

Spiny Dogfish Advisory Panel (AP) Informational Document - August 2017
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****Note - Data Sources for the following are generally from unpublished standard NMFS databases unless noted...everything should be considered preliminary at this point.**

Basic Biology

Spiny dogfish (*Squalus acanthias*) is a coastal shark with populations on the continental shelves of northern and southern temperate zones throughout the world. It is the most abundant shark in the western north Atlantic and ranges from Labrador to Florida, but is most abundant from Nova Scotia to Cape Hatteras, North Carolina. Its major migrations on the northwest Atlantic shelf are north and south, but it also migrates inshore and offshore seasonally in response to changes in water temperature. Spiny dogfish have a long life, late maturation, a long gestation period, and relatively low fecundity, making them generally vulnerable to depletion. Fish, squid, and ctenophores dominate the stomach contents of spiny dogfish collected during the Northeast Fisheries Science Center (NEFSC) bottom trawl surveys but they are opportunistic and have been found to consume a wide variety of prey. More detailed life history information can be found in the essential fish habitat (EFH) source document for spiny dogfish at: <http://www.nefsc.noaa.gov/publications/tm/tm203/tm203.pdf>.

Status of the Stock

Reports on “Stock Status,” including Stock Assessment Workshop (SAW) reports and peer-review reports are available online at the NEFSC website: <http://www.nefsc.noaa.gov/nefsc/saw/>. An assessment update in 2015 found that the stock is not overfished nor subject to overfishing. A data update including the 2017 spring survey is available at <http://www.mafmc.org/ssc-meetings/2017/september-13>. The point estimate of mature female biomass from the 2017 spring survey is the lowest in the time series.

Regulatory Summary

Spiny Dogfish regulations are summarized at <https://www.greateratlantic.fisheries.noaa.gov/regs/infodocs/spinydogfactsheet.pdf>. We are currently in multi-year regulations from May 2016-April 2019 (see Table 1 below), but the Council and its Scientific and Statistical Committee review multi-year specifications each year.

Table 1. May 2016 to April 2019 Spiny Dogfish Specifications

Specifications	Basis	2016 (pounds)	2016 (mt)	2017 (pounds)	2017 (mt)	2018 (pounds)	2018 (mt)
OFL	Projected Catch at Fmsy	64,414,664	29,218	na	na	na	na
New ABCs	Council Risk Policy	52,066,572	23,617	50,805,528	23,045	49,901,633	22,635
Canadian Landings	= avg last 3 years (10,11,12)	143,300	65	143,300	65	143,300	65
Domestic ABC	= ABC – Canadian Landings	51,923,272	23,552	50,662,228	22,980	49,758,333	22,570
ACL	= Domestic ABC	51,923,272	23,552	50,662,228	22,980	49,758,333	22,570
Mgmt Uncert. Buffer	Ave pct overage since 2011	0	0	0	0	0	0
ACT	= ACL - mgmt uncertainty	51,923,272	23,552	50,662,228	22,980	49,758,333	22,570
U.S. Discards	=3 year average 12-13-14	11,494,167	5,214	11,494,167	5,214	11,494,167	5,214
TAL	ACT – Discards	40,429,105	18,338	39,168,060	17,766	38,264,165	17,356
U.S. Rec Landings	= 2014 estimate	68,343	31	68,343	31	68,343	31
Comm Quota	TAL – Rec Landings	40,360,761	18,307	39,099,717	17,735	38,195,822	17,325

OFL = Overfishing Level; ABC = Acceptable Biological Catch; ACL = Annual Catch Limit; ACT = Annual Catch Target; TAL = Total Allowable Landings; Rec = Recreational; Comm = Commercial.

Fishery Performance

At the onset of the domestic commercial fishery in the early 1990's, population biomass for the Northwest Atlantic stock of spiny dogfish was at its highest estimated level (approx. 1.2 billion lb). A large scale unregulated fishery developed and quickly depleted the stock of mature female spiny dogfish such that in 1997 a stock assessment showed that the stock was overfished (NEFSC 1997). The Spiny Dogfish FMP was developed in 1998 and implemented in 2000 in order to halt further depletion of mature female spiny dogfish and allow the stock to recover to a sustainable level. Because the directed commercial fishery concentrated on mature females, rebuilding required elimination of that directed fishery. In 2010 NMFS communicated the rebuilt status of the stock to the Councils.

The current (May 1, 2016 – April 30 2019) quotas are derived from the recommendations of the Council's Scientific and Statistical Committee (SSC) for Acceptable Biological Catch (ABC), and how various components of fishing mortality are handled by the spiny dogfish fishery management plan, as described in the table above. The SSC uses the best available scientific information to set ABC consistent with the Council's risk policy to avoid overfishing and achieve optimum yield. The trip limit is 6,000 pounds in Federal waters; individual states may set more restrictive possession limits.

The following pages provide information on landings and prices since 2000 (pages 3-4), the progression of landings through the year for the current and previous fishing years (page 4), landings by state, month, and gear for 2014-2016 (page 5), and vessel activity since 2000 (page 6).

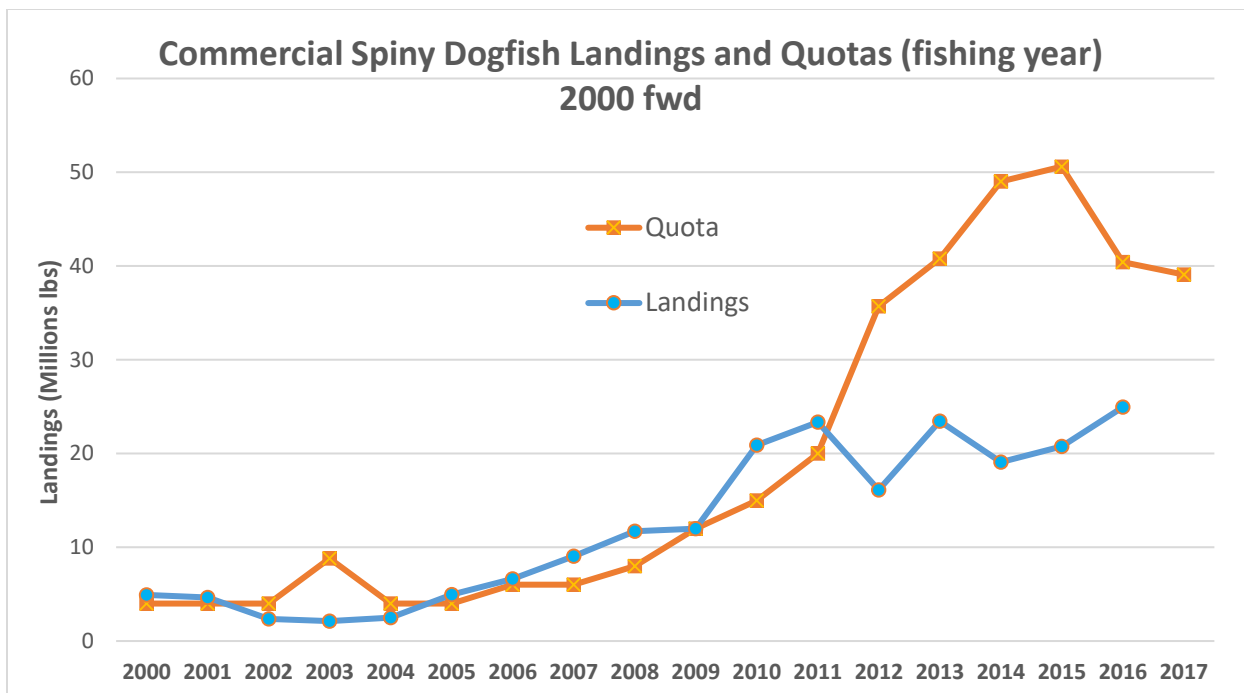


Figure 1. Spiny Dogfish Landings and Quotas 2000-2016. 2016 = May 1, 2016 to April 30, 2017.

Source: Unpublished NMFS dealer reports

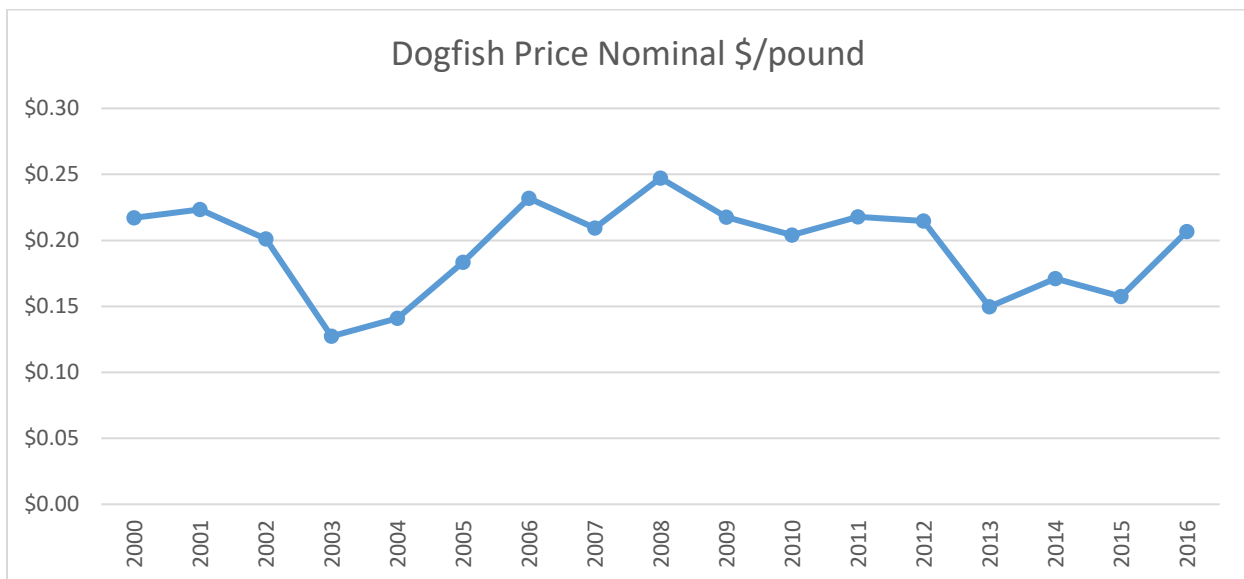


Figure 2. U.S. Spiny Dogfish fishing year ex-vessel prices Calendar Year (Nominal)

Source: Unpublished NMFS dealer reports

Note: Avg. Price since May 1, 2017 = 22 cents; Avg Price Aug 1-Aug 16, 2017 = 22 cents (Preliminary)

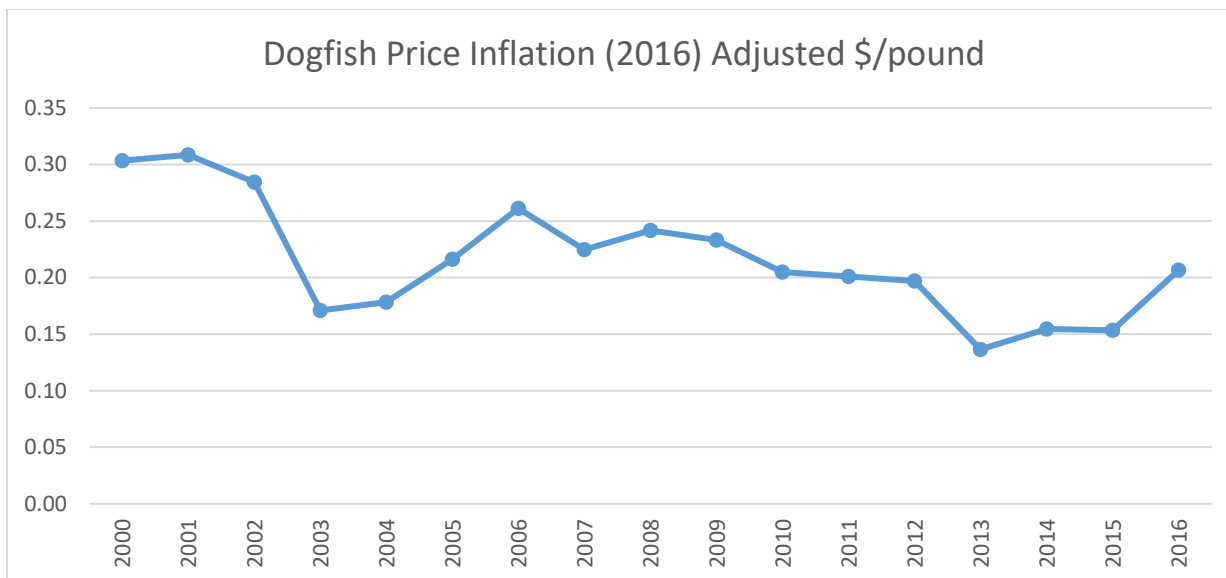


Figure 3. U.S. Spiny Dogfish fishing year ex-vessel prices Calendar Year (Producer Price Index adjusted, 2016 dollars)

Source: Unpublished NMFS dealer reports

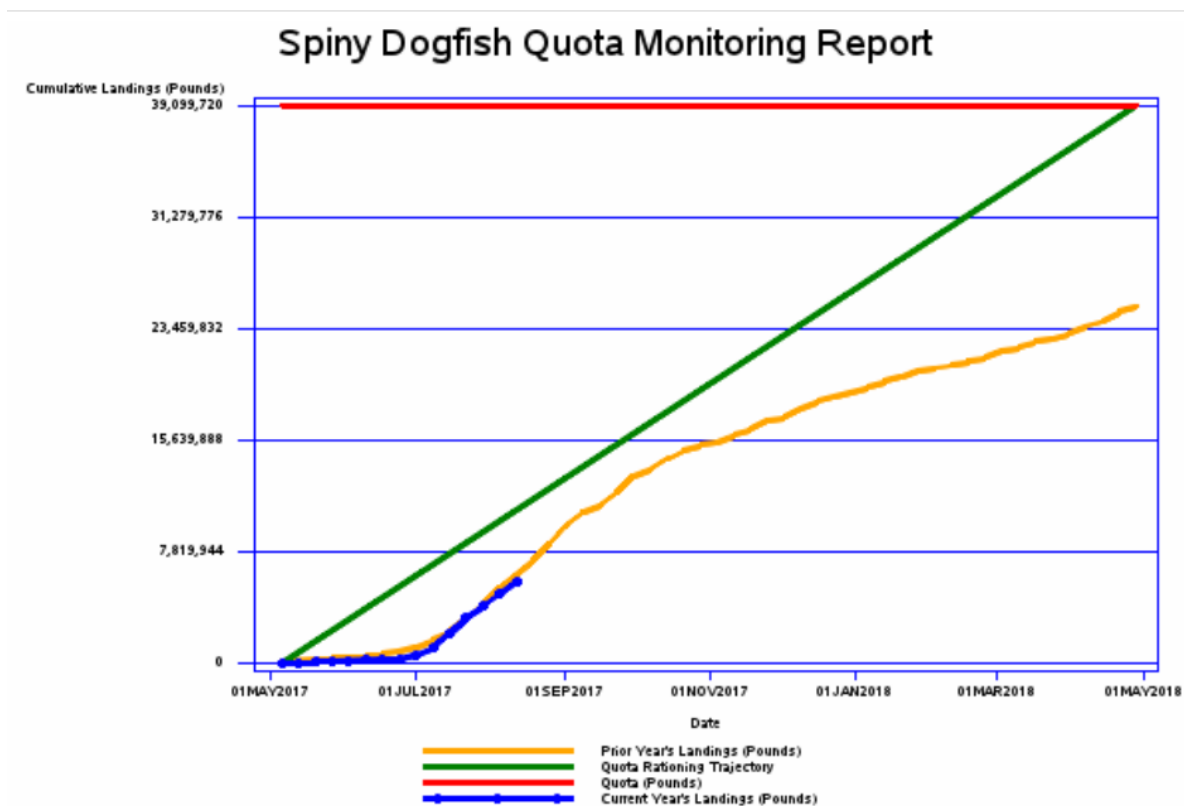


Figure 4. Spiny Dogfish Landings (Blue = 2017-2018 Fishing Year; Orange = 2016-2017 Fishing Year)
(Data through 8/12/17)

Table 2. 2014-2016 Calendar Year dogfish landings by state (pounds)

YEAR	CT	MA	MD	ME+Other	NC	NH	NJ	NY	RI	VA	Total
2014	33,864	9,422,869	1,051,609	230,687	5,396,223	1,704,651	2,202,747	69,034	689,445	2,641,962	23,443,091
2015	34,400	7,849,795	1,140,724	20,530	3,835,242	923,635	1,910,056	29,835	528,559	2,796,559	19,069,335
2016	33,128	14,365,312	1,381,015	678	2,320,523	755,605	3,607,489	39,064	670,682	3,495,086	26,668,582

Source: unpublished NEFSC dealer reports

Table 3. 2014-2016 Calendar Year dogfish landings by month. (pounds)

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2014	1,330,398	2,407,670	1,948,007	711,112	189,828	649,121	3,150,575	2,911,739	2,818,723	1,817,351	2,220,089	3,288,478	23,443,091
2015	2,149,252	1,879,910	1,042,833	664,004	217,713	188,187	3,051,504	2,879,635	1,859,773	811,894	1,737,913	2,586,717	19,069,335
2016	2,848,995	1,352,475	1,845,163	1,413,103	299,780	1,140,263	3,834,146	4,962,902	3,162,140	2,089,312	1,970,507	1,749,796	26,668,582

Source: unpublished NEFSC dealer reports

Table 4. 2014-2016 Calendar Year dogfish landings by gear.

YEAR	GILL_NET_SINK_ _OTHER	LONGLINE_ BOTTOM	GILL_NET_SET_ _STAKE__SEA_ BASS	HAND_LINE_ _OTHER	TRAWL_OTTER_ BOTTOM_FISH	GILL_NET_ DRIFT__LA RGE_PELA GIC	GILL_NET RUNAROUND	GILL_NET_ OTHER	Other/Unk nown
2014	11,632,466	3,662,223	4,733,309	1,058,551	1,157,981	277,303	148,709	15,098	757,451
2015	10,103,553	2,939,522	3,283,804	1,228,404	846,502	184,228	169,974	25,895	287,453
2016	15,540,703	6,446,262	1,618,757	991,391	975,895	262,135	311,992	138,640	382,807
Total	37,276,722	13,048,007	9,635,870	3,278,346	2,980,378	723,666	630,675	179,633	1,427,711

Source: unpublished NEFSC dealer reports

Table 5. Number of vessels active in various annual landing ranges (pounds per vessel per year). Federally-permitted vessels.

YEAR	Vessels 200,000+	Vessels 100,000 - 199,999	Vessels 50,000 - 99,999	Vessels 10,000 - 49,999
2000	30	24	25	122
2001	4	12	11	32
2002	2	14	8	31
2003	4	5	3	11
2004	0	0	0	43
2005	0	0	2	65
2006	0	0	8	117
2007	1	5	17	74
2008	0	11	18	107
2009	0	11	42	191
2010	0	22	42	124
2011	2	55	71	140
2012	20	40	56	181
2013	10	29	43	83
2014	29	37	39	88
2015	26	26	34	56
2016	50	31	27	45

Source: unpublished NEFSC dealer reports