de minimis*. Source: ACCSP Data Warehouse, September 23, 2013.**

State	Landings	Coastwide Landings	% of Coastwide Landings
ME*	226,770	23,854,651	0.95%
NH	1,805,494		7.57%
MA	13,130,538		55.04%
RI	1,351,254		5.67%
CT*	97,312		0.41%
NY	299,385		1.26%
NJ	1,489,790		6.25%
DE*	12,654		0.05%
MD	1,146,921		4.81%
VA	1,565,651		6.56%
NC	2,728,882		11.44%
SC*	0		0.00%
GA*	0		0.00%
FL*	0		0.00%

**Table 7: State-by-state compliance with the Interstate Fishery Management Plan for Spiny Dogfish.**

	<b>Report Submitted (Due July 1)</b>	<i>De Minimis Request</i>	<b>Biomedical Permit Harvest</b>	<b>Finning Prohibition</b>	<b>Possession limit</b>
<b>Maine</b>	Yes	No	Yes: 232 Collected	Yes	3,000 lb
<b>New Hampshire</b>	Yes	No	No	Yes	3,000 lb
<b>Massachusetts</b>	Yes	No	No	Yes	3,000 lb
<b>Rhode Island</b>	Yes	No	No	Yes	3,000 lb
<b>Connecticut</b>	Yes	No	No	Yes	3,000 lb
<b>New York</b>	Yes	No	No	Yes	3,000 lb
<b>New Jersey</b>	Yes	No	No	Yes	3,000 lb
<b>Delaware</b>	Yes	Yes, recommended	No	Yes	3,000 lb
<b>Maryland</b>	Yes	No	No	Yes	3,000 lb
<b>Virginia</b>	Yes	No	No	Yes	3,000 lb
<b>North Carolina</b>	Yes	No	No	Yes	5,000 lb
<b>South Carolina</b>	Yes	Yes, Recommended	No	Yes	3,000 lb
<b>Georgia</b>	Yes	Yes, Recommended	No	Yes	1 fish bag limit / 30" min size
<b>Florida</b>	Yes	Yes, Recommended	Prohibit harvest, possession, purchase, sale, or exchange of spiny dogfish.		

**Research Priorities**

- Determine area, season, and gear specific discard mortality estimates coast wide in the recreational, commercial, and non-directed (bycatch) fisheries. (SR 88)
- Monitor the level of effort and harvest in other fisheries as a result of no directed fishery for spiny dogfish. (SR 88 )
- Characterize and quantify bycatch of spiny dogfish in other fisheries. (SR 88)

## 2013 SPINY DOGFISH FMP REVIEW

- Increase observer trips to document the level of incidental capture of spiny dogfish during the spawning stock rebuilding period. (SR 88)
- Conduct a coast wide tagging study to explore stock structure, migration, and mixing rates. (2010 TRAC, SR 88)
- Standardize age determination along the entire East Coast. Conduct an ageing workshop for spiny dogfish, encouraging participation by NEFSC, NCDMF, Canada DFO, other interested agencies, academia, and other international investigators with an interest in dogfish ageing (US and Canada Pacific Coast, ICES). (SR 88)

### References

NEFSC. 2013. Update on the Status of Spiny Dogfish in 2013 and Projected Harvests at the Fmsy Proxy and Pstar of 40%. Report to MAFMC SSC September 17, 2013. 51 p.

Special Report No. 88 of the Atlantic States Marine Fisheries Commission. 2008. Prioritized research needs in support of interjurisdictional fisheries management.

< <http://www.safmc.net/Portals/0/FEP/AppendAFEPVolIVInterResNeeds08.pdf> >

TRAC (Transboundary Resource Assessment Committee) Spiny Dogfish Review Proceedings. 2010.

< <http://www.mar.dfo-mpo.gc.ca/science/TRAC/trac.html> >