

**CAPE WIND ENERGY PROJECT**

**APPENDIX 3.8-B:**

**DRAFT  
FISHERIES REPORT**

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## **1.0 INTRODUCTION**

The waters of Nantucket Sound support a diverse fish community. Both commercial and recreational fishing are conducted in the Sound. During the summer months, a temperature gradient forms off the east coast of Cape Cod that demarcates the cold-water fishes to the north and warmer water fishes to the south. This gradient, however, is variable and will oscillate north and south along a 20-40 mile section of the Cape Cod Coast. Due to its geographic location and the temperature gradient observed along Cape Cod, Nantucket Sound serves as a migratory pathway for many warm water species that pass through the Sound moving into Cape Cod Bay and Massachusetts Bay. The area also serves as a northern border for several summer migrants including scup, northern fluke and black sea bass.

Both federal and state agencies monitor certain commercial and recreational fishing activities within Nantucket Sound. NOAA Fisheries monitors federally-permitted commercial and recreational fishing activities in all coastal states throughout the United States. The Commonwealth of Massachusetts monitors state-permitted commercial fishing activities in its coastal waters for certain fisheries and gear types. Commercial catch data monitored by NOAA Fisheries and reported by federally-permitted vessels fishing in Nantucket Sound are presented in Section 2.0 for finfish, squid, shellfish and lobster. In addition, information from the NOAA Fisheries dealer database was used to calculate an average price per pound for fisheries landed in five counties surrounding Nantucket Sound. This average price per pound was then applied to the catch data for Nantucket Sound reported by federally-permitted vessels to obtain an average dollar value for each species/year as available (see also Section 2.0). Commercial catch data monitored by the Massachusetts Division of Marine Fisheries (*Marine Fisheries* or DMF) and reported by state-permitted vessels fishing in Nantucket Sound is presented in Section 3.0 for various fisheries including the fish weir, gill net, fish pot, lobster, shellfish and striped bass fisheries.

Recreational fishery information was obtained from the NOAA Fisheries Marine Recreational Fisheries Statistical Surveys for three counties surrounding Nantucket Sound and from recreational catch data reported by federally-permitted charter or party boats fishing in Nantucket Sound. These recreational data are presented in Section 4.0.

Information on fish resources from scientific studies or monitoring activities in Nantucket Sound is less prevalent. The main source of resource data available in Nantucket Sound is from the *Marine Fisheries* independent fisheries monitoring program. *Marine Fisheries* conducts bi-annual resource trawls for all coastal waters including Nantucket Sound and the information gathered is independent of commercial fisheries monitoring. Data from those trawls located in Nantucket Sound are discussed in detail in Section 5.0.

## **2.0 NOAA FISHERIES COMMERCIAL VESSEL TRIP REPORT DATA**

Data on commercial fisheries have long been collected by the NOAA Fisheries National Marine Fisheries Service (NMFS). In the Northeast prior to 1994, fishery statistics were collected through a voluntary reporting system. Fish landings and price information were collected by NMFS port agents at the point of initial sale of the catch through dealer reports or "weigh out receipts". This voluntary "weigh out" reporting was replaced in June 1994 with a mandatory reporting system. The mandatory reporting system continues today and involves fishermen submitting logbooks of their catch. NMFS refers to these data as vessel trip reports (VTRs). The system is used in all fisheries that are subject to federal fishery management plans except for American lobster and Atlantic herring fisheries.

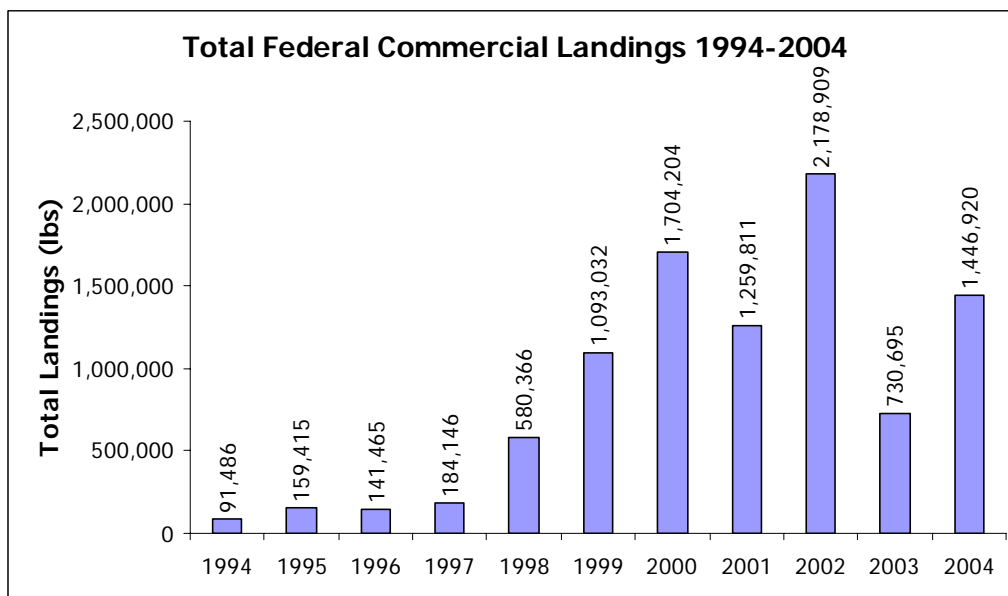
Appendix 5.4-A of the Draft Environmental Impact Statement/Report (DEIS/R) presented NMFS commercial landings data for the Nantucket Sound region from 1990 through 2001. The data from 1990 through 1993 are from weigh out reports and those from 1994 through 2001 are from vessel trip reports (VTRs). The DEIS/R did not directly compare the weigh out data with the VTR data because the data were collected using different methods (dealer weigh out versus fishermen logbook) and because the weigh out data are reported from a larger sampling area than the VTR data. Since these two data sets were analyzed separately and there have been no

changes to the 1990-1993 weigh out data presented in the DEIS/R, the weigh out data were not carried forward into this revised report.

Since filing the DEIS/R, three additional years of VTR data have become available. This revised report compiles the results from the NMFS VTR data from 1994- 2004, an eleven-year period<sup>1</sup>. For reporting purposes, NMFS divides the coast of the United States into statistical sampling areas and sub-areas. Nantucket Sound is located in statistical area 538, sub-area 075 (Area 075). VTR data over the 11 year period were obtained for Area 075 (see Attachment B for a map depicting NMFS statistical area 075).

## **2.1 General Fisheries Landings Reported on Vessel Trip Reports (VTRs)**

Approximately 9.6 million pounds of commercial landings subject to federal VTR reporting were harvested from Nantucket Sound (Area 075) from 1994 through 2004 (Figure 1). The commercial data presented in Figure 1 includes finfish species, shellfish species, lobster, and other invertebrates such as squid, shrimp and crabs. The total federally-reported landings appear to have increased from 1994 through 2000 and then fluctuated between 2001 and 2004 (Figure 1). It is important to note, however, that this trend may simply be an artifact of the mandatory reporting requirements that began in 1994 for the vessel trip reports. As the reporting system became more common, the accuracy with which the fishermen reported and are continuing to report their catches may have improved. In addition, quotas and management measures can affect landings; therefore some years with lower landings could be a result of management measures or quotas rather than abundance. VTR data are presented annually by month and species in Tables 1 through 11 in Attachment B. A summary table showing the total commercial landings (pounds) and number of species landed by month and year is presented in Table 12 in Attachment B.



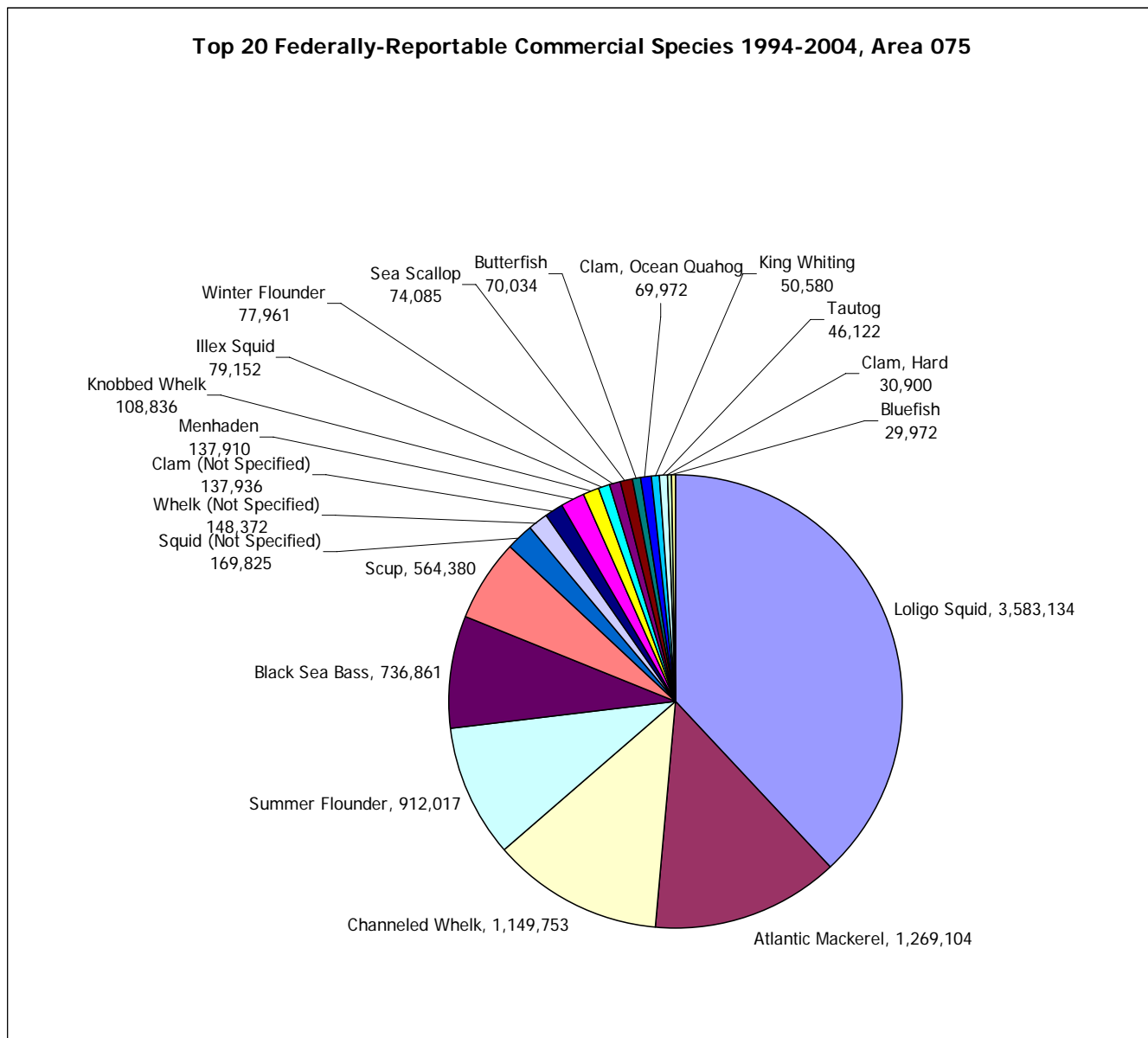
**Figure 1. Total federally-reportable commercial landings from 1994 through 2004 for NMFS statistical area 075 (Source: NMFS Vessel Trip Report Data, Area 075).**

Of the species reported on NMFS VTRs, the top 20 species harvested from 1994 through 2004 included *Loligo* squid, Atlantic mackerel, channeled whelk, summer flounder, black sea bass, scup, unidentified squid species, unidentified whelk species, unidentified clam species, menhaden, knobbed whelk, *Illex* squid, winter flounder, sea

<sup>1</sup> When gathering the most up-to-date VTR data, it was determined that the 1994-2001 VTR data provided by NOAA Fisheries and presented in the DEIS/R included recreational catch data for federally-permitted charter/party boats as well as the commercial catch data. Therefore, the data has been reanalyzed for each year to present the commercial data separate from the recreational data.



scallop, butterfish, ocean quahog, king whiting, tautog, hard clam, and bluefish. The top 20 species accounted for approximately 9.4 million pounds of federally-reportable commercial species harvested, or about 98.7% of the total federally-reportable commercial species harvested during this time period (Table 13 in Attachment B and Figure 2). Annual trends of these top 20 species are also presented in Attachment B.



**Figure 2. Top 20 federally-reportable commercial species harvested from 1994 through 2004 for NMFS statistical area 075 (Source: NMFS Vessel Trip Report Data for Area 075).**

Gear types used to harvest these commercial species included otter trawls, weirs, dredges, seines, various types of pots/traps as well as hand lines. Federally-reportable commercial landings by gear type are presented in Table 1 for the period 1994 through 2004 for Area 075, Nantucket Sound. According to the federal VTR data, the greatest landings during this time period were from otter trawls for bottom fish (approximately 4.9 million pounds) or 52% of the total federally-reportable commercial landings.

**Table 1. Total federally-reportable commercial landings by gear type in Nantucket Sound from 1994-2004 (Source: NMFS Vessel Trip Report Data, Area 075)**

Gear Type	Total Federally-Reportable Commercial Landings (lbs) Area 075
Otter Trawl, Bottom, Fish	4,989,980
Weir	1,939,195
Pot, Conch/Whelk	965,609
Pot, Fish	862,658
Dredge, Ocean Quahog/Surf Clam	324,248
Trap	233,512
Scottish Seine	99,298
Hand Line/Rod & Reel	89,850
Otter Trawl, Bottom, Shrimp	24,429
Pot, Crab	22,372
Pot, Other	11,227
Pot, Lobster	5,420
Pot, Mixed	1,443
Otter Trawl, Bottom, Scallop	548
Other Gear	299
Dredge, Sea Scallop	226
Pot, Shrimp	135
Grand Total	9,570,449

Source: NMFS Vessel Trip Report Data for Area 075.

Figures 1 through 5 in Attachment A plot the latitude/longitude in degrees and minutes reported on VTRs by federally-permitted commercial vessels in Area 075 as the point where most fishing was reported to occur. Federal commercial fishing activity was plotted by gear type as follows: pots/traps (Attachment A, Figure 1), otter trawls (Attachment A, Figure 2), dredging (Attachment A, Figure 3), weirs and seines (Attachment A, Figure 4), and hand line/rod and reel (Attachment A, Figure 5). A discussion of each of these figures is presented below.

Figure 1 in Attachment A plots the results reported by commercial fishermen on VTRs where most of their federally-permitted pot/trap fishing occurs in Area 075. Since pots and traps are stationary gear, the latitude/longitude points reported on VTRs are assumed to be fairly representative of where fishing takes place. As reported on the VTRs, the highest density of pots and traps appear to be primarily west of Horseshoe Shoal, along the Main channel and north and south of Tuckernuck Shoal. Pot and trap fishing is also reported to occur within the Project area on Horseshoe Shoal, with higher densities in the southeast corner of the Project area. The portion of federally-reportable pot/trap fishing within the Project area accounts for approximately 7.5% of the total reported in Area 075 over the eleven year period.

Plots of the general location of otter trawl fishing in Area 075 subject to federal VTR reporting is presented in Attachment A, Figure 2. The VTR reporting instructions indicate that fishermen should enter a point where **most** of their fishing occurs. Since otter trawls are mobile gear, this plot serves as a general guide to where fishing may occur in Area 075. It is not possible to distinguish the location of where a trawl starts or stops. However, NOAA Fisheries indicated that plotting all data points reported on VTRs over an eleven year period can provide some information as to the pattern of where this gear type may be used in Area 075. As shown in Figure 2 of Attachment A, the highest density of otter trawling subject to federal VTR reporting appears to be north and east of Horseshoe Shoal and north of Nantucket. Otter trawl fishing is also reported to occur within the Project area on Horseshoe Shoal, with higher densities in the northern and southeast corner of the Project area. The portion

of federally-reportable otter trawl fishing within the Project area accounts for approximately 5% of the total reported in Area 075 over the eleven year period. The remaining 95 percent appears to occur outside of the Project area.

The general location of fishing activity in Area 075 characterized on VTRs as dredging is presented in Attachment A, Figure 3. As with otter trawls, dredging is considered mobile gear; therefore, this plot serves as a general guide to where dredging activities may occur in Area 075. None of the commercial fishermen subject to federal permits reported using dredge gear within the Project area. According to the VTRs, all dredging activities were reported to occur well east of the Project area in the general vicinity of Monomoy Island (see Attachment A, Figure 3).

Figure 4 in Attachment A plots the results reported by commercial fishermen on VTRs where most federally-permitted weir or seine fishing occurs in Area 075. Weirs are considered stationary gear; therefore, the latitude/longitude points reported on VTRs are assumed to be fairly representative of where weir fishing takes place. Federally-permitted weir fishing was reported to occur north of the Project area in nearshore waters of Centerville Harbor near Osterville and in nearshore waters of Monomoy Island. The weir fishery is licensed by the towns and therefore takes place within the three-nautical mile (5.6 km) limit of state waters. No federally-permitted weir fishing was reported to occur within the Project area. There are several types of seines used in the commercial fishing industry; however, according to the VTRs, all federally-permitted seines were scottish seines in Area 075 during this time period. Since Scottish seines are considered mobile and it is not possible to distinguish where towing of the seine starts or stops, this plot serves as a general guide to where federally-permitted seine fishing may occur in Area 075. However, as stated above, NOAA Fisheries indicated that plotting all data points reported on VTRs over an eleven year period can provide some information as to the pattern of where this gear type may be used in Area 075. None of the commercial fishermen subject to federal permits reported using seine gear within the Project area. According to the VTRs, all seine fishing was reported to occur well east of the Project area in the general vicinity of Monomoy Island (see Attachment A, Figure 4).

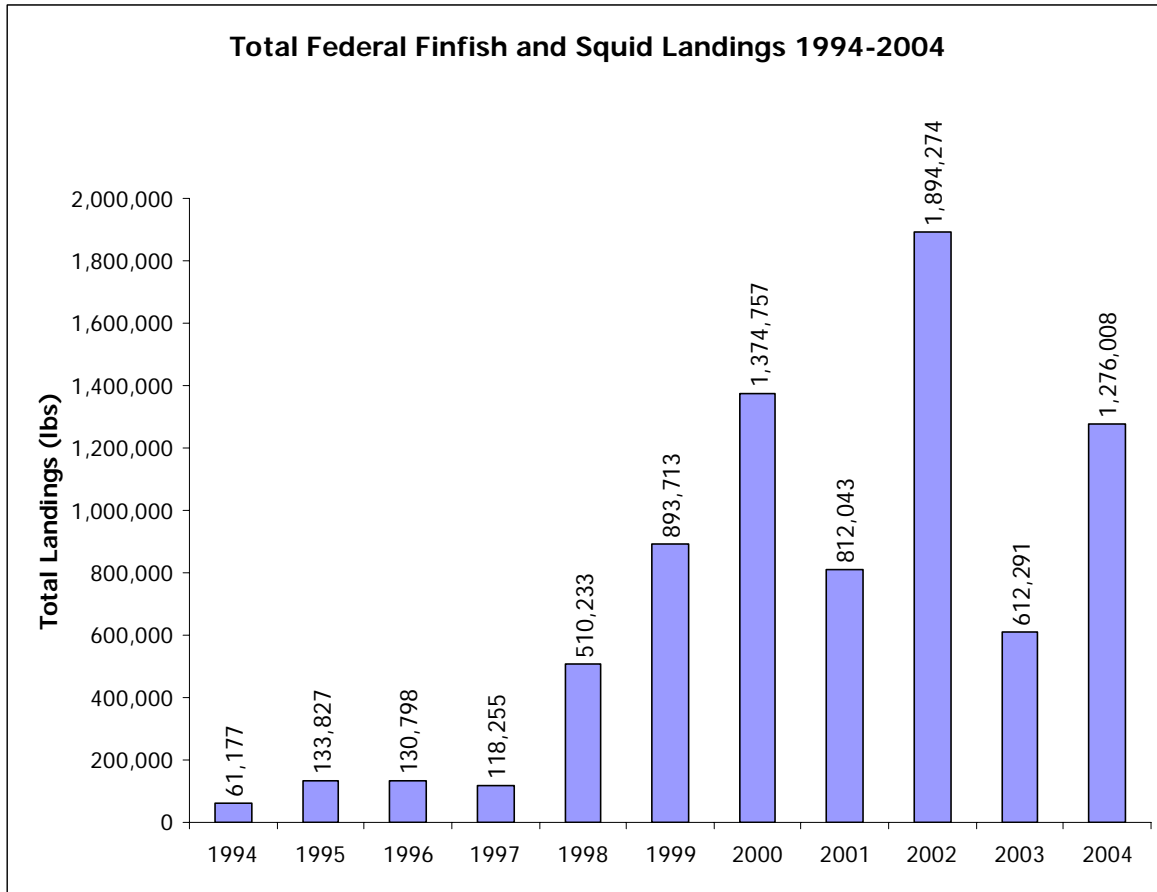
Attachment A, Figure 5 plots the location reported by commercial fishermen on VTRs where most of their federally-permitted hand line/rod and reel fishing occurs in Area 075. Since hand lines/rod and reel are considered stationary gear, the latitude/longitude points reported on VTRs are assumed to be fairly representative of where fishing takes place. As reported on the VTRs, the highest density of federal commercial hand line/rod and reel fishing appears to be well north of the Project area in nearshore waters. Higher densities of this gear type are also reported to occur just south of Monomoy Island. Some commercial VTRs indicated that hand line/rod and reel fishing occurs within the Project area on Horseshoe Shoal, but these are at much lower densities than reported elsewhere in Nantucket Sound. The portion of federally-reportable hand line/rod and reel fishing within the Project area accounts for approximately 3% of the total reported in Area 075 over the eleven year period.

## **2.2 Finfish and Squid Landings**

The commercial data presented in Figure 3 includes finfish species and squid species. Squid (both *Loligo* and *Illex*) landings are included with the finfish landings because they are an important commercial fishery in this region.

Of the approximately 9.6 million pounds of federally-reportable commercial landings harvested from 1994 through 2004 in Area 075, 7.8 million pounds (81%) were finfish and squid. The remaining 1.8 million pounds (19%) consisted of lobster and various scallop, whelk, clam and crab species. Similar to the overall total federally-reportable commercial landings for Area 075, finfish and squid landings appear highest in 2002 (1.9 million pounds) and lowest in 1994 (61 thousand pounds) (see Figure 1 and Figure 3). Again, it is important to note that mandatory reporting by the fishermen began in 1994 and the steady increase in the total finfish species harvested, may be a function of better reporting practices through time. In addition, quotas and management measures can affect landings; therefore some years with lower landings could be a result of management measures or quotas rather than abundance. Total federally-reportable landings for finfish and squid species in

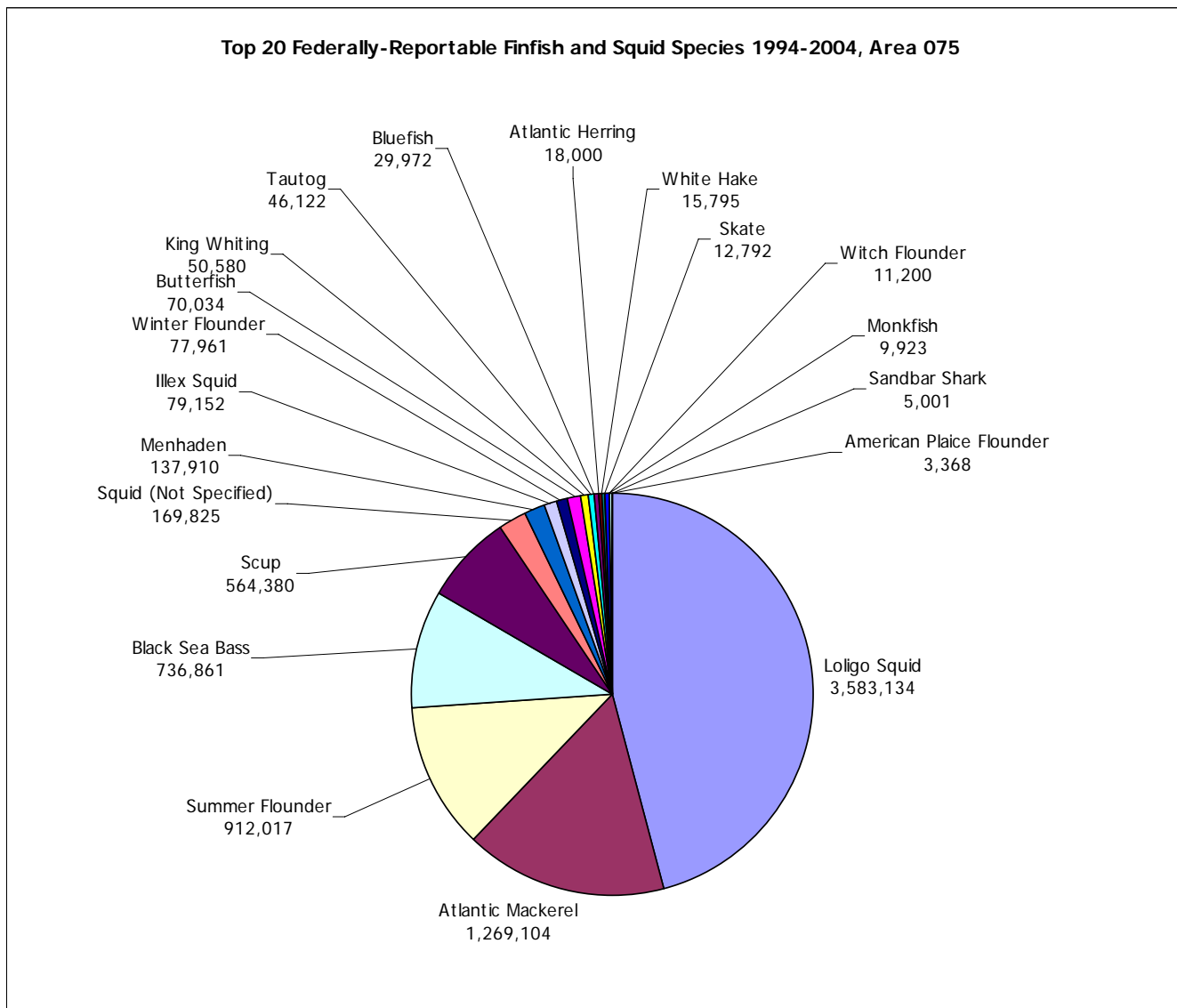
Area 075 and the proportion of total catch for each species by year is presented in Table 14 of Attachment B for the 1994-2004 time period.



**Figure 3. Total federally-reportable finfish and squid landings from 1994 through 2004 for NMFS statistical area 075 (Source: NMFS Vessel Trip Report Data for Area 075)**

Of the finfish and squid species reported on NMFS VTRs, the top 20 species harvested from 1994 through 2004 in Area 075 included *Loligo* squid, Atlantic mackerel, summer flounder, black sea bass, scup, unidentified squid species, menhaden, *Illex* squid, winter flounder, butterfish, king whiting, tautog, bluefish, Atlantic herring, white hake, skate, witch flounder, monkfish, sandbar shark, and American plaice flounder (Figure 4). The harvest of these 20 species accounted for approximately 7.8 million pounds or about 99.8% of the 7.82 million pounds of federally-reportable finfish and squid harvested in Area 075 from 1994-2004 (Figure 4).

In Area 075, *Loligo* squid was the top species landed, with approximately 3.6 million pounds reported. *Illex* squid and unspecified species of squid also ranked among the top species in Area 075. Squid landings accounted for approximately 49% of federally-reportable finfish and squid landings in Area 075 during the eleven year period.



**Figure 4. Top 20 federally-reportable finfish and squid species harvested from 1994 through 2004 for NMFS statistical area 075 (Source: NMFS Vessel Trip Report Data for Area 075).**

Gear types reported on VTRs for the harvest of finfish and squid species in Area 075 from 1994-2004 include otter trawls, weirs, dredges, seines, various types of pots/traps as well as hand lines. Specific gear types reported for finfish and squid landings in Area 075 are presented in Table 2 for the 1994 through 2004 time period. The greatest reported landings were from otter trawls (approximately 4.7 million pounds). Fish weirs and fish pots also captured a large fraction of the total federally-reportable finfish and squid landings in Area 075 during this time period.

**Table 2. Total federally-reportable finfish and squid landings by gear type in Nantucket Sound from 1994-2004 (Source: NMFS Vessel Trip Report Data, Area 075).**

<b>Gear Types</b>	<b>Federally-Reportable Finfish and Squid Landings (lbs) Statistical Area 075</b>
Otter Trawl, Bottom, Fish	4,714,801
Weir	1,939,195
Pot, Fish	686,838
Trap	233,512
Scottish Seine	99,298
Hand Line/Rod & Reel	89,795
Otter Trawl, Bottom, Shrimp	20,577
Pot, Conch/Whelk	13,277
Pot, Other	11,227
Pot, Crab	3,993
Pot, Lobster	2,829
Pot, Mixed	1,056
Otter Trawl, Bottom, Scallop	464
Other Gear	299
Pot, Shrimp	135
Dredge, Ocean Quahog/Surf Clam	80
<b>Grand Total</b>	<b>7,817,376</b>

Source: NMFS Vessel Trip Report Data for Area 075.

### **2.3 Shellfish Landings**

Federally-reportable shellfish landings in Area 075 between 1994 and 2004 are represented by several species including conch (whelk), quahogs, scallops, and clams. Conch is the generic classification for the various whelks found in the Southern New England waters, including the knobbed whelk, channeled whelk, and lightning whelk. Federally-reportable shellfish harvested from Nantucket Sound (Area 075) totaled approximately 1.8 million pounds from 1994 through 2004 (Figure 5). The lowest shellfish landings (approximately 10 thousand pounds) were reported in 1996 while the highest shellfish landings for Nantucket Sound were reported in 2001 (approximately 448 thousand pounds; Figure 5).

For Area 075, conch (especially channeled whelk) were the predominant federally-reportable shellfish species harvested from 1994-2004 (Figure 6). The other main federally-reportable shellfish harvested from Area 075 during this time period were clams (not specified), sea scallops, and ocean quahogs. The various conch species totaled approximately 1.4 million pounds which constituted about 81% of the total shellfish landings over the 1994 through 2004 time period (Table 3). The various clam species totaled approximately 248 thousand pounds, which constituted about 14% of the total shellfish landings from 1994-2004 (Table 3).

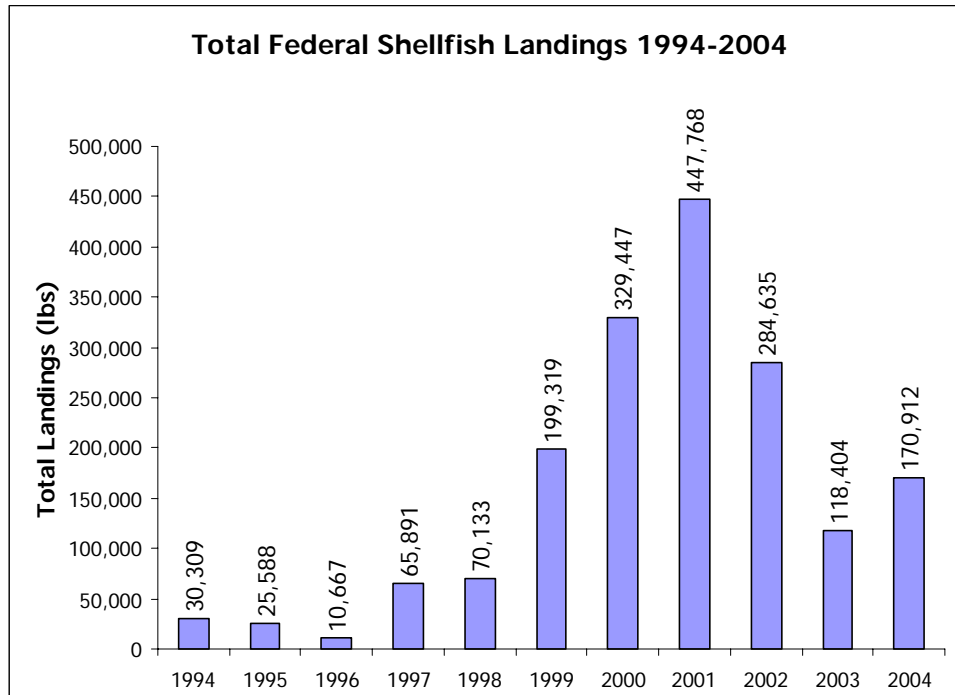


Figure 5. Total federally-reportable shellfish landings from 1994 through 2004 for statistical area 075 (Source: NMFS Vessel trip Report Data for Area 075)

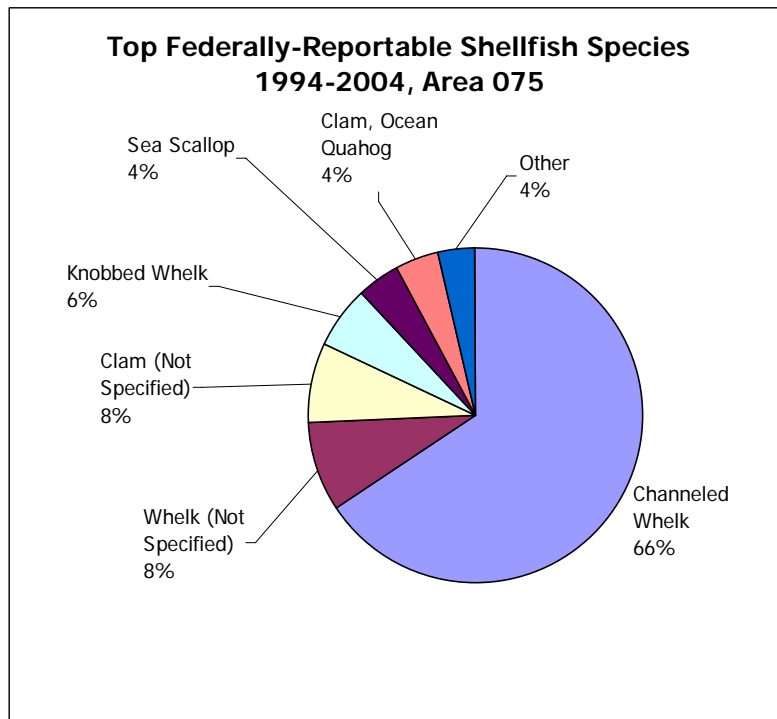


Figure 6. Top federally-reportable shellfish species landed from NMFS statistical area 075 from 1994 through 2004 (Source: NMFS Vessel Trip Report Data for Area 075)

**Table 3. Total federally-reportable shellfish species landed (pounds) in Nantucket Sound from 1994-2004 (Source: NMFS Vessel Trip Report Data for Area 075)**

Shellfish Species	Total Federally-Reportable Shellfish Landings (lbs) Area 075	Percent of Total Shellfish Landings
Channeled Whelk	1,149,753	65.59%
Whelk (Conch Species Not Specified)	148,372	8.46%
Clam, Species Not Specified	137,936	7.87%
Knobbed Whelk	108,836	6.21%
Sea Scallop	74,085	4.23%
Clam, Ocean Quahog	69,972	3.99%
Clam, Hard	30,900	1.76%
Horseshoe Crab	10,431	0.60%
Clams/Bushel (Species not Specific)	7,771	0.44%
Knobbed Whelk - Bushel	3,906	0.22%
Shrimp (Pandalid)	3,852	0.22%
American Lobster	3,250	0.19%
Lightning Whelk	1,275	0.07%
Quahogs – Bushel	1,121	0.06%
Spider Crab	500	0.03%
Crab, Species Not Specified	295	0.02%
Clam, Hard (Bay Quahog)	292	0.02%
Razor Clam	283	0.02%
Bay Scallops	226	0.01%
Rock Crab	17	0.001%
<b>Grand Total</b>	<b>1,753,073</b>	<b>100.00%</b>

Source: NMFS Vessel Trip Report Data for Area 075.

The most common gear type reported on VTRs for harvesting shellfish from Area 075 from 1994-2004 was conch pots (Table 4). Fifty-four percent of the federally-reportable shellfish landings in Nantucket Sound were harvested from conch pots during this time period. Shellfish were also reported to be harvested from quahog/clam dredges (18.5%), otter trawls (16%), fish pots (10%), and crab pots (1.0%).



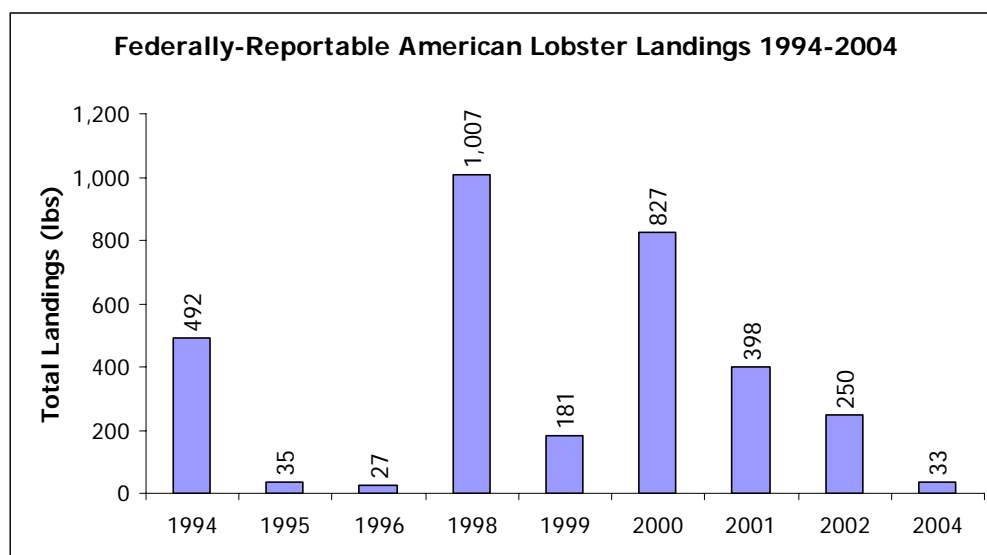
**Table 4. Gear type used for harvesting of federally-reportable shellfish in Nantucket Sound from 1994 through 2004 (Source: NMFS Vessel Trip Report Data for Area 075)**

<b>Gear Type</b>	<b>Total Federally-Reportable Shellfish Landings (lbs) Area 075</b>	<b>Percent of Total Shellfish Landings</b>
Pot, Conch/Whelk	952,332	54.32%
Dredge, Ocean Quahog/Surf Clam	324,168	18.49%
Otter Trawl, Bottom, Fish	275,179	15.70%
Pot, Fish	175,820	10.03%
Pot, Crab	18,379	1.05%
Otter Trawl, Bottom, Shrimp	3,852	0.22%
Pot, Lobster	2,591	0.15%
Pot, Mixed	387	0.02%
Dredge, Sea Scallop	226	0.01%
Otter Trawl, Bottom, Scallop	84	0.005%
Hand Line/Rod & Reel	55	0.003%
<b>Grand Total</b>	<b>1,753,073</b>	<b>100.00%</b>

**2.4 Lobster Landings**

Nantucket Sound does not appear to support a major lobster fishery. For Nantucket Sound (Area 075), federally-reportable lobster landings constituted about 0.034% of the total federally-reportable commercial landings and 0.19% of the federally-reportable shellfish landings from 1994 through 2004. Figure 7 presents the lobster landings by year for Area 075.

VTR data from Nantucket Sound (Area 075) indicated low lobster landings in 1995, 1996, and 2004 (35, 27, and 33 pounds, respectively). The highest federally-reportable lobster landings occurred in 1998 (1,007 pounds, or 31% of total federal lobster landings in Area 075) and in 2000 (827 pounds, or 25% of total federal lobster landings in Area 075) over the 1994 through 2004 time period.



**Figure 7. Total federally-reportable lobster landings from 1994 through 2004 for NMFS statistical area 075 (Source: NMFS Vessel Trip Report Data for Area 075)**

The most common gear type reported to be used by commercial fishermen with federal licenses to harvest lobster is the lobster pot (Table 5). During the 1994-2004 time period, 78% of the federally-reportable lobster landings in Area 075 were from lobster pots, 3.3% were from fish pots, and 11.2% were from mixed pots (most likely lobster, fish, conch or crab pots). The remaining 7.5% of federally-reportable lobster landings in Area 075 were from otter trawls.

**Table 5. Gear type used for harvesting of federally-reportable lobster in Nantucket Sound from 1994 through 2004 (Source: NMFS Vessel Trip Report Data for Area 075)**

Gear Type	Total Federally-Reportable Lobster Landings (lbs) Area 075
Pot, Lobster	2,537
Pot, Mixed	364
Otter Trawl, Bottom, Fish	243
Pot, Fish	106
Grand Total	3,250

Source: NMFS Vessel Trip Report Data for Area 075

**2.5 Commercial Dealer Landings**

Price data for commercial fish landed were obtained from the NOAA Fisheries commercial dealer database. Dealers that purchase from federally-permitted vessels must complete dealer weigh-out forms when purchasing from federal vessels. These weigh out reports include information on the pounds landed and sold to the dealer and the price paid for each species. Dealer weigh out results are reported by county and cannot be matched with the NMFS statistical area where the fish were reported to be caught. In order to get an estimate of the value of landings from Nantucket Sound (Area 075), NOAA Fisheries suggested using information from both the commercial VTR database (see Sections 2.1 through 2.4 above) and the dealer database. At the suggestion of NOAA Fisheries, price data were obtained from the NOAA dealer database for Barnstable, Dukes, Nantucket, Plymouth, and Bristol counties. Price data for the five counties was averaged for each species by year and then this average price was multiplied by the annual pounds for each species reported in the VTR data for Area 075 to come up with an approximation of the value of federal-reportable landings from Area 075. Table 15 in Attachment B provides the price data by species and year for federally-reportable commercial landings in Nantucket Sound from 1994-2004.

Table 6, below provides a summary of the total federally-reportable pounds harvested from Nantucket Sound (Area 075) and the total value based on average price data of those federally-reportable landings for each year between 1994 and 2004. The total value for a given year ranged from \$116,632 in 1994 to \$1,889,520 in 2002. Higher values are associated with years that reported higher landings. See Table 15 in Attachment B for species specific price trends over the eleven year period.

**Table 6. Federally-Reportable Pounds Harvested from Nantucket Sound and Approximate Value**

Year	Federally-Reportable Pounds Harvested from Area 075	Total Value based on Average Price data from Dealer database
1994	91,486	\$116,632
1995	159,415	\$191,032
1996	141,465	\$149,538
1997	184,146	\$216,055
1998	580,366	\$624,685
1999	1,093,032	\$1,116,003
2000	1,704,204	\$1,534,398
2001	1,259,811	\$1,600,345
2002	2,178,909	\$1,889,520

2003	730,695	\$903,805
2004	1,446,920	\$1,506,277
<b>Grand total</b>	<b>9,570,449</b>	<b>\$9,848,289</b>

### **3.0 MARINE FISHERIES COMMERCIAL LANDINGS DATA**

*Marine Fisheries* has been collecting commercial landings and catch and effort data for over thirty years. Data collection efforts focus on lobster, shellfish and some other state-regulated fisheries throughout Massachusetts. The other fisheries include: striped bass, fluke, fish weir, gillnet, and fish-pot (sea bass, scup & conch). Unlike the NOAA Fisheries federal commercial data that bases information by trip through individual trip reports (see Section 2.0), *Marine Fisheries* collects information via annual catch reports submitted at license renewal time which details catch and effort data by month, not by trip.

Appendix 5.4-A of the DEIS/R presented *Marine Fisheries* commercial landings data for Nantucket Sound from 1990-2000. Since filing the DEIS/R, four additional years of data have become available. This revised report compiles the results from the *Marine Fisheries* data from 1990-2004, a fifteen-year period. For the purposes of reporting commercial fishery information, *Marine Fisheries* also defines statistical areas for the waters along the Massachusetts coast. Nantucket Sound is considered statistical reporting area 10. DMF Area 10 appears to be identical to the NMFS Area 075. A map depicting DMF Area 10 is included in Attachment C. Information for Area 10 from 1990 to 2004 are summarized in this section. The information is presented by specific fishery type (fish weir, gill net, fish pot, shellfish, lobster, and striped bass) since this is how the data are collected by *Marine Fisheries*.

#### **3.1 License Information**

Information on state-issued licenses was obtained from *Marine Fisheries* for the gill net, fish pot and fish weir fisheries. Table 7 presents the number of fishermen who reported fishing with these gear types in DMF Area 10 via state-specific catch reports over the 15-year period. This table represents the number of fishermen who participate in fisheries requiring annual state catch reports. It does not account for those fisheries in Area 10 that do not require annual state catch reports such as fluke, scup and black sea bass harvested with gear other than pots, and certain shellfisheries. This information suggests that few fishermen used fish weirs in Nantucket Sound. The number of fishermen reporting the use of fish weirs on state catch reports ranged from 3 to 5 from 1992 to 2004. The information also suggests that few fishermen appear to participate in the state gill net fishery in Nantucket Sound. In 1992, 1995, 1999, and 2002 only 1 fisherman reported using gillnets in DMF Area 10 on state catch reports. In 1993, 3 fishermen reported using gillnets in the area. No fishermen reported using gill nets on state catch reports during the remaining years.

The state-permitted fish pot fishery is further sub-divided by species for the purposes of reporting. The number of fishermen that reported harvesting scup from fish pots on state catch reports in Nantucket Sound appears to have generally declined through the years. In 1994, 49 fishermen reported the harvest of scup from pots in DMF Area 10. By 2004, this number had decreased to 28. The number of fishermen that reported collecting sea bass from fish pots on state catch reports in Nantucket Sound has varied over the years from a high of 38 in 1991 to a low of 18 in 1998. The number of fishermen that reported collecting conch from fish pots on state catch reports in Nantucket Sound appears to have generally decreased through the years. Forty-seven fishermen reported harvesting conch from fish pots from 1993 through 1995 in DMF Area 10. Since that time, this number has decreased, and in 2004 only 28 fishermen reported harvesting conch from fish pots.

**Table 7. Number of fishermen reporting fishing in DMF Area 10 via state catch reports for five state managed fisheries**

Fishery	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	total
Fish Weir			4	4	4	3	4	4	5	4	4	4	3	2	4	49
Gillnet	0	0	1	3	0	1	0	0	0	1	0	0	1	0	0	7
Sea Bass (Fish Pot)	35	38	27	22	27	29	28	20	18	25	25	28	34	32	33	421
Conch (Fish Pot)	NA	NA	42	47	47	47	40	27	21	33	24	20	34	26	31	439
Scup (Fish Pot)	NA	NA	NA	NA	49	47	44	31	26	28	21	14	17	24	28	329

NA = data not available; state did not require catch reports for those fisheries during those years

**3.2 Fish Weir, Gill net, Fish pot and Striped Bass Fisheries**

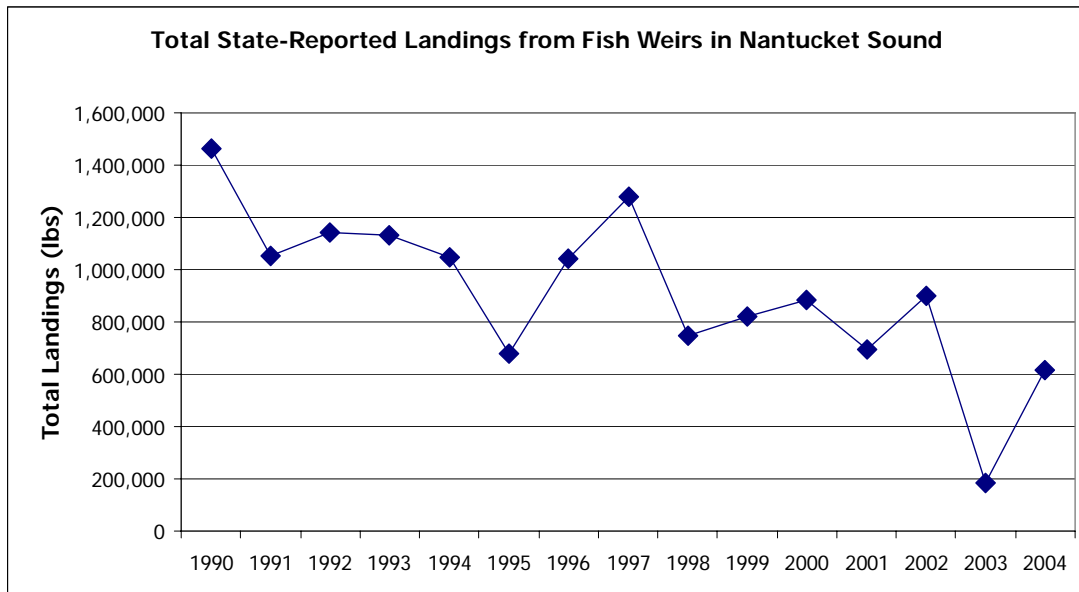
The fish species reported on catch reports to DMF from fish weirs, gill nets and fish pots are presented in Table 8. Fish weirs appeared to collect more diverse finfish species than gill nets. The fish pot fishery targets demersal species such as scup, sea bass and conch. No other species are reported for fish pots.

**Table 8. Species reported on state catch reports from gill nets, fish weirs and fish pots in DMF Area 10 from 1990 through 2004**

Fish Weir	Gillnet	Fish pot
Albacore	Atlantic Mackerel	Conch
Amberjack	Bluefish	Scup
Atlantic Herring	Cod	Sea bass
Atlantic mackerel	Cusk	
Black Sea bass	Dogfish	
Bluefish	Flounder - unclassified	
Bonito	Haddock	
Butterfish	Hake	
Flounder - unclassified	Monkfish	
Fluke	Pollock	
Gray sole (witch)	Skates	
Herring - unclassified	Summer flounder	
King mackerel	Tautog	
Menhaden	Winter flounder	
Sea herring	Witch flounder	
Sea Robin	Yellowtail flounder	
Scup		
Sea bass - unclassified		
Spanish mackerel		
Squid		
Summer flounder		
Tautog		
Weakfish		
Winter flounder		

Witch flounder

**Fish Weir Fishery:** Total state-reported landings from the fish weir fishery in Area 10 from 1990 through 2004 are estimated at 13.7 million pounds (mean = 913 thousand lbs/yr). Landings from fish weirs were highest in 1990 (1.4 million lbs) and lowest in 2003 (184 thousand lbs; Figure 8). Atlantic mackerel, squid and scup are the most common species reported to be harvested from fish weirs. Fifteen-year total state-reported fish weir landings for Atlantic mackerel, squid and scup in Area 10 are 5.8 million pounds (mean = 385,688 lbs/yr), 4.7 million pounds (mean = 315,121 lbs/yr), and 1.6 million pounds (mean = 105,571 lbs/yr) respectively. The annual landing trends for these species are shown in Figure 9. Atlantic mackerel landings reached a high of 876 thousand pounds in 1997 and have declined to between 7-530 thousand pounds from 1998 to 2004. Scup landings peaked in 1992 (334 thousand pounds) declining to very low landings in 1996 through 1998 and then showing a slight upward trend from 1999 through 2004. Squid landings have shown a general downward trend from 1990 through 2004. In 1990-1991, squid landings were greater than 700 thousand pounds and then fluctuated between 1992-2004 with 2003 reporting only 23,323 lbs. Individual species landings by year are presented for fish weirs in Table 1 of Attachment C.



**Figure 8. Total state-reported landings from the fish weir fishery in DMF Area 10 from 1990 through 2004 (Source: *Marine Fisheries Commercial Data 1990-2004*)**

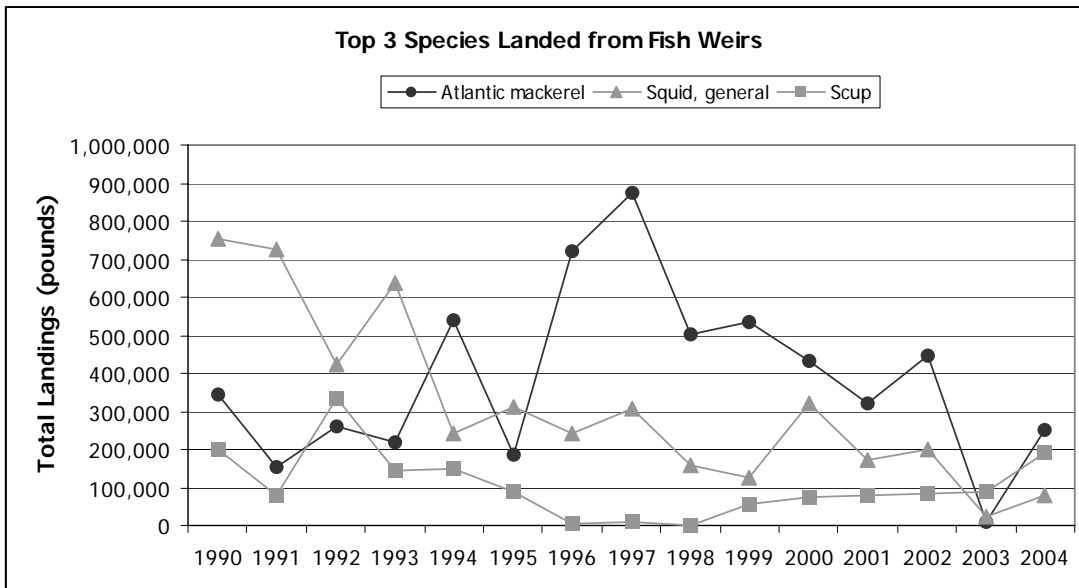
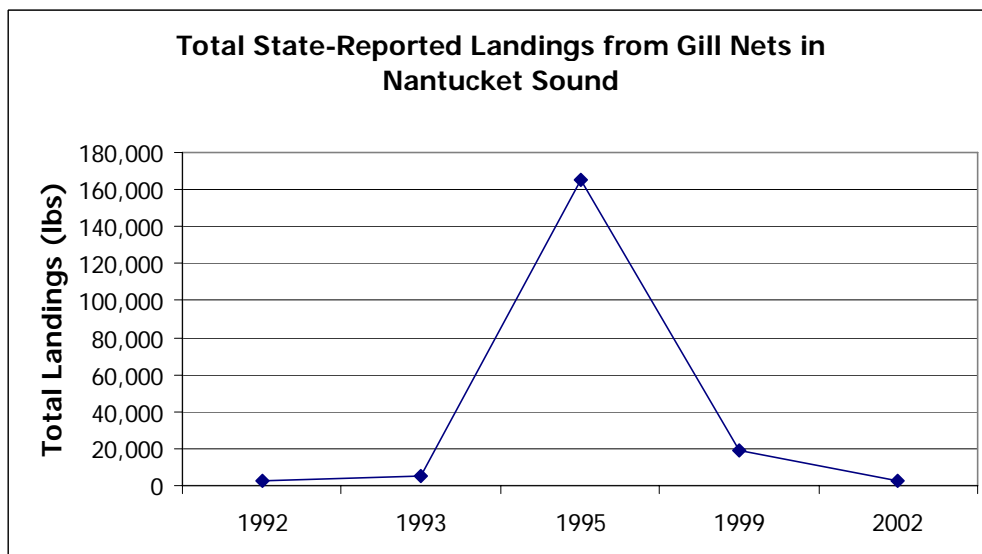
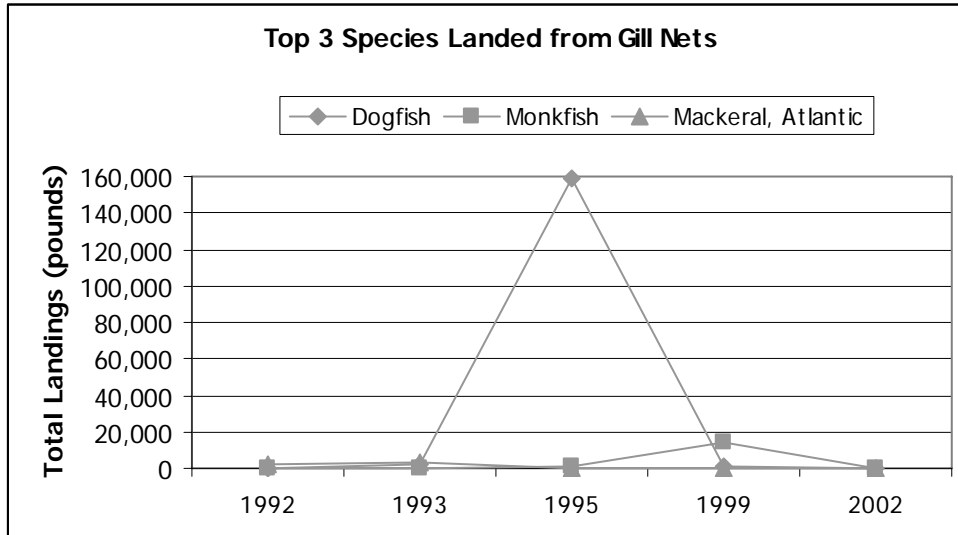


Figure 9. Most common species landed from fish weirs in DMF Area 10 from 1990 through 2004 (Source: *Marine Fisheries Commercial Data 1990-2004*)

**Gill Net Fishery:** The state-permitted gill net fishery does not seem to comprise a large component of the state-reported landings in Nantucket Sound. Between 1990 and 2004, state landings from gillnets in Area 10 were only reported during five of those years (1992, 1993, 1995, 1999, and 2002). Total state-reported landings from the gill net fishery in Area 10 from these five years totaled approximately 195 thousand pounds. Only one species (Atlantic mackerel) was collected in state-permitted gill nets in 1992. In 1993 and 1995 the diversity of fish increased to five and six species, respectively. The greatest species diversity was observed in 1999 when 15 different fish species were collected. In 2002, the diversity decreased again to three species. On an annual basis, total state-reported landings from gill nets were greatest in 1995 (165 thousand pounds) due to the large landings of dogfish (approximately 158 thousand pounds) (Figure 10). Dogfish, monkfish and Atlantic mackerel are the most common species reported in state catch reports to be harvested from fish gill nets. The annual landing trends for these species are shown in Figure 11. Individual species landed by year for the state-managed gill net fishery in Nantucket Sound are presented in Table 2, Attachment C.



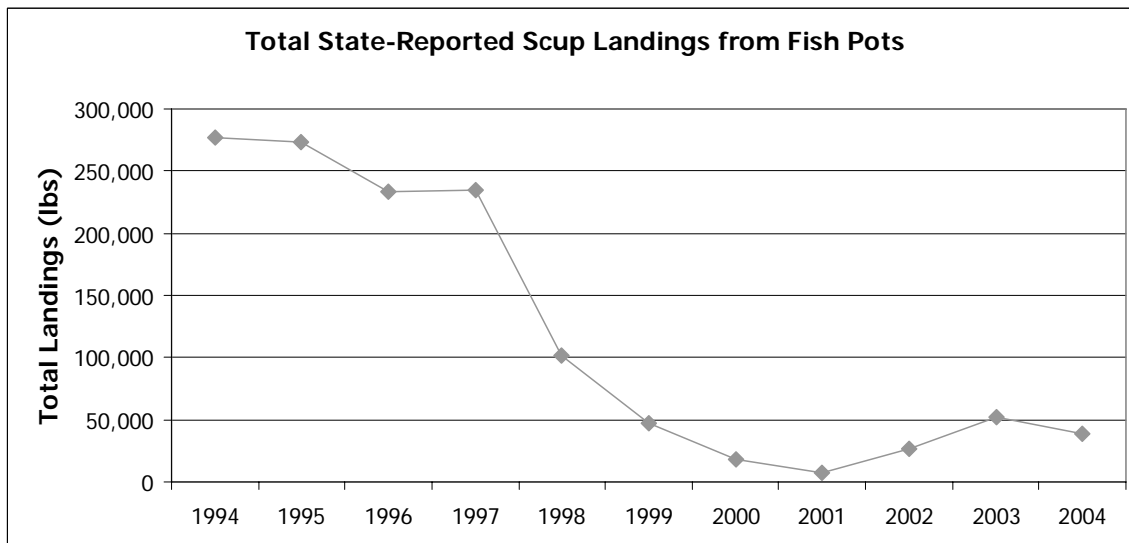
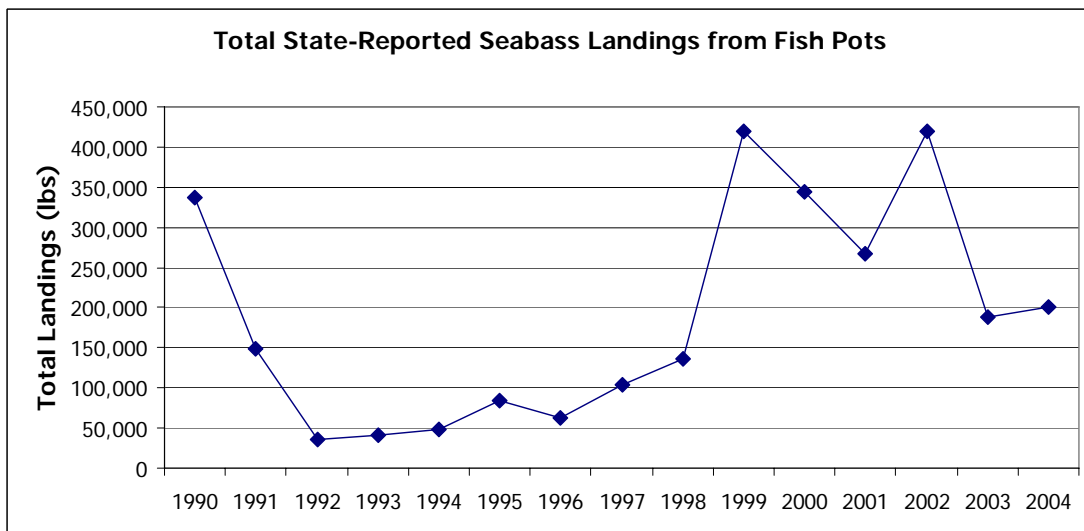
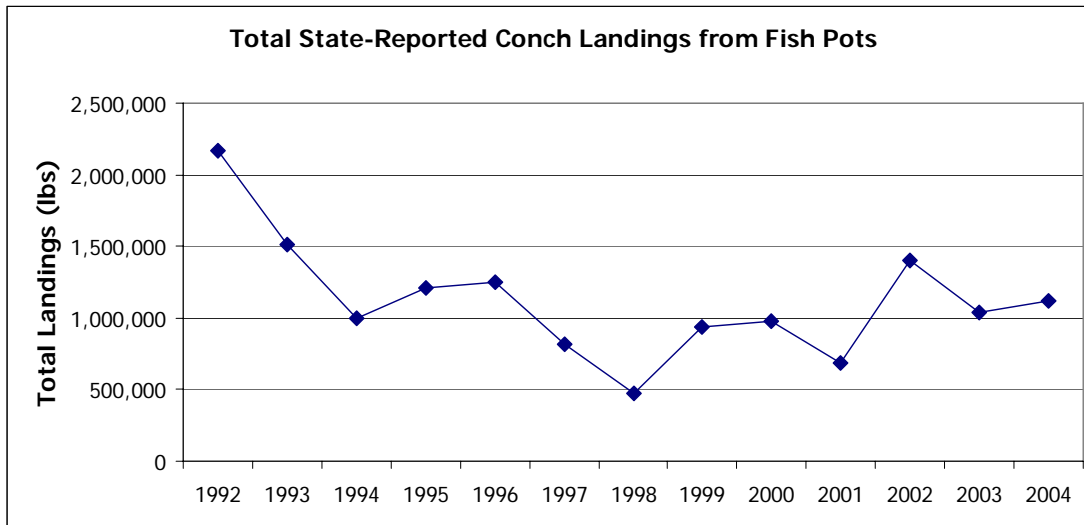
**Figure 10. Total state-reported landings from the gill net fishery in DMF Area 10**



**Figure 11. Most common species landed from gill nets in DMF Area 10 from 1990 through 2004 (Source: *Marine Fisheries Commercial Data 1990-2004*)**

**Fish Pot Fishery:** The state-permitted fish pot fishery includes the conch, black sea bass and scup pot fisheries. Conch were only reported from 1992 to 2004 because fishermen were not required to file catch reports for conch prior to this date. Catch reports were not required for scup from 1990 to 1993. Figure 12 presents the total annual state-reported landings of conch, sea bass and scup from fish pots in Nantucket Sound.

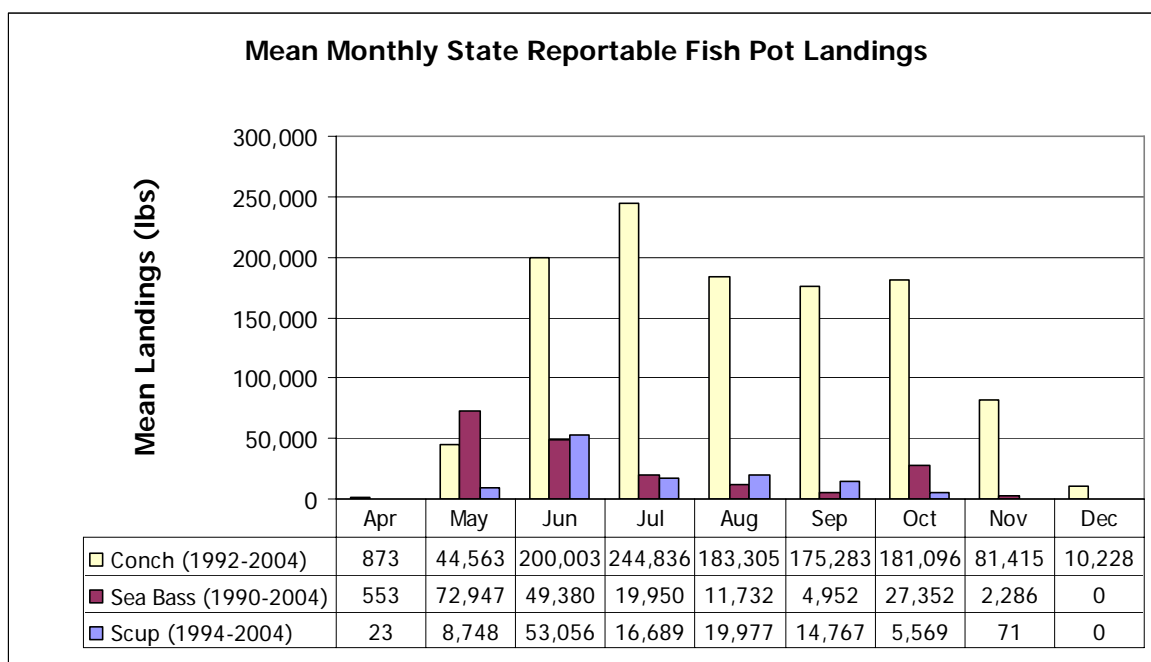
The state-permitted conch pot fishery is open from April 15 through December 14. State-reported conch landings from fish pots between 1992 and 2004 totaled approximately 14.6 million pounds for Area 10. Annually, state conch landings from fish pots have generally decreased from a high of approximately 2 million pounds in 1992 to a low of 478 thousand pounds in 1998. Since 1998, landings have increased slightly from 939 thousand pounds in 1999 to 1.1 million pounds in 2004 with the year 2001 reporting a low of 685 thousand pounds. Seasonally, state-reported conch landings from fish pots are generally highest in June, July and August, averaging more than 180 thousand pounds during those months from 1992 to 2004 (Figure 13). Attachment C (Table 3) presents state-reported conch landings by month and year for the fish pot fishery in Nantucket Sound.



**Figure 12. Trends in annual state-reported commercial landings of conch, sea bass and scup from fish pots in DMF Area 10, Nantucket Sound (Source: *Marine Fisheries Commercial Data 1990-2004*)**



State-reported sea bass landings from fish pots from 1990 through 2004 totaled approximately 2.8 million pounds for Area 10. From 1990 to 1992 annual state-reported sea bass landings from fish pots dropped substantially from 336 thousand pounds to 36 thousand pounds. From 1992 to 1998, annual landings increased steadily and in 1999, there was a large peak of approximately 419 thousand pounds. Landings then fluctuated between 2000 and 2004. Seasonally, sea bass landings from fish pots in Area 10 were highest in May and June for the 1990 through 2004 period, averaging over 72 thousand pounds in May and over 49 thousand pounds in June (Figure 13). Attachment C (Table 4) presents state-reported sea bass landings by month and year for the fish pot fishery in Nantucket Sound.



**Figure 13. Mean monthly state-reported commercial fish pot landings for conch, sea bass and scup from DMF Area 10 (Source: *Marine Fisheries Commercial Data 1990-2004*)**

State-reported scup landings from fish pots totaled approximately 1.3 million pounds from 1994 to 2004 for Area 10. Annual state-reported landings of scup from fish pots declined from 1994 to 2001 and then fluctuated from 2002-2004. Landings in 1994 were approximately 277 thousand pounds and declined to approximately 7.7 thousand pounds in 2004. Seasonally scup landings from fish pots in Area 10 were highest in June, averaging over 50 thousand pounds from 1994 to 2004 (Figure 13). State-reported scup landings by month and year for the fish pot fishery in Nantucket Sound are presented in Table 5, Attachment C.

### **3.3 Striped Bass Fishery**

The state-regulated commercial fishery for striped bass in Nantucket Sound is a hook and line fishery only. Spearing, netting and snagging of striped bass are prohibited. The commercial fishermen report what they keep, the legal and sublegal fish released, and the fish sold to seafood wholesalers. Analysis of the striped bass fishery for this report is based on those fish sold to market for the period of 1990 through 2004. Information on state-permitted striped bass landings sold to market are presented by year and month in Table 8, Attachment C. Table 8 of Attachment C also presents state-permitted striped bass landings that were consumed and retained by the permittee and landings that were released by the permittee (both legal and sublegal).

The state-regulated commercial season for striped bass occurs from mid July until the quota is fulfilled (*Marine Fisheries*, 2005). In 2005, the striped bass fishery quota was met in mid August thus closing the fishery

for that year. In previous years, state-regulated commercial fishing for striped bass sometimes extended into October. State-permitted commercial fishermen may fish for striped bass only on Sundays, Tuesdays, Wednesdays and Thursdays within the commercial season.

Seasonally, state-permitted striped bass landed and sold to market were greatest during the month of July (mean = 25,324 pounds); Figure 14). By September, much fewer striped bass were landed and sold to market (mean = 814 pounds). Total state-permitted striped bass landings sold to market for Nantucket Sound from 1990 through 2004 were approximately 574 thousand pounds. Figure 15 presents the annual landings for state-regulated striped bass sold to market in Area 10, Nantucket Sound. From 1990 to 1994, total state landings sold to market did not exceed 15 thousand pounds. From 1995 through 1998, state-permitted striped bass landings sold to market increased steadily to a high of 80 thousand pounds, then decreased to below 50 thousand pounds in 1999 and 2001. From 2002-2004, state-permitted landings sold to market fluctuated up and down.

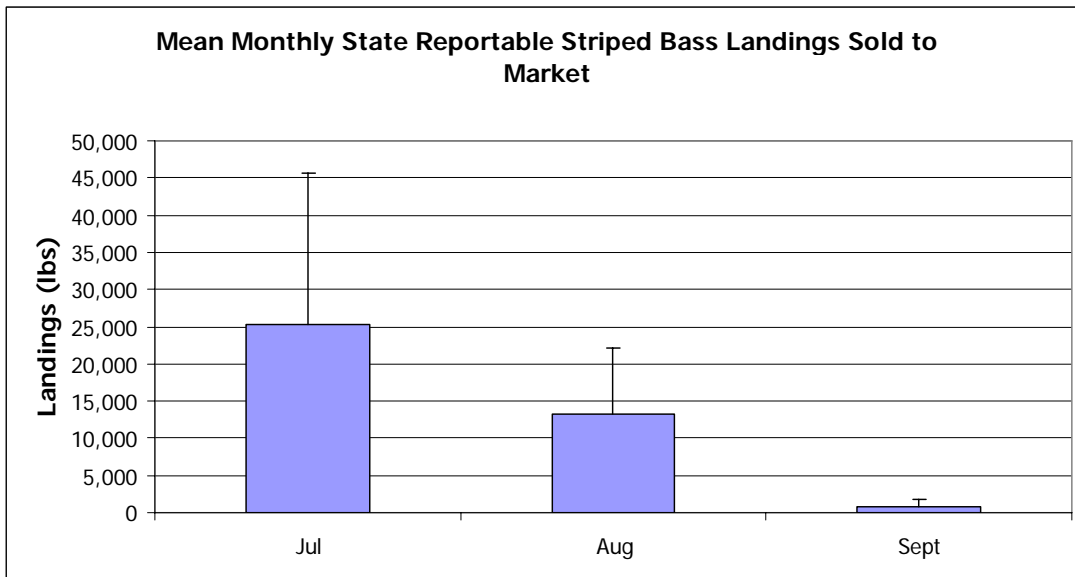
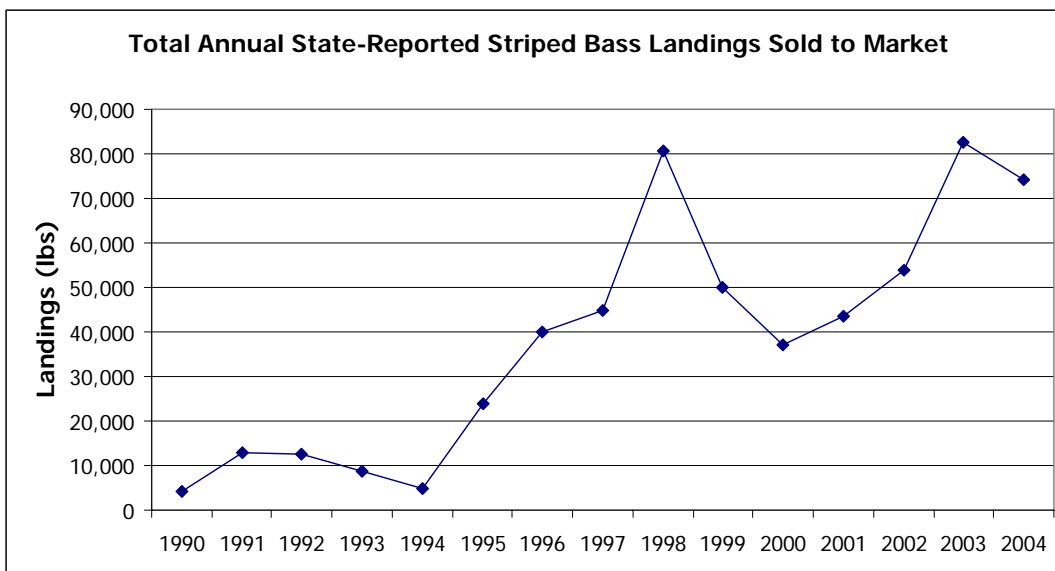


Figure 14. Mean monthly state-regulated striped bass landings sold to market from DMF Area 10 from 1990 through 2004 (Source: *Marine Fisheries Commercial Data 1990 – 2004*)



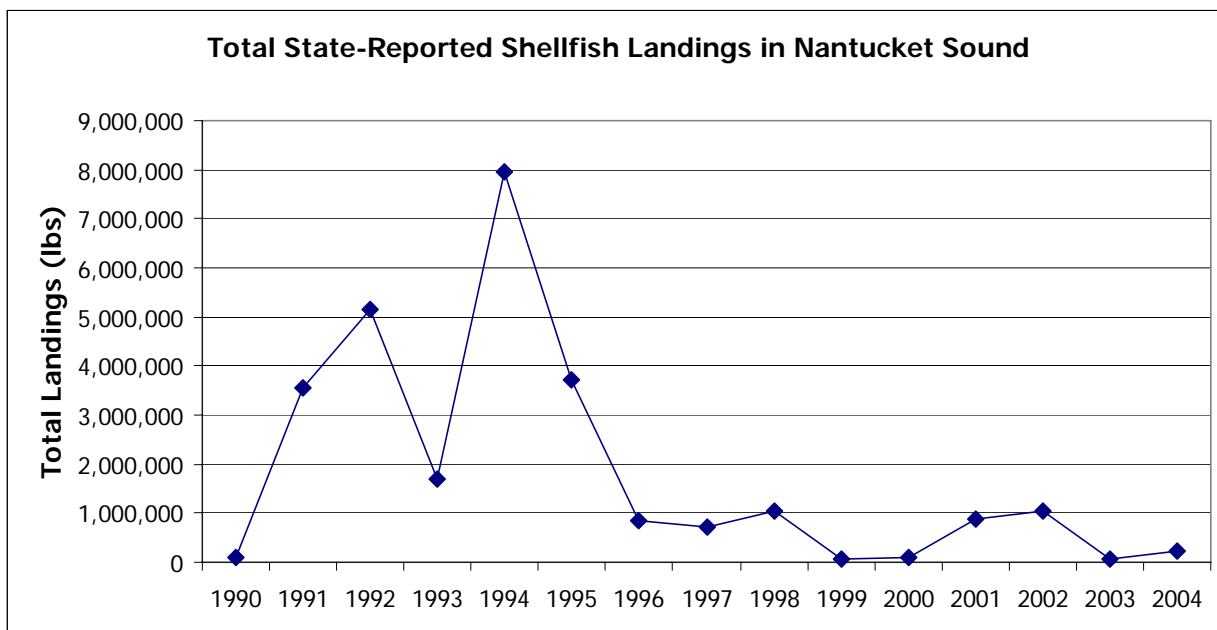
**Figure 15. Total annual state-regulated striped bass landings sold to market from DMF Area 10 from 1990 through 2004 (Source: *Marine Fisheries Commercial Data 1990 – 2004*)**

**3.4 Shellfish Landings**

State-regulated shellfish species harvested from Area 10 from 1990 through 2004 included bay scallops (weights reported with shells), ocean quahogs, mixed quahog species, cherrystones, littlenecks, mussels, sea clams, sea scallops, soft shell calms, and conch. Lobster landings are reported separately by DMF and are discussed in Section 3.5 below. The total annual landings for shellfish species required to be reported to the state in Nantucket Sound from 1990 through 2004 is presented in Figure 16. Approximately 27.1 million pounds of shellfish were reported harvested by state permittees from Area 10 during this time period. From 1990 to 1992, state-reported shellfish landings increased from approximately 80 thousand pounds to just over 5 million pounds. State-reported landings declined in 1993, but then increased to a 10 year high of 7.9 million pounds in 1994. Since 1994, state-reported shellfish landings have decreased to lows of 65 thousand pounds in 1999, 83 thousand pounds in 2000 and 55 thousand pounds in 2003.

Table 9 presents total state-reported landings for shellfish species from 1990 to 2004. Sea clams appear to be the most common species reported by state permittees over the fifteen-year period in Nantucket Sound. State-reported sea clam landings constituted 47% of the state shellfish landings from 1990 through 2004 (Figure 17). State-reported landings in Area 10 for individual shellfish species by year are presented in Table 6, Attachment C.

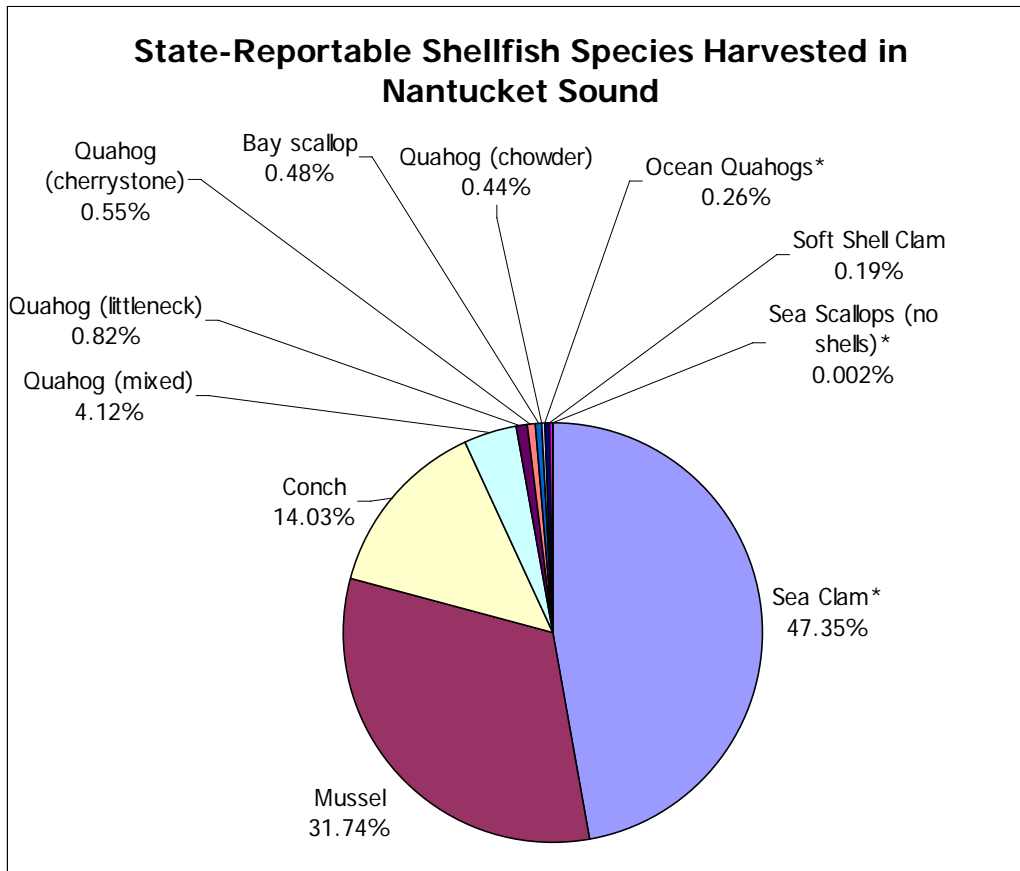
Mussels were the second most common species of shellfish reported by state permittees, constituting 32% of the state shellfish landings from Nantucket Sound. The various species of conch harvested from Nantucket Sound from 1990 through 2004 accounted for 14% of the total state-reported shellfish landings. The various quahogs (ocean quahogs, mixed quahogs, cherrystones, and littlenecks) accounted for 6.19% of the total state-reported shellfish landings; bay scallops, sea scallops and soft shell clams accounted for less than 1% of the total state-reported shellfish landings from 1990 through 2004.



**Figure 16. Total annual state-regulated landings of shellfish from DMF Area 10 from 1990 through 2004 (Source: *Marine Fisheries Commercial Data 1990-2004*)**

**Table 9. Total state-regulated landings of shellfish species in DMF Area 10 from 1990 through 2004**

Shellfish Species harvested	Total lbs Landed (1990 - 2004)
Sea Clam*	12,816,980
Mussel	8,592,273
Conch	3,798,311
Quahog (mixed)	1,115,443
Quahog (littleneck)	220,985
Quahog (cherrystone)	149,802
Bay scallop	129,658
Quahog (chowder)	119,036
Ocean Quahogs*	71,600
Soft Shell Clam	52,285
Sea Scallops (no shells)*	413
<b>Grand Total</b>	<b>27,066,786</b>

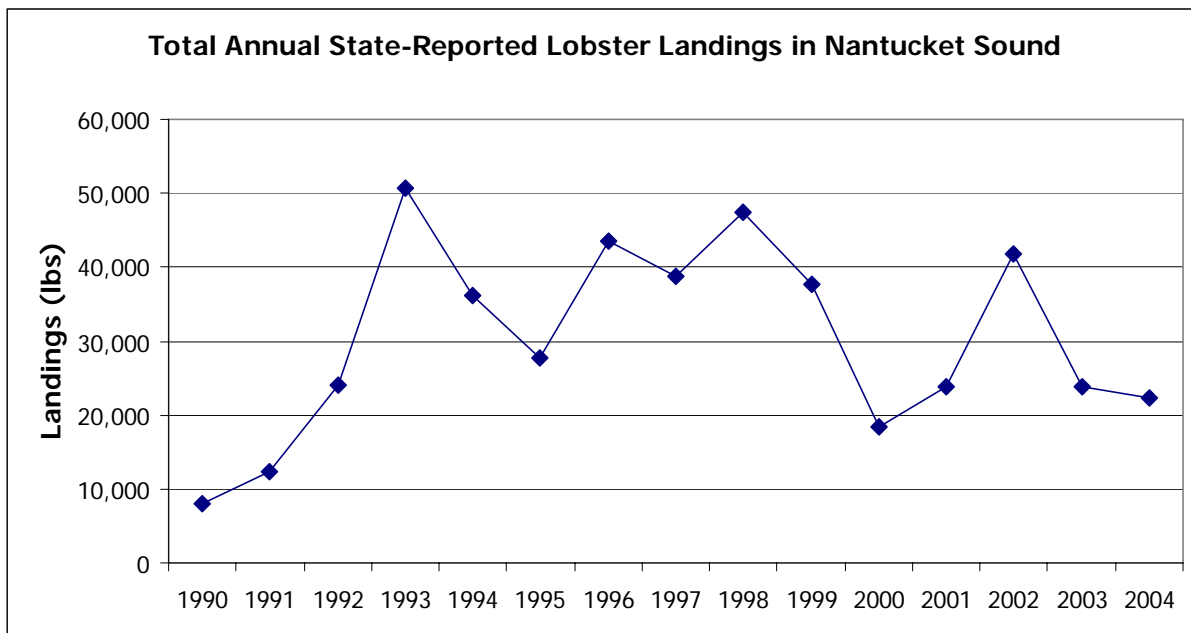


**Figure 17. Percent of total state-regulated landings for various shellfish species harvested from DMF Area 10 from 1990 through 2004 (Source: *Marine Fisheries Commercial Data 1990 – 2004*)**

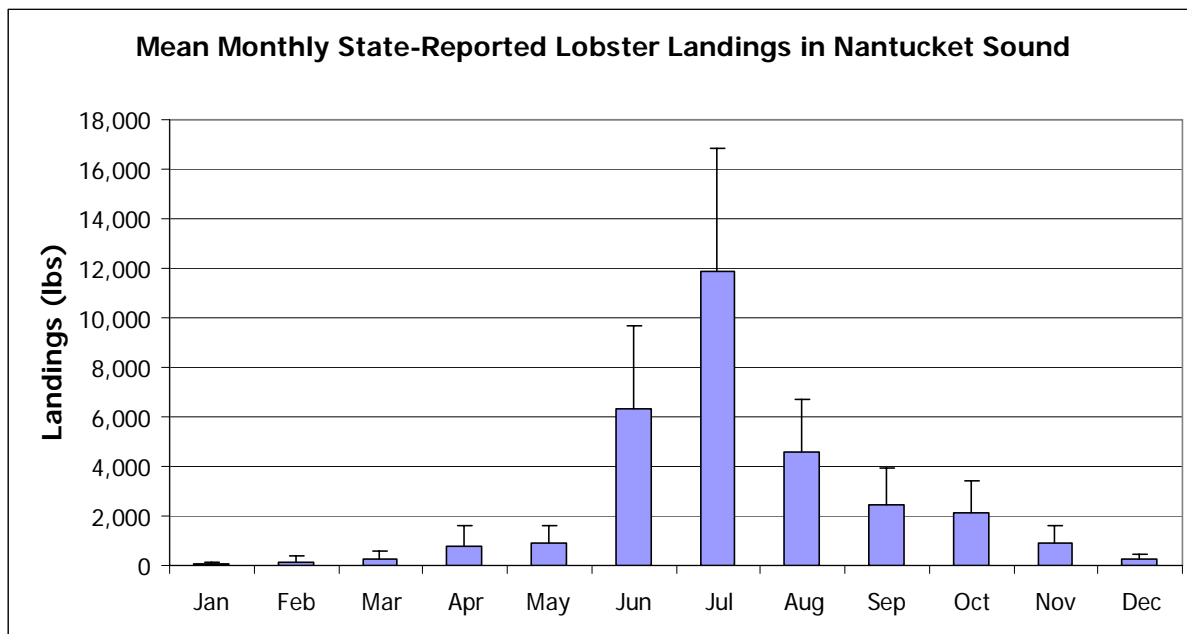
### 3.5 Lobster Landings

The season for commercial lobstering with pots in Massachusetts' waters is open year long. While some specific areas are permanently closed or only open seasonally, all of Nantucket Sound is open year long for lobstering and state-regulated commercial landings have been reported at least once for each month of the year from 1990 through 2004. The total annual state-regulated landings for lobster in Nantucket Sound from 1990 through 2004 are presented in Figure 18. Approximately 457 thousand pounds of lobster were reported harvested by state permit holders from Nantucket Sound during this time period. From 1990 to 1993 state-reported lobster landings increased from 8 thousand pounds to approximately 50 thousand pounds. Landings fluctuated from a low of 28 thousand pounds to a high of approximately 48 thousand pounds between 1994 and 1999, but declined to below 20 thousand pounds in 2000, the lowest landings observed since 1992. From 2001 to 2004, state-reported lobster landings in Area 10 remained at approximately 20 thousand pounds with the exception of higher landings of approximately 42 thousand pounds reported in 2002.

Seasonally, state-regulated lobster landings were highest during the summer months (Figure 19), increasing substantially in June and peaking in July (mean = 11,858 pounds) and then declining steadily from August through December. State-reported lobster landings in Area 10 from 1990 to 2004 are presented by month and year in Table 7, Attachment C.



**Figure 18. Total annual state-regulated lobster landings from DMF Area 10 from 1990 through 2004 (Source: *Marine Fisheries Commercial Data 1990 – 2004*)**



**Figure 19. Mean monthly state-regulated lobster landings from DMF Area 10 from 1990 through 2004 (Source: *Marine Fisheries Commercial Data 1990 – 2004*)**

#### **4.0 NOAA FISHERIES RECREATIONAL DATA**

##### **4.1 Marine Recreational Fisheries Statistics Survey**

Until 1979, data on marine recreational fisheries were not collected on a regular basis. In 1981, NMFS developed a Marine Recreational Fisheries Statistics Survey (MRFSS) to establish a database, which could be used for evaluating the impacts of recreational fishing on marine resources throughout the country. These surveys are conducted through telephone interviews or face-to-face interviews with recreational anglers at various ports. Unlike the commercial information, recreational fisheries data are not reported using a statistical sampling grid of the coastal waters. Instead, NMFS interviewers record the county where the survey was conducted, or if a phone interview was used, the county where anglers reported they visited to participate in recreational fishing activities. Surveyors question anglers as to where they fished, how long they fished, what types of gear they used, as well as what species they caught.

The information requested by NMFS using the MRFSS attempts to capture information from the surveyed population on the numbers of individuals that participate in the various types of recreational fisheries (i.e., hook and line, charter boat, private boat, etc.), the number of trips and hours spent fishing by the anglers, and the numbers and species of fish caught. The true recreational fishing effort would be greater than this, since NMFS cannot target every angler for a given year. These data can best be used to get a sense of fishing mode, length of fishing, gear type used and species caught by a proportion of individuals from a surveyed population. Additional information on recreational fishing through shore-based surveys was conducted by ESS Group, Inc. on August 2005. The results from these interviews are included in Appendix 3.8-D (Survey of Commercial and Recreational Fishing Activities in Nantucket Sound).

Appendix 5.4-A of the DEIS/R presented recreational data compiled from the MRFSS from 1990 through 2001. Since filing the DEIS/R, three additional years of data have become available. This revised report compiles the results from MRFSS data from three counties surrounding Nantucket Sound (Dukes, Barnstable, and Nantucket) from 1990-2004, a fifteen year period. It is important to note that the recreational fishery information summarized below cannot be directly related to Nantucket Sound. From the surveys, there is no way to

determine the exact fishing location of the anglers that responded to the survey. Therefore, although survey information was gathered from three counties surrounding Nantucket Sound, it can only be assumed that some portion of the anglers interviewed from these counties were truly fishing in Nantucket Sound and not in other areas such as those offshore of the islands, farther out on the Cape, in Buzzards Bay, or in Cape Cod Bay.

Information that was summarized from the recreational statistics data included fishing effort by mode, fishing effort by hours fished as reported by individual anglers, type of gear used by individual anglers, number of fish reported by anglers, as well as the number of fish observed by interviewers during surveys, and the fish species observed by interviewers during surveys. The recreational fishing data are presented as 2-month intervals referred to as waves. For New England, no surveys were conducted during January and February (Wave 1).<sup>2</sup> The total number of MRFSS surveys used to summarize recreational fishing in the three counties surrounding Nantucket Sound is shown in Table 10. NMFS waves are as follows:

- Wave 1: January and February
- Wave 2: March and April
- Wave 3: May and June
- Wave 4: July and August
- Wave 5: September and October
- Wave 6: November and December

**Table 10. Number of MRFSS surveys reported from Dukes, Barnstable and Nantucket counties**

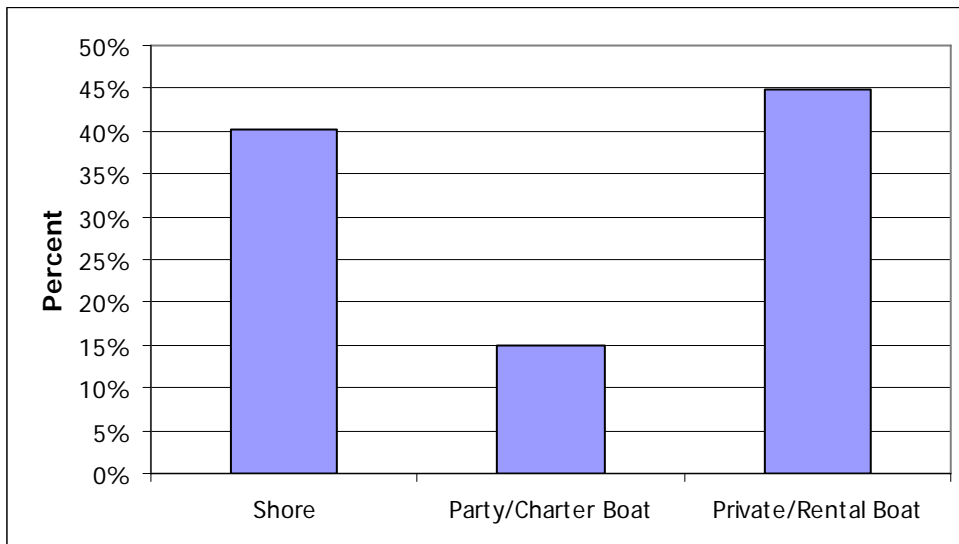
<b>Year</b>	<b>Number of Surveys</b>
1990	2,916
1991	2,479
1992	2,503
1993	3,105
1994	3,063
1995	3,446
1996	2,600
1997	2,594
1998	2,717
1999	2,627
2000	2,184
2001	2,474
2002	2,298
2003	2,906
2004	2,218
<b>Grand Total</b>	<b>40,130</b>

Data from three distinct modes of fishing were compiled and summarized (fishing from shore, fishing from a charter or party boat and fishing from a private or rental boat). Fishing from shore is comprised of any pier, dock or structure built over the water, any rock wall built out into the water or parallel to the shore to restrain currents or protect a harbor, a breakwater device, bridges, causeways, beaches or banks. Fishing effort from shore may not provide much pertinent information to the recreational fishing that occurs on the Wind Park site in Nantucket Sound, but will be important in addressing concerns of anglers fishing near the proposed cable landfall areas.

<sup>2</sup> [http://www.st.nmfs.gov/st1/recreational/the\\_mrfss.html](http://www.st.nmfs.gov/st1/recreational/the_mrfss.html)

A head or party boat is defined as a boat on which fishing space and privileges are provided for a fee. The vessel is operated by a licensed captain and crew. A charter boat is also operated by a licensed captain and crew; however, the anglers are part of a pre-formed group that “charters” the boat, captain and crew for a specific price and time. A private boat is that belonging to an individual. A rental boat is rented and operated by the renter. No captain or crew is provided for private or rental boats.

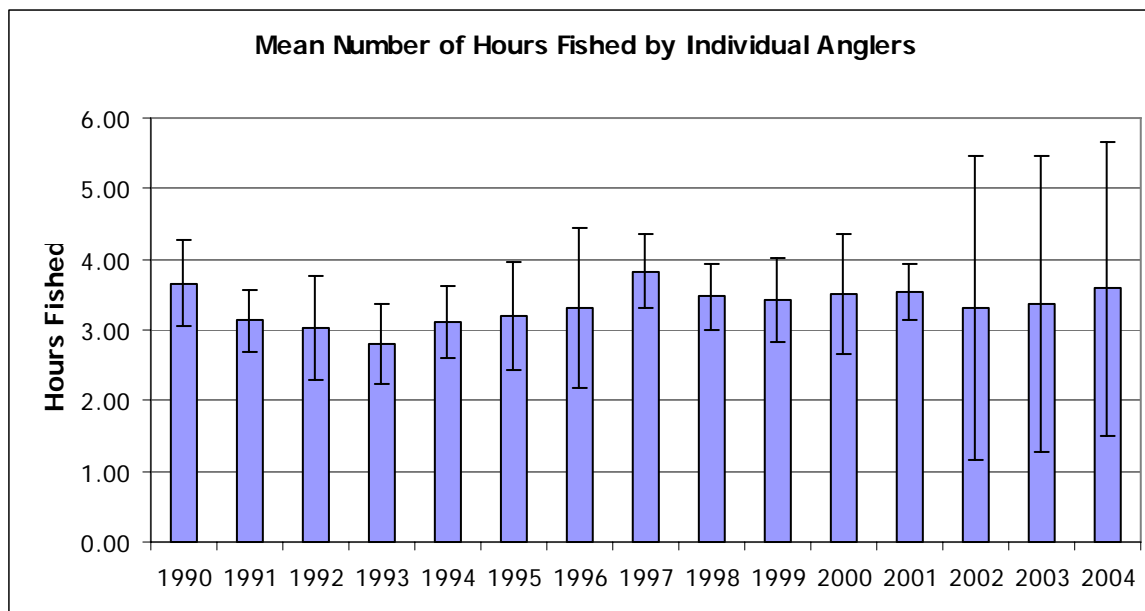
Based on the surveyed population, the use of private boats or rental boats appears to be the most common mode of recreational fishing over the past fifteen years (Figure 20). Approximately 45% of the individuals surveyed reported using private/rental boats when engaged in fishing activities from 1990-2004. Surveyed anglers reporting the use of party/charter boats was much lower than private boats (15%). Out of the 40,130 anglers surveyed, the number reporting that they used charter/party boats ranged from a low of 274 individuals in 1999 to a high of 586 in 2003. Based on the surveyed population, fishing from shore was also more common than the use of charter/party boats over this fifteen year period. Approximately 40% of the individuals surveyed reported fishing from shore as the mode of recreational fishing from 1990-2004. Attachment D (Table 1) presents the complete MRFSS survey results of recreational fishing effort by mode, year and wave for Barnstable, Dukes and Nantucket counties between 1990 and 2004.



**Figure 20. Percent of surveyed anglers reporting mode of fishing as shore, party/charter boat, or private/rental boat from surveys conducted from 1990 through 2004 in Dukes, Barnstable and Nantucket counties (Source: MRFSS Data 1990 – 2004)**

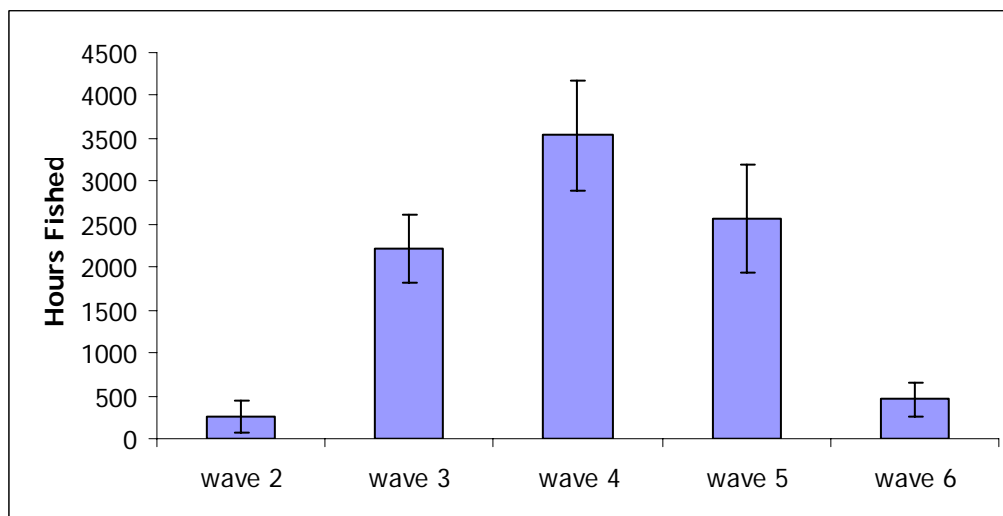
The average length of time that surveyed individuals reported fishing over the 15-year period did not vary greatly among years (Figure 21). Average time spent fishing reported by surveyed anglers ranged from a low of 3.1 hours in 1993 to a high of 3.6 hours in 1997 and 2004.





**Figure 21. Mean number of hours fished by surveyed anglers calculated from all surveys conducted in Dukes, Barnstable and Nantucket counties (Source: MRFSS Data 1990 – 2004)**

The mean number of hours reported by surveyed anglers was calculated by wave across all years from 1990 through 2004 (Figure 22). As expected, the number of hours fished is longer during the summer months. Based on the surveyed population, the mean number of hours fished was greatest during wave 4 (July and August) followed by wave 5 (September and October). Attachment D (Table 2) presents the complete MRFSS survey results of recreational fishing effort by hours fished, year and wave for Barnstable, Dukes and Nantucket counties between 1990 and 2004.

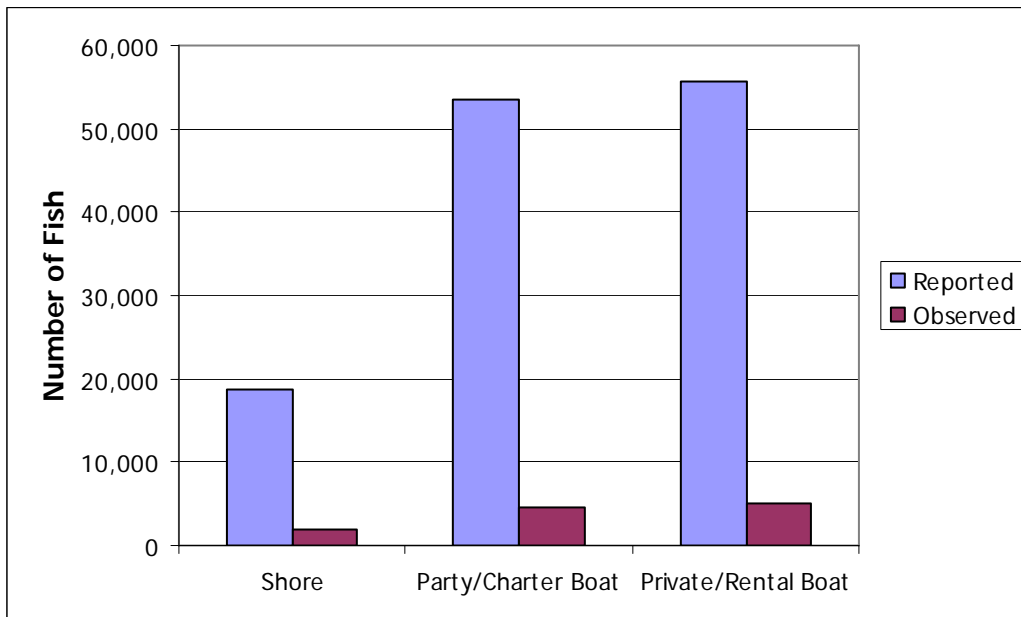


**Figure 22. Mean number of hours fished by wave as reported from surveys from 1990 through 2004 from Dukes, Barnstable and Nantucket counties (Source: MRFSS 1990 – 2004)**

The fishing gear reported by surveyed anglers included hook and line, dip/A frame net, cast net, gill net, seine, trawl, trap, spear, hand, or other. By far, the majority of surveyed anglers (99.7%) reported use of hook and line for recreational fishing. The use of a dip net ranked second in terms of gear used (0.105%). Some type of fish

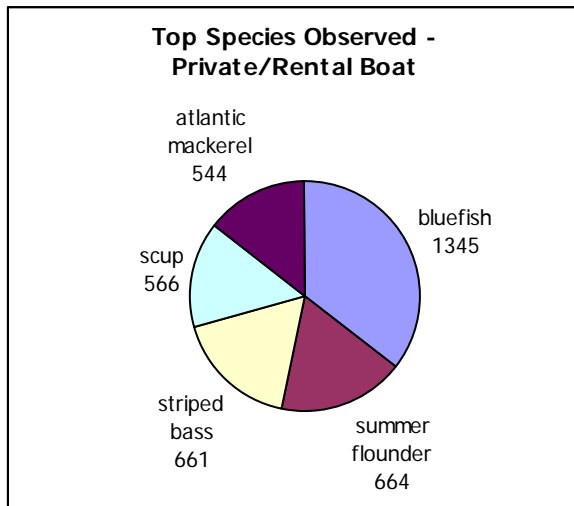
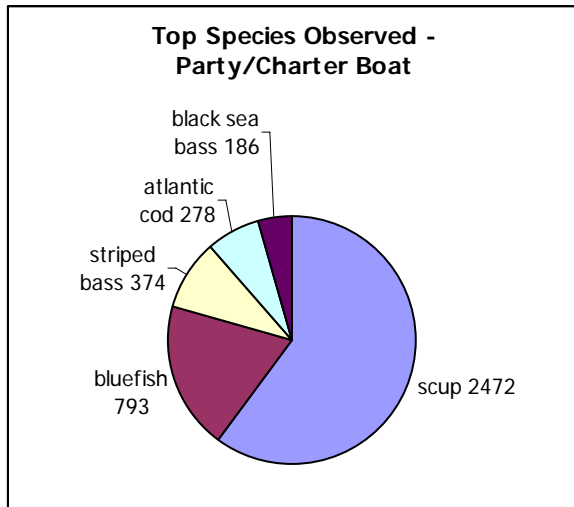
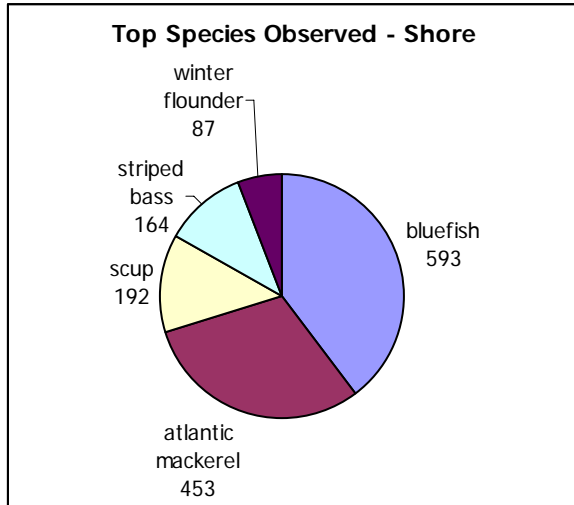
trap use was reported in only 20 of 40,079 surveys from 1990 through 2004. Gill nets were reported one time each over the 15-year period. Attachment D (Table 3) presents complete MRFSS survey results of recreational fishing by gear type, year and wave for Barnstable, Dukes and Nantucket counties between 1990 and 2004.

The number of fish reported by surveyed anglers and the number of fish observed by interviewers are reported in Attachment D (Table 4) by fishing mode, year and wave. In general, the number of fish reported by anglers during interviews increased from 1990 through 2004 (Figure 23). However, it is important to note, that if an angler is surveyed multiple times over the years, he/she may become more familiar with survey questions and may provide more detailed information on the catch. Survey interviewers observed an average of 11.5% of the catches reported by anglers fishing from shore, fishing from party/charter boats, or fishing from private/rental boats from 1990 through 2004. The greatest numbers of fish were reported from anglers using private/rental boats (Figure 23). Anglers fishing from shore reported the lowest numbers of fish.



**Figure 23. Total number of fish reported by surveyed anglers fishing by different modes from 1990 through 2004 in Dukes, Barnstable and Nantucket counties (Source: MRFSS 1990 – 2004)**

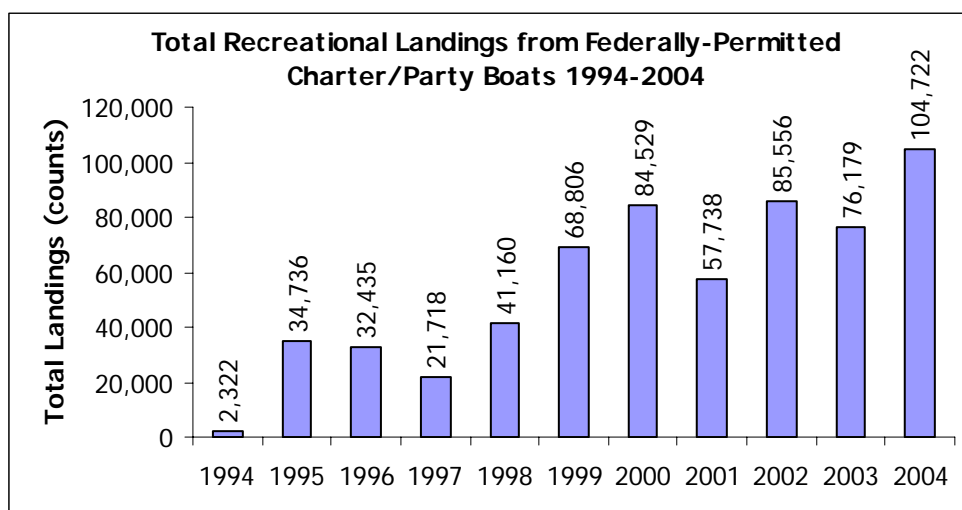
The species of fish observed by the interviewers from 1990 through 2004 by fishing mode is presented in Attachment D (Table 5). The top five species observed by interviewers over the fifteen year survey period by common fishing mode are presented in Figure 24. The most common species observed by interviewers surveying anglers fishing from shore were bluefish, Atlantic mackerel, scup, striped bass and winter flounder. The most common species observed by interviewers surveying anglers from party/charter boats included scup, bluefish, striped bass, Atlantic cod, and black sea bass. Bluefish, summer flounder, striped bass, scup, and Atlantic mackerel were the most common fish observed by interviewers surveying anglers who were fishing from private/rental boats (Figure 24).



**Figure 24. Top 5 species observed by interviewers surveying anglers from shore, party/charter boats or private/rental boats from Dukes, Barnstable and Nantucket counties (Source: MRFSS 1990 – 2004)**

## 4.2 NOAA Fisheries Recreational Vessel Trip Report Data – Charter and Party Boats

NMFS recreational VTR data from 1994-2004 was obtained from NOAA Fisheries for Nantucket Sound (Area 075). These data include recreational landings for federally-permitted charter or party boats subject to VTR reporting. Federal charter/party permits are issued to federal vessels by NOAA Fisheries for the following fisheries: scup, black sea bass, squid/mackerel/butterfish, bluefish, summer flounder, and New England multi-species. Federal vessel permits for bluefish were not implemented until 2000 for party/charter fisheries (NOAA Fisheries, 2005 – personal communication). Approximately 609,901 individuals were reported caught by federally-permitted recreational charter/party boats in Nantucket Sound (Area 075) from 1994 through 2004 (Figure 25). The recreational data presented in Figure 25 includes finfish species, squid, and certain shellfish species. There appears to be a general trend of increasing federally-reported recreational landings from 1994-2004. A charter/party vessel with state permits only may fish in state waters without the requirement of reporting to NOAA Fisheries. These recreational landings are not captured in the NMFS recreational VTR data presented below.



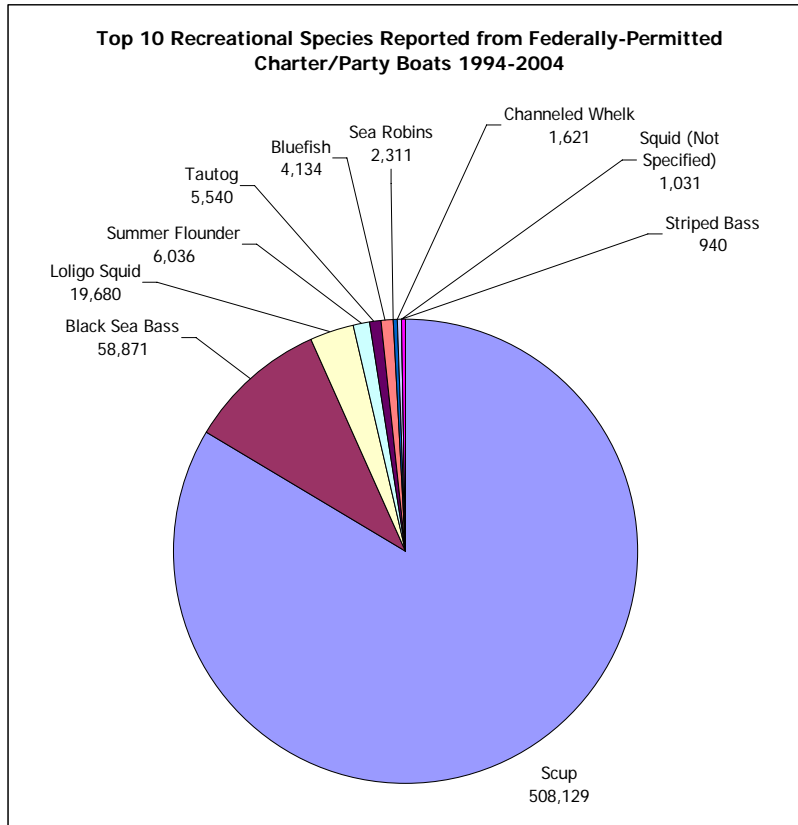
**Figure 25. Total recreational landings from federally-permitted charter and party boats from 1994 through 2004 as reported from vessel trip reports for NMFS statistical area 075 (Source: NMFS Vessel Trip Report Data, Area 075).**

Charter and party boat recreational VTR data are presented annually by month and species in Tables 1 through 11 in Attachment E. A summary table showing the total federally-reportable recreational species landed by month over the 11 year period is presented in Table 12 of Attachment E. Recreational charter and party boat landings for federally-permitted vessels were reported from April to October with peak landings reported in the month of June over the eleven year period.

Of the species reported on NMFS recreational VTRs, the top 10 species harvested from 1994 through 2004 in Nantucket Sound included scup, black sea bass, *Loligo* squid, summer flounder, tautog, bluefish, sea robins, channeled whelk, unidentified squid, and striped bass. The top 10 species accounted for approximately 99.99% of the total federally-reportable recreational species harvested during this time period (Table 13 in Attachment E and Figure 26).

Scup was the top recreational species landed by federally-permitted charter and party boats in Nantucket Sound, with approximately 508,129 individuals reported over the 1994-2004 time period. This accounted for approximately 83% of the total federally-reportable recreational charter and party boat landings in Area 075 during the eleven year period. Black sea bass and *Loligo* squid also ranked among the top species reported by

recreational charter and party boats in Area 075. These species accounted for almost 10% and approximately 3% of the total federally-reportable recreational charter and party boat landings during the eleven year period.



**Figure 26. Top 10 recreational species reported caught from federally-permitted charter and party boats from 1994 through 2004 for NMFS statistical area 075 (Source: NMFS Vessel Trip Report Data for Area 075).**

Gear types used to harvest these recreational species included hand line/rod & reel, fish pots, and otter trawls. Federally-reportable recreational landings by gear type are presented in Table 11 for the period 1994 through 2004 for Area 075, Nantucket Sound. According to the federal recreational VTR data, the greatest landings during this time period were from hand line/rod & reel. Rod and reel landings accounted for approximately 607,000 individuals or 99.5% of the total federally-reportable recreational charter and party boat landings.

**Table 11. Total federally-reportable charter and party boat recreational landings by gear type from 1994-2004 (Source: NMFS Vessel Trip Report Data, Area 075)**

Gear Type	Total Federally-Reportable Recreational Charter and Party Boat Landings (counts) Area 075
Hand Line/Rod & Reel	606,884
Pot, Fish	1621
Otter Trawl, Bottom, Fish	1311
Otter Trawl, Bottom, Scallop	85

Grand Total	609,901
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Attachment A, Figure 6 plots the latitude/longitude in degrees and minutes reported on VTRs by federally-permitted recreational charter and party boats in Area 075 as the point where most fishing was reported to occur. As demonstrated in this Figure, much of these vessels fish close to shore, along Monomoy Island and adjacent to Martha's Vineyard. Some fishing was reported to occur within the Project area on Horseshoe Shoal, but this portion only accounts for approximately 2.8% of the total federally-reportable charter/party trips over the eleven year period.

## **5.0 MARINE FISHERIES RESOURCE TRAWL DATA**

*Marine Fisheries* has conducted bi-annual bottom trawl surveys within Massachusetts' territorial waters (including both state and federal waters in Nantucket Sound) during the spring and fall since 1978. Spring surveys are conducted in May and fall surveys are conducted in September. The surveys are timed to coincide with seasons when either adults or juveniles are available inshore. The objective of this sampling, the east coast's longest ongoing inshore survey, is to obtain fishery independent data on the distribution, abundance, size and age composition of finfish as well as some crustaceans and mollusks (<http://www.mass.gov/dfwele/dmf/programsandprojects/resource>).

The bi-annual sampling is based on a stratified random sampling design using depth strata and a 1 square nautical mile grid system. The coastal waters are subdivided into geographical zones or strata. No stratum is assigned less than two sampling stations so that an estimate of sampling error can be made. On average, 95 stations are sampled on each spring and fall cruise. *Marine Fisheries* uses the NOAA R/V *Gloria Michelle* to conduct the sampling. Trawls consist of 20-minute tows at a speed of 2.5 knots. A 3/4 size North Atlantic type, two seam otter trawl is used for all surveys. The net contains a 6.4 mm cod end liner to retain smaller juveniles.

It is important to note that the timing of the surveys (May and September) does not allow the surveys to represent the abundance and distribution of finfish over the entire year, but is timed to coincide with seasons when either adults or juveniles are available inshore. Additionally, the gear type (otter trawls) and methods used during the survey are similar to gear used by commercial fishermen and are more effective at collecting demersal and semi-pelagic species. True pelagics (i.e., Atlantic mackerel) and highly migratory species such as bluefin tuna are not frequently caught in bottom trawls and may therefore be under-represented in the *Marine Fisheries* resource trawl data. Despite these limitations, *Marine Fisheries* resource trawl surveys represent the best long-term monitoring data for this area and provide seasonal finfish data when adults or juveniles are available inshore. *Marine Fisheries* staff use the survey information to prepare scientific reports and give technical presentations to fishery managers for use in developing policies governing the use and protection of fishery resources (<http://www.mass.gov/dfwele/dmf/programsandprojects/resource>). Since *Marine Fisheries* uses these survey results for management and policy decisions, it is also appropriate and adequate to use these data for a regulatory EIS.

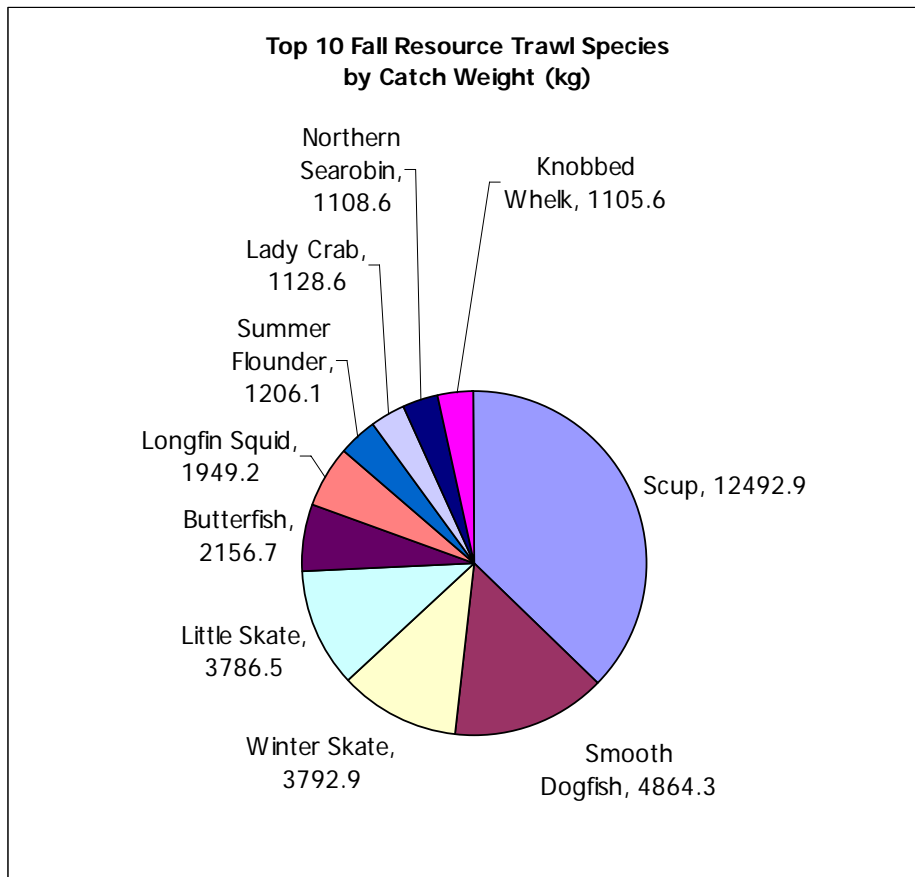
For the DEIS/R, trawl data from 1978 through 2002 were obtained from *Marine Fisheries* for all of Nantucket Sound. Data fields obtained included catch number, pounds, species, and location. Size composition data were not requested. Trawl locations from 1990-2002 were plotted on a map containing the outline of the Proposed site (Horseshoe Shoal) and the alternative wind farm locations (Monomoy-Handkerchief Shoal, Tuckernuck Shoal) and analyses of catch per unit effort for each site were calculated. Please see Appendix 5.4-A of the DEIR/S for the results of that analysis.

Since filing the DEIS/R, two additional years of *Marine Fisheries* resource trawl data have become available. This revised report compiles the results from the resource trawl data for Nantucket Sound from 1978-2004, a 27-year period. In response to comments received on the DEIS/R from NOAA Fisheries, *Marine Fisheries*, and other agencies, this revised report does not analyze data by site or single out trawl locations within Horseshoe Shoal. Instead, the resource trawl results are presented on a Nantucket Sound-wide basis for the 27-year period. This type of analysis is more appropriate for a general assessment of species that are likely to occur in Nantucket

Sound and on Horseshoe Shoal in May and September based on data collected over a 27-year period.<sup>3</sup> As with the DEIS/R, data fields obtained included catch number, pounds, species, and location. Size composition data were not requested.

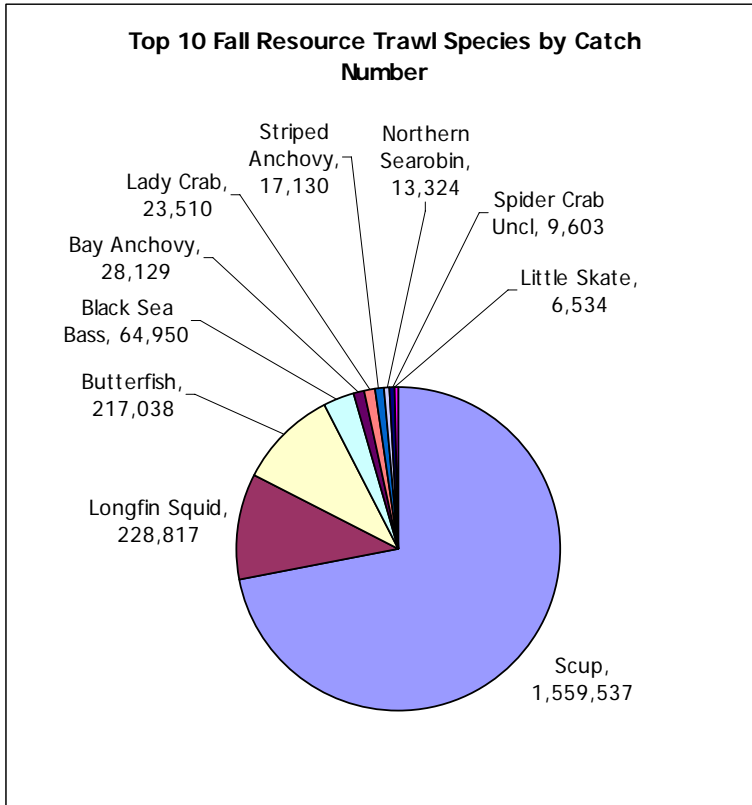
A total of 122 species were observed in the bi-annual resource trawl dataset in Nantucket Sound between 1978 and 2004. The spring surveys collected 74 species and the fall surveys collected 105 species over the 27-year sampling period. Total annual catch number and catch weight for each species reported in fall trawls and spring trawls is presented in Tables 1 through 4 of Attachment F. As shown in these Tables, fall catch numbers were higher than spring catch numbers; however, fall catch weight was lower than spring catch weight over the 27-year period. This is likely due to the large presence of juveniles that typically pass through Nantucket Sound in the fall.

Figure 27 and Figure 28 and depict the top 10 species by catch weight and catch number collected in the fall *Marine Fisheries* resource trawls in Nantucket Sound over the 27-year period. The top 10 species by weight accounted for approximately 33,591 kg (74,055 pounds) which represents approximately 88% of the total catch weight collected during the fall surveys in Nantucket Sound between 1978 and 2004. The top 10 species by number accounted for 2,168,572 individuals, which represents 98.6% of the total number of individuals collected during the fall surveys. Six species were ranked in the top 10 for both catch weight and catch number during the fall. The smooth dogfish, winter skate, summer flounder, and knobbed whelk were ranked in the top 10 for weight but not number and the bay anchovy, striped anchovy, black sea bass, and spider crab were ranked in the top 10 species by catch number but not weight.



<sup>3</sup> Species reported are those that are susceptible to being caught by DMF trawl gear (otter trawl) and are usually benthic or demersal species. Adults and juveniles are collected by this method.

**Figure 27. Top 10 Species by Catch Weight (kg) Collected from Fall *Marine Fisheries* Resource Trawl Surveys in Nantucket Sound from 1978-2004 (Source: DMF Trawl Survey Data)**



**Figure 28. Top 10 Species by Catch Number Collected from Fall *Marine Fisheries* Resource Trawl Surveys in Nantucket Sound from 1978-2004 (Source: DMF Trawl Survey Data)**

Figure 29 and Figure 30 depict the top 10 species by catch weight and catch number collected in the spring *Marine Fisheries* resource trawls in Nantucket Sound over the 27-year period. The top 10 species by weight accounted for approximately 59,099 kg (130,291 pounds) which represents approximately 92% of the total catch weight collected during the spring surveys in Nantucket Sound between 1978 and 2004. The top 10 species by number accounted for 317,090 individuals which represents approximately 91% of the total number of individuals collected during the spring surveys. The smooth dogfish, winter skate, and tautog were ranked in the top 10 for weight but not number and the Atlantic herring, Atlantic rock crab, and butterfish were ranked in the top 10 species by catch number but not weight.



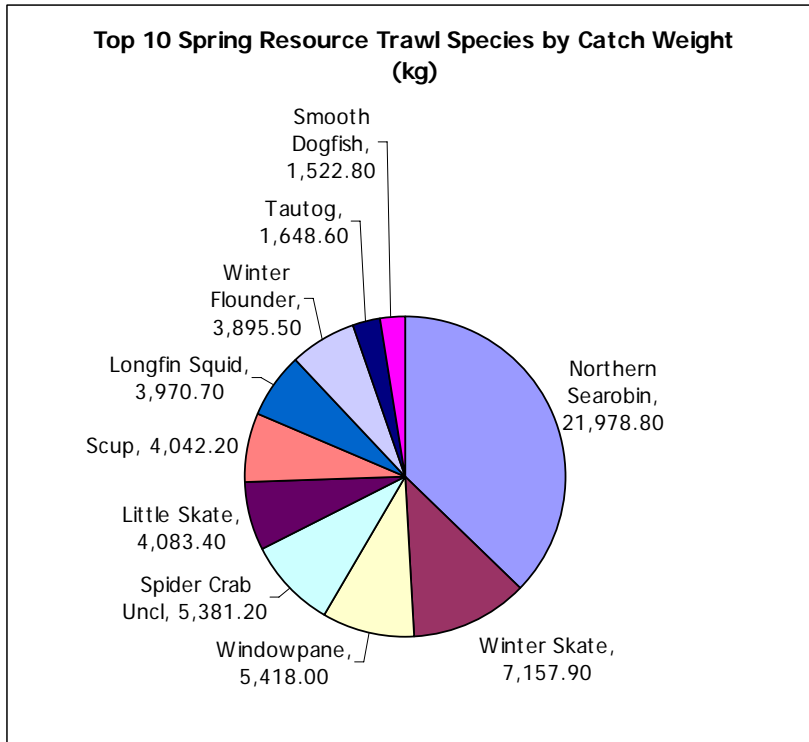
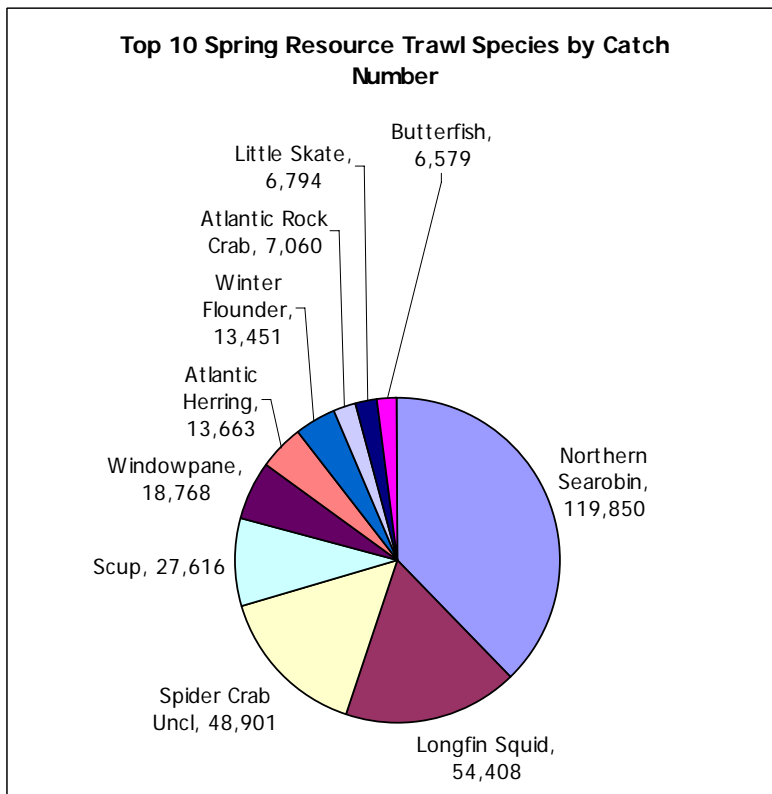


Figure 29. Top 10 Species by Catch Weight (kg) Collected from Spring *Marine Fisheries* Resource Trawl Surveys in Nantucket Sound from 1978-2004 (Source: DMF Trawl Survey Data)



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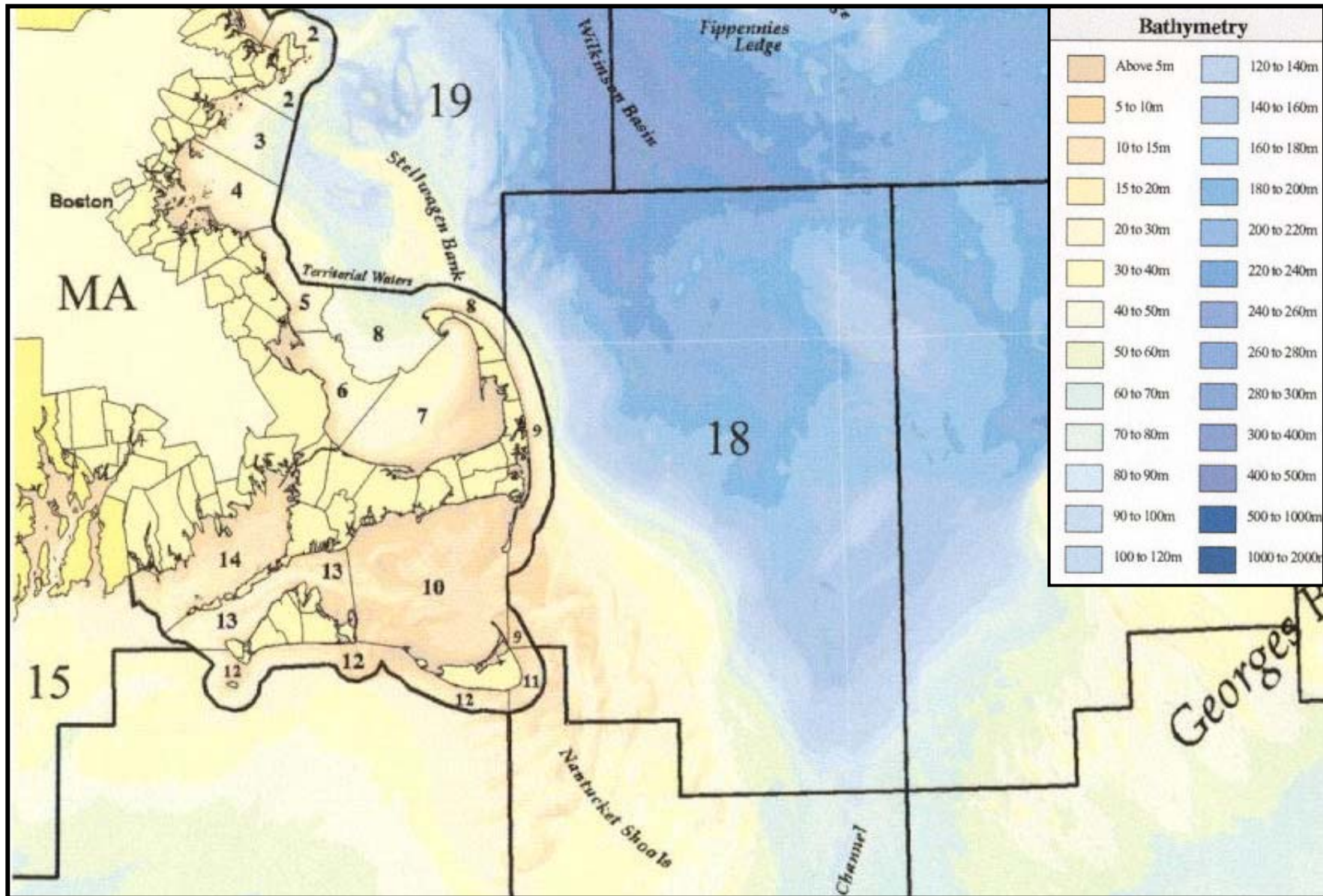
**Figure 30. Top 10 Species by Catch Number Collected from Spring *Marine Fisheries* Resource Trawl Surveys in Nantucket Sound from 1978-2004 (Source: DMF Trawl Survey Data)**

As demonstrated by these figures, six species were within the top 10 species by weight collected in both the fall and the spring surveys. The butterfish, summer flounder, lady crab and knobbed whelk were within the top 10 species by weight for fall only and the windowpane, spider crab, winter flounder, and tautog were within the top 10 species by weight for spring only. Six species were also within the top 10 species by catch number for both the fall and spring surveys. The black sea bass, bay anchovy, lady crab and striped anchovy were within the top 10 species by number for the fall season only and the windowpane, Atlantic herring, winter flounder and Atlantic rock crab were within the top 10 species by number for the spring season only.

Attachment A

General Location of Federally-  
Reported Commercial and  
Recreational Fishing

# MA DMF Statistical Reporting Areas



Attachment B

NOAA Fisheries  
Commercial VTR Data

**Table 1. 1994 federally-reportable commercial landings (pounds) for Nantucket Sound  
(Source: NMFS Vessel Trip Report Data for Area 075)**

	May	July	August	September	October	November	Grand Total
American Lobster			315	177			492
Black Sea Bass					17		17
Channeled Whelk		9,431	6,006	7,889	3,476	501	27,303
King Whiting			100				100
Knobbed Whelk			1,335	209			1,544
Lightning Whelk			315				315
Loligo Squid	21,770						21,770
Monkfish				18			18
Sandbar Shark		246					246
Scup	5,500		285	742	403		6,930
Skate				52			52
Summer Flounder		1,743	21,074	4,228	2		27,047
Tautog					104		104
Whelk (Not Specified)			655				655
White Hake			4,881				4,881
Winter Flounder				12			12
<b>Grand Total</b>	<b>27,270</b>	<b>11,420</b>	<b>34,966</b>	<b>13,327</b>	<b>4,002</b>	<b>501</b>	<b>91,486</b>

**Table 2. 1995 federally-reportable commercial landings (pounds) for Nantucket Sound**  
**(Source: NMFS Vessel Trip Report Data for Area 075)**

	March	April	May	June	July	August	September	October	November	December	Grand Total
American Lobster					35						35
American Plaice Flounder				2,600							2,600
Black Sea Bass			15	14			355	149			533
Bluefish				42	110			42			194
Channeled Whelk				5,137	7,718	760	3,216	365	323	190	17,709
Cod			855	150							1,005
Horseshoe Crab				250	60						310
King Whiting						20					20
Knobbed Whelk				5,739	755	240					6,734
Loligo Squid		1,500	36,435	31,165							69,100
Monkfish				2,270							2,270
Other Finfish			79	500							579
Scup		20	2,598	2,398	70	35	908	1,009			7,038
Skate			675	260			3	11			949
Summer Flounder			305	13,402	11,287	8,849	3,575				37,418
Tautog		50	55	21				3			129
Whelk (Not Specified)					800						800
Windowpane Flounder		5									5
Winter Flounder	200	50	7,795	392							8,437
Witch Flounder				2,240							2,240
Yellowtail Flounder			10	1,300							1,310
<b>Grand Total</b>	200	1,625	48,822	67,880	20,835	9,904	8,057	1,579	323	190	159,415

**Table 3. 1996 federally-reportable commercial landings (pounds) for Nantucket Sound  
(Source: NMFS Vessel Trip Report Data for Area 075)**

	April	May	June	July	August	September	October	November	Grand Total
American Lobster			27						27
Atlantic Mackerel		1,650							1,650
Black Sea Bass		32	198			4	1		235
Bluefish		275	50						325
Butterfish		900							900
Channeled Whelk			3,420	4,053	1,482		457	111	9,523
Illex Squid		950							950
Knobbed Whelk			25	300					325
Lightning Whelk				30	750				780
Loligo Squid		83,821	6,700						90,521
Rock Crab			12						12
Scup		756	186	30	63	115	195		1,345
Skate		1	90						91
Squid (Not Specified)	450	7,341	1,000						8,791
Summer Flounder		190	5,011	15,295	4,799				25,295
Tautog		106	22				1		129
White Hake					100				100
Winter Flounder	100	325	40				1		466
<b>Grand Total</b>	<b>550</b>	<b>96,347</b>	<b>16,781</b>	<b>19,708</b>	<b>7,194</b>	<b>119</b>	<b>655</b>	<b>111</b>	<b>141,465</b>



**Table 4. 1997 federally-reportable commercial landings (pounds) for Nantucket Sound  
(Source: NMFS Vessel Trip Report Data for Area 075)**

	April	May	June	July	August	September	October	Grand Total
Black Sea Bass		49	3	30				82
Bluefin Tuna				375				375
Bluefish			345	2				347
Butterfish		75	500					575
Channeled Whelk			960	11,441	4,160	11,865	13,455	41,881
Horseshoe Crab				545				545
Knobbed Whelk			210	850	55			1,115
Loligo Squid	1,250	72,763	11,000					85,013
Monkfish			60	140				200
Scup		2,970	8,403					11,373
Skate					300			300
Summer Flounder		540	3,371	11,290	3,600			18,801
Tautog		36	98	120	10			264
Whelk (Not Specified)				8,482	8,844	5,024		22,350
White Hake				900				900
Winter Flounder			25					25
<b>Grand Total</b>	1,250	76,433	24,975	34,175	16,969	16,889	13,455	184,146

**Table 5. 1998 federally-reportable commercial landings (pounds) for Nantucket Sound**  
**(Source: NMFS Vessel Trip Report Data for Area 075)**

	January	March	April	May	June	July	August	September	October	November	December	Grand Total
American Lobster		76	853	78								1,007
Atlantic Herring				500								500
Atlantic Mackerel			5,570	223,740								229,310
Black Sea Bass				1,153	25,286	7,629	4,414	7,209	35,334	5,760		86,785
Bluefish				190	367	12	185	840	850			2,444
Bonito							20					20
Butterfish			20	8,844	2,010							10,874
Channeled Whelk					7,210	11,898	8,674	11,303	9,549	9,427	366	58,427
Cod	180											180
Common Pompano									30			30
Horseshoe Crab					50							50
King Whiting						1,735		5				1,740
Knobbed Whelk					966	331						1,297
Loligo Squid			13,206	37,705	1,664							52,575
Menhaden					30,000							30,000
Monkfish					30							30
Razor Clam								283				283
Sandbar Shark							327					327
Scup				938	2,700	1,211	1,977	31,210	5,213	15		43,264
Seatrout, NK									9			9
Shark (Not Specified)					31		45	46				122
Shrimp	742											742
Silver Hake								20				20
Skate				5		300	260					565
Spotted Weakfish								42	15			57
Squid (Not Specified)				3,880	550							4,430
Summer Flounder			9	443	8,202	25,099						33,753
Tautog			1,274	2,065	2,147	142	159	186	1,377	513		7,863
Tuna (Not Specified)								17	7			24
Weakfish									20			20
Whelk (Not Specified)					354	1,564	4,937	1,472				8,327
White Hake					1,640							1,640
Windowpane Flounder			40	300								340
Winter Flounder			400	2,500					325	86		3,311
<b>Grand Total</b>	<b>922</b>	<b>76</b>	<b>21,372</b>	<b>282,341</b>	<b>83,207</b>	<b>49,921</b>	<b>20,998</b>	<b>52,633</b>	<b>52,729</b>	<b>15,801</b>	<b>366</b>	<b>580,366</b>

**Table 6. 1999 federally-reportable commercial landings (pounds) for Nantucket Sound  
(Source: NMFS Vessel Trip Report Data for Area 075)**

	April	May	June	July	August	September	October	November	December	Grand Total
American Lobster	53			56	72					181
Atlantic Mackerel	61,815	240,484								302,299
Black Sea Bass	22	52,549	37,678	15,260	8,479	17,023	36,323	669		168,003
Bluefish		100	9	31	32					172
Butterfish	40	2,180								2,220
Channeled Whelk		6,255	35,545	29,719	29,891	33,608	39,339	13,163	2,136	189,656
Cod				115						115
Crab (Not Specified)	40									40
Cusk				15						15
Horseshoe Crab	50	20		703						773
Illex Squid	300									300
King Whiting				753		2,851				3,604
Knobbed Whelk				761	830					1,591
Loligo Squid	27,220	171,388	2,900							201,508
Menhaden		28,510								28,510
Sandbar Shark				1,504	366					1,870
Scup		9,931	5,539					481		15,951
Sea Scallop		400	325							725
Silver Hake			100	300	100					500
Skate		200								200
Squid (Not Specified)	1,706	32,627	2,228	209						36,770
Summer Flounder	32	4,803	2,172	76,189	34,320					117,516
Tautog	728	3,080		230	196	407	357	58		5,056
Whelk (Not Specified)	23	19		3,914	2,397					6,353
White Hake				2,277	1,919	3,138				7,334
Windowpane Flounder	145									145
Winter Flounder	1,625									1,625
<b>Grand Total</b>	<b>93,799</b>	<b>552,546</b>	<b>86,496</b>	<b>132,036</b>	<b>78,602</b>	<b>57,027</b>	<b>76,019</b>	<b>14,371</b>	<b>2,136</b>	<b>1,093,032</b>

**Table 7. 2000 federally-reportable commercial landings (pounds) for Nantucket Sound  
(Source: NMFS Vessel Trip Report Data for Area 075)**

	April	May	June	July	August	September	October	November	Grand Total
American Lobster	365		273	187	2				827
American Plaice Flounder		20	600						620
Atlantic Mackerel		209,509							209,509
Black Sea Bass	382	42,905	20,183	25,168			62,648		151,286
Bluefish	30	4,336	1,205	80	35				5,686
Butterfish	5	3,072							3,077
Channeled Whelk		11,904	57,253	47,081	58,373	28,388	41,241	4,228	248,468
Cod			1,500						1,500
Haddock			100						100
Horseshoe Crab		50		465	150				665
Illex Squid		57,924							57,924
King Whiting							1,296		1,296
Knobbed Whelk				3,376	1,558				4,934
Loligo Squid	34,925	498,831	120,405						654,161
Monkfish							15		15
Other Finfish							155		155
Pollock			200						200
Scup	1,065	13,940	1,485	2,017	165				18,672
Sea Robins			60	3					63
Skate		60							60
Smooth Dogfish		120	100						220
Spanish Mackerel			4						4
Squid (Not Specified)	4,510	112,874	2,400						119,784
Summer Flounder	25	6,333	2,242	78,234	43,401	38			130,273
Tautog	2,938	4,892		156			2,276		10,262
Weakfish		5							5
Whelk (Not Specified)	30	1,693	18,365	26,686	16,757	11,022			74,553
Windowpane Flounder	215								215
Winter Flounder	1,050	5,520					800		7,370
Witch Flounder			1,800						1,800
Yellowtail Flounder			500						500
<b>Grand Total</b>	<b>45,540</b>	<b>973,988</b>	<b>228,675</b>	<b>183,453</b>	<b>120,441</b>	<b>39,448</b>	<b>108,431</b>	<b>4,228</b>	<b>1,704,204</b>

**Table 8. 2001 federally-reportable commercial landings (pounds) for Nantucket Sound  
(Source: NMFS Vessel Trip Report Data for Area 075)**

	March	April	May	June	July	August	September	October	November	December	Grand Total
American Lobster	250	148									398
Atlantic Herring		3,000	2,600								5,600
Atlantic Mackerel		2,410	131,155								133,565
Black Sea Bass			32,989	4,411	21,638			18,206	1,144		78,388
Bluefish			2,615	360		160					3,135
Butterfish		2,590	24,330								26,920
Channeled Whelk			23,301	111,208	82,790	28,262	10,157	10,931	6,116	1,160	273,925
Clam, Hard (Bay Quahog)								157	135		292
Clam, Ocean Quahog							150				150
Clam, (Not Specified)							2,940	41,566	5,180	34,200	83,886
Clams/Bushel (Not Specified)								7,476	295		7,771
Crab, Species (Not Specified)		15			177						192
Cusk					30						30
Horseshoe Crab					358	450	390	1,200			2,398
King Whiting						175	1,665				1,840
Knobbed Whelk				3,300	225	648	700	10			4,883
Knobbed Whelk - Bushel								3,906			3,906
Loligo Squid		137,518	304,928	20							442,466
Sculpins			100								100
Scup			32,079	450	1,388	231			171		34,319
Sea Scallop			1,200						24,400	42,600	68,200
Spotted Weakfish			20	10							30
Squid (Not Specified)			50								50
Summer Flounder		2	1,835	43	24,756	49,678					76,314
Tautog		166	5,221		135			696			6,218
Tilefish		3									3
Whelk (Not Specified)			25		974	768					1,767
Winter Flounder		15	3,050								3,065
<b>Grand Total</b>	250	145,867	565,498	119,802	132,471	80,372	16,002	84,148	37,441	77,960	1,259,811

**Table 9. 2002 federally-reportable commercial landings (pounds) for Nantucket Sound  
(Source: NMFS Vessel Trip Report Data for Area 075)**

	January	February	March	April	May	June	July	August	September	October	November	December	Grand Total
American Lobster				215	35								250
Atlantic Herring				1,000	700								1,700
Atlantic Mackerel				48,740	192,761								241,501
Black Sea Bass				1,749	71,273	2,546	24,030	834		22,455	2,069		124,956
Bluefish				34	800	889	538	317		20			2,598
Bonito							15			8			23
Butterfish				1,852	5,149	30							7,031
Channeled Whelk	3,130		840	1,325	19,902	49,555	13,226	9,057	11,117		151	411	108,714
Clam, Hard	17,550	5,490	4,440	3,420									30,900
Clam, Ocean Quahog	19,200	12,100	7,000	7,120	750								46,170
Clam (Not Specified)	51,850	1,000	1,200										54,050
Cod					5								5
Cusk						250							250
Horseshoe Crab						672	1,869	242		23			2,806
Illex Squid					3,615								3,615
King Whiting					1,314	8,887	5,838	1,357	3,730	4,850			25,976
Knobbed Whelk					100	10,622	11,025	8,009					29,756
Lightning Whelk					50								50
Loligo Squid				338,910	761,415	4,800					8		1,105,133
Menhaden				24,700	51,800								76,500
Monk Tails					150								150
Other Finfish						700							700
Quahogs - Bushel			35	114	87			207	54	108	32	22	659
Rock Crab					5								5
Sandbar Shark				1				9					10
Scup				7,576	89,005		6,787	1,008			339		104,715
Shrimp						3,110							3,110
Skate						100							100
Smooth Dogfish					150		75						225
Spotted Weakfish					10								10
Summer Flounder				589	5,114	38,665	73,048	58,874					176,290
Tautog				4,031	2,715		29	11		185	2		6,973
Whelk (Not Specified)				9	1,675	796	2,792	2,666	227				8,165
White Hake					60			340					400
White Marlin						100							100
Windowpane Flounder					131								131
Winter Flounder				134	15,047								15,181
Yellowtail Flounder					1								1
<b>Grand Total</b>	<b>91,730</b>	<b>18,590</b>	<b>13,515</b>	<b>441,519</b>	<b>1,223,819</b>	<b>121,722</b>	<b>139,272</b>	<b>82,931</b>	<b>15,128</b>	<b>27,649</b>	<b>2,601</b>	<b>433</b>	<b>2,178,909</b>

**Table 10. 2003 federally-reportable commercial landings (pounds) for Nantucket Sound**  
**(Source: NMFS Vessel Trip Report Data for Area 075)**

	January	February	March	April	May	June	July	August	September	October	November	Grand Total
American Plaice Flounder					148							148
Atlantic Herring					1,200							1,200
Atlantic Mackerel					22,718							22,718
Black Sea Bass				75	15,205	31,325		17,348		20		63,973
Blue Black Herring					300							300
Bluefish				75	2,519	4,947	272	221	26			8,060
Butterfish				1	12,633	45	1,300					13,979
Channeled Whelk					4,478	14,252	12,213	5,210	20,757	6,171		63,081
Clam, Ocean Quahog							2,646	5,830	5,725	6,090	3,361	23,652
Cod										60		60
Haddock										40		40
Hogfish								80				80
Horseshoe Crab					5	227	434	203	203	31		1,103
Illex Squid					7,785							7,785
King Whiting						1,992	4,657	1,645	1,110			9,404
Knobbed Whelk					10	6,929	14,777	1,869	31			23,616
Loligo Squid				2,427	164,761	11,772						178,960
Menhaden					2,900							2,900
Monkfish										360		360
Quahogs - Bushel	40	51	97	61	82	33	98					462
Red Hake						55						55
Sandbar Shark					2	3	1,000					1,005
Scup				50	10,010	128,715	5,417	3,256	1,445			148,893
Sea Raven					2	15						17
Sea Robins					2							2
Sea Scallop					5,160							5,160
Shark (Not Specified)								22				22
Silver Hake						75		18				93
Skate					205	3,800	1,500					5,505
Skate Wings					2							2
Spider Crab					500							500
Spotted Weakfish					7							7
Summer Flounder					3,133	26,182	52,257	38,126	1,782	150		121,630
Tautog				50	3,352	40		27				3,469
Weakfish					4							4
Whelk (Not Specified)						10		740	80			830
White Hake							500					500
Windowpane Flounder					373							373
Winter Flounder					13,837							13,837
Witch Flounder						1,500				5,410		6,910
<b>Grand Total</b>	<b>40</b>	<b>51</b>	<b>97</b>	<b>2,739</b>	<b>271,333</b>	<b>231,917</b>	<b>97,071</b>	<b>74,595</b>	<b>31,159</b>	<b>18,332</b>	<b>3,361</b>	<b>730,695</b>

**Table 11. 2004 federally-reportable commercial landings (pounds) for Nantucket Sound**  
**(Source: NMFS Vessel Trip Report Data for Area 075)**

	February	March	April	May	June	July	August	September	October	November	December	Grand Total
American Lobster						33						33
Atlantic Herring				9,000								9,000
Atlantic Mackerel				128,552								128,552
Bay Scallops	155	71										226
Black Sea Bass				31,359	17,922	1	13,321					62,603
Bluefish				999	4,690	699	468	110	45			7,011
Butterfish				4,378	80							4,458
Channeled Whelk				10,322	19,331	22,577	10,383	16,898	18,355	11,400	1,800	111,066
Crab (Not Specified)					63							63
Horseshoe Crab					50	415	1,316					1,781
Illex Squid				8,088	490							8,578
King Whiting								2,400		4,200		6,600
Knobbed Whelk				2,800	5,110	12,592	10,583	474	1,482			33,041
Lightning Whelk						10	120					130
Loligo Squid			14,770	636,082	31,075							681,927
Monk Tails					17		500					517
Monkfish					8		7,000	22				7,030
Ocean Pout				200								200
Sandbar Shark				4	25	1,453	61					1,543
Scup			78	87,739	54,258	3,333	16,424	7,666	2,382			171,880
Skate				2,200	1,670	1,100						4,970
Smooth Dogfish					900		100					1,000
Summer Flounder				5,121	21,488	40,888	59,181	16,322	4,680			147,680
Tautog			1,769	3,786	80		20					5,655
Whelk (Not Specified)				576	2,000	2,457	4,820	874	13,845			24,572
White Hake							40					40
Windowpane Flounder				1,770			2					1,772
Winter Flounder				24,062	370		200					24,632
Witch Flounder							250					250
Yellowtail Flounder				10			100					110
<b>Grand Total</b>	155	71	16,617	957,048	159,627	85,558	124,889	44,766	40,789	15,600	1,800	1,446,920



**Table 12. Total federally-reportable commercial landings (pounds) and number of species landed by month and year**  
 (Source: NMFS Vessel Trip Report Data for Area 075)

MONTH	1994		1995		1996		1997		1998		1999		2000		2001		2002		2003		2004		Total Landings (lbs)
	No. Species	Total Landings (lbs)	No. Species	Total Landings (lbs)	No. Species	Total Landings (lbs)	No. Species	Total Landings (lbs)	No. Species	Total Landings (lbs)	No. Species	Total Landings (lbs)	No. Species	Total Landings (lbs)	No. Species	Total Landings (lbs)	No. Species	Total Landings (lbs)	No. Species	Total Landings (lbs)	No. Species	Total Landings (lbs)	
January									2	922							12	91,730	3	40			92,692
February																	6	18,590	1	51	1	155	18,796
March			1	200					1	76					2	250	5	13,515	2	97	2	71	14,209
April			5	1,625	2	550	1	1,250	29	21,372	37	93,799	48	45,540	32	145,867	106	441,519	11	2,739	8	16,617	770,878
May	3	27,270	21	48,822	38	96,347	44	76,433	110	282,341	229	552,546	279	973,988	219	565,498	326	1,223,819	265	271,333	329	957,048	5,075,445
June			69	67,880	31	16,781	36	24,975	83	83,207	66	86,496	80	228,675	52	119,802	112	121,722	135	231,917	151	159,627	1,141,082
July	10	11,420	41	20,835	49	19,708	75	34,175	52	49,921	127	132,036	139	183,453	117	132,471	205	139,272	111	97,071	126	85,558	905,920
August	67	34,966	30	9,904	17	7,194	21	16,969	26	20,998	69	78,602	89	120,441	113	80,372	117	82,931	160	74,595	219	124,889	651,861
September	26	13,327	22	8,057	3	119	5	16,889	28	52,633	28	57,027	19	39,448	9	16,002	10	15,128	36	31,159	73	44,766	294,555
October	15	4,002	12	1,579	6	655	1	13,455	44	52,729	23	76,019	48	108,431	33	84,148	37	27,649	11	18,332	48	40,789	427,788
November	1	501	1	323	1	111			13	15,801	10	14,371	5	4,228	10	37,441	15	2,601	1	3,361	10	15,600	94,338
December			1	190					1	366	3	2,136			4	77,960	3	433			2	1,800	82,885
<b>Grand Total</b>	<b>122</b>	<b>91,486</b>	<b>203</b>	<b>159,415</b>	<b>147</b>	<b>141,465</b>	<b>183</b>	<b>184,146</b>	<b>389</b>	<b>580,366</b>	<b>592</b>	<b>1,093,032</b>	<b>707</b>	<b>1,704,204</b>	<b>591</b>	<b>1,259,811</b>	<b>954</b>	<b>2,178,909</b>	<b>736</b>	<b>730,695</b>	<b>969</b>	<b>1,446,920</b>	<b>9,570,449</b>

**Table 13. Top 20 federally-reportable commercial species landed (pounds) from Nantucket Sound  
(Source: NMFS Vessel Trip Report Data for Area 075)**

Species	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Grand Total
Loligo Squid	21,770	69,100	90,521	85,013	52,575	201,508	654,161	442,466	1,105,133	178,960	681,927	3,583,134
Atlantic Mackerel			1,650		229,310	302,299	209,509	133,565	241,501	22,718	128,552	1,269,104
Channeled Whelk	27,303	17,709	9,523	41,881	58,427	189,656	248,468	273,925	108,714	63,081	111,066	1,149,753
Summer Flounder	27,047	37,418	25,295	18,801	33,753	117,516	130,273	76,314	176,290	121,630	147,680	912,017
Black Sea Bass	17	533	235	82	86,785	168,003	151,286	78,388	124,956	63,973	62,603	736,861
Scup	6,930	7,038	1,345	11,373	43,264	15,951	18,672	34,319	104,715	148,893	171,880	564,380
Squid (Not Specified)			8,791		4,430	36,770	119,784	50				169,825
Whelk (Not Specified)	655	800		22,350	8,327	6,353	74,553	1,767	8,165	830	24,572	148,372
Clam (Not Specified)								83,886	54,050			137,936
Menhaden					30,000	28,510			76,500	2,900		137,910
Knobbed Whelk	1,544	6,734	325	1,115	1,297	1,591	4,934	4,883	29,756	23,616	33,041	108,836
Illex Squid			950			300	57,924		3,615	7,785	8,578	79,152
Winter Flounder	12	8,437	466	25	3,311	1,625	7,370	3,065	15,181	13,837	24,632	77,961
Sea Scallop						725		68,200		5,160		74,085
Butterfish			900	575	10,874	2,220	3,077	26,920	7,031	13,979	4,458	70,034
Clam, Ocean Quahog								150	46,170	23,652		69,972
King Whiting	100	20			1,740	3,604	1,296	1,840	25,976	9,404	6,600	50,580
Tautog	104	129	129	264	7,863	5,056	10,262	6,218	6,973	3,469	5,655	46,122
Clam, Hard									30,900			30,900
Bluefish		194	325	347	2,444	172	5,686	3,135	2,598	8,060	7,011	29,972
<b>Grand Total</b>	<b>85,482</b>	<b>148,112</b>	<b>140,455</b>	<b>181,826</b>	<b>574,400</b>	<b>1,081,859</b>	<b>1,697,255</b>	<b>1,239,091</b>	<b>2,168,224</b>	<b>711,947</b>	<b>1,418,255</b>	<b>9,446,906</b>

**Table 14. Total federally-reportable Landings (pounds) for finfish and squid species and proportion of total catch for each species (Source: NMFS Vessel Trip Report Data for Area 075)**

1994			1995			1996			1997			1998			1999					
Species	Total	% of total annual catch	Species	Total	% of total annual catch	Species	Total	% of total annual catch	Species	Total	% of total annual catch	Species	Total	% of total annual catch	Species	Total	% of total annual catch			
Summer Flounder	27,047	44.21%	Loligo Squid	69,100	51.63%	Loligo Squid	90,521	69.21%	Loligo Squid	85,013	71.89%	Atlantic Mackerel	229,310	44.94%	Atlantic Mackerel	302,299	33.83%			
Loligo Squid	21,770	35.59%	Summer Flounder	37,418	27.96%	Summer Flounder	25,295	19.34%	Summer Flounder	18,801	15.90%	Black Sea Bass	86,785	17.01%	Loligo Squid	201,508	22.55%			
Scup	6,930	11.33%	Winter Flounder	8,437	6.30%	Squid (Not Specified)	8,791	6.72%	Scup	11,373	9.62%	Loligo Squid	52,575	10.30%	Black Sea Bass	168,003	18.80%			
White Hake	4,881	7.98%	Atlantic Mackerel	7,038	5.26%	Atlantic Mackerel	1,650	1.26%	White Hake	900	0.76%	Scup	43,264	8.48%	Summer Flounder	117,516	13.15%			
Sandbar Shark	246	0.40%	American Plaice Flounder	2,600	1.94%	Scup	1,345	1.03%	Butterfish	575	0.49%	Summer Flounder	33,753	6.62%	Squid, Species not Specified	36,770	4.11%			
Tautog	104	0.17%	Monkfish	2,270	1.70%	Illex Squid	950	0.73%	Bluefin Tuna	375	0.32%	Menhaden	30,000	5.88%	Menhaden	28,510	3.19%			
King Whiting	100	0.16%	Witch Flounder	2,240	1.67%	Butterfish	900	0.69%	Bluefish	347	0.29%	Butterfish	10,874	2.13%	Scup	15,951	1.78%			
Skate	52	0.08%	Yellowtail Flounder	1,310	0.98%	Winter Flounder	466	0.36%	Skate	300	0.25%	Tautog	7,863	1.54%	White Hake	7,334	0.82%			
Monkfish	18	0.03%	Cod	1,005	0.75%	Bluefish	325	0.25%	Tautog	264	0.22%	Squid (Not Specified)	4,430	0.87%	Tautog	5,056	0.57%			
Black Sea Bass	17	0.03%	Black Sea Bass	949	0.71%	Black Sea Bass	235	0.18%	Monkfish	200	0.17%	Winter Flounder	3,311	0.65%	King Whiting	3,604	0.40%			
Winter Flounder	12	0.02%	Other Finfish	579	0.43%	Tautog	129	0.10%	Black Sea Bass	82	0.07%	Bluefish	2,444	0.48%	Butterfish	2,220	0.25%			
Grand Total	61,177		Black Sea Bass	533	0.40%	White Hake	100	0.08%	Winter Flounder	25	0.02%	King Whiting	1,740	0.34%	Sandbar Shark	1,870	0.21%			
			Bluefish	194	0.14%	Skate	91	0.07%	Grand Total	118,255		White Hake	1,640	0.32%	Winter Flounder	1,625	0.18%			
			Tautog	129	0.10%	Grand Total	130,798					Skate	565	0.11%	Silver Hake	500	0.06%			
			King Whiting	20	0.01%							Atlantic Herring	500	0.10%	Illex Squid	300	0.03%			
			Windowpane Flounder	5	0.004%							Windowpane Flounder	340	0.07%	Skate	200	0.02%			
			Grand Total	133,827								Sandbar Shark	327	0.06%	Bluefish	172	0.02%			
												Cod	180	0.04%	Windowpane Flounder	145	0.02%			
												Shark, Species not Specified	122	0.024%	Cod	115	0.01%			
												Spotted Weakfish	57	0.011%	Cusk	15	0.002%			
												Common Pompano	30	0.006%	Grand Total	893,713				
												Monkfish	30	0.006%						
												Tuna (Not Specified)	24	0.005%						
												Bonito	20	0.004%						
												Silver Hake	20	0.004%						
												Weakfish	20	0.004%						
												Seatrout, NK	9	0.002%						
												Grand Total	510,233							
2000			2001			2002			2003			2004								
Species	Total	% of total annual catch	Species	Total	% of total annual catch	Species	Total	% of total annual catch	Species	Total	% of total annual catch	Species	Total	% of total annual catch						
Loligo Squid	654,161	47.58%	Loligo Squid	442,466	54.49%	Loligo Squid	1,105,133	58.34%	Loligo Squid	178,960	29.23%	Loligo Squid	681,927	53.44%	Loligo Squid	171,880	13.47%			
Atlantic Mackerel	209,509	15.24%	Atlantic Mackerel	133,565	16.45%	Atlantic Mackerel	241,501	12.75%	Scup	148,893	24.32%	Scup	147,880	11.57%	Scup	147,680	11.57%			
Black Sea Bass	151,286	11.00%	Black Sea Bass	78,388	9.65%	Summer Flounder	176,290	9.31%	Summer Flounder	121,630	19.86%	Summer Flounder	128,552	10.07%	Atlantic Mackerel	128,552	10.07%			
Summer Flounder	130,273	9.48%	Summer Flounder	76,314	9.40%	Black Sea Bass	124,956	6.60%	Black Sea Bass	63,973	10.45%	Atlantic Mackerel	62,603	4.91%	Black Sea Bass	62,603	4.91%			
Squid (Not Specified)	119,784	8.71%	Scup	34,319	4.23%	Scup	104,715	5.53%	Atlantic Mackerel	22,718	3.71%	Atlantic Mackerel	24,632	1.93%	Winter Flounder	24,632	1.93%			
Illex Squid	57,924	4.21%	Butterfish	26,920	3.32%	Menhaden	76,500	4.04%	Butterfish	13,979	2.28%	Winter Flounder	9,000	0.71%	Atlantic Herring	9,000	0.71%			
Scup	18,672	1.36%	Tautog	6,218	0.77%	King Whiting	25,976	1.37%	Winter Flounder	13,837	2.26%	Atlantic Herring	8,578	0.67%	Illex Squid	7,030	0.55%			
Tautog	10,262	0.75%	Atlantic Herring	5,600	0.69%	Winter Flounder	15,181	0.80%	King Whiting	9,404	1.54%	Illex Squid	8,578	0.67%	Monkfish	7,011	0.55%			
Winter Flounder	7,370	0.54%	Bluefish	3,135	0.39%	Butterfish	7,031	0.37%	Bluefish	8,060	1.32%	Monkfish	6,600	0.52%	Bluefish	7,011	0.55%			
Bluefish	5,686	0.41%	Winter Flounder	3,065	0.38%	Tautog	6,973	0.37%	Illex Squid	7,785	1.27%	King Whiting	6,600	0.52%	King Whiting	6,600	0.52%			
Butterfish	3,077	0.22%	King Whiting	1,840	0.23%	Illex Squid	3,615	0.19%	Witch Flounder	6,910	1.13%	Witch Flounder	5,655	0.44%	Tautog	5,655	0.44%			
Witch Flounder	1,800	0.13%	Sculpins	100	0.01%	Bluefish	2,598	0.14%	Skate	5,505	0.90%	Skate	4,970	0.39%	Skate	4,970	0.39%			
Cod	1,500	0.11%	Squid (Not Specified)	50	0.01%	Atlantic Herring	1,700	0.09%	Tautog	3,469	0.57%	Butterfish	4,458	0.35%	Butterfish	4,458	0.35%			
King Whiting	1,296	0.09%	Cusk	30	0.004%	Other Finfish	700	0.04%	Menhaden	2,900	0.47%	Windowpane Flounder	1,772	0.14%	Windowpane Flounder	1,772	0.14%			
American Plaice Flounder	620	0.05%	Spotted Weakfish	30	0.004%	White Hake	400	0.02%	Atlantic Herring	1,200	0.20%	Sandbar Shark	1,543	0.12%	Sandbar Shark	1,543	0.12%			
Yellowtail Flounder	500	0.04%	Tilefish	3	0.0004%	Cusk	250	0.013%	Sandbar Shark	1,005	0.16%	Smooth Dogfish	1,000	0.08%	Smooth Dogfish	1,000	0.08%			
Smooth Dogfish	220	0.02%	Grand Total	812,043		Smooth Dogfish	225	0.012%	White Hake	500	0.08%	Monk Tails	517	0.04%	Monk Tails	517	0.04%			
Windowpane Flounder	215	0.02%				Monk Tails	150	0.008%	Sandbar Shark	373	0.06%	Witch Flounder	250	0.02%	Witch Flounder	250	0.02%			
Pollock	200	0.01%				Windowpane Flounder	131	0.007%	White Hake	360	0.06%	Ocean Pout	200	0.02%	Ocean Pout	200	0.02%			
Other Finfish	155	0.01%				Skate	100	0.005%	Blue Black Herring	300	0.05%	Yellowtail Flounder	110	0.01%	Yellowtail Flounder	110	0.01%			
Haddock	100	0.01%				White Marlin	100	0.005%	American Plaice Flounder	148	0.02%	White Hake	40	0.0031%	White Hake	40	0.0031%			
Sea Robins	63	0.005%				Bonito	23	0.0012%	Silver Hake	93	0.02%	Grand Total	1,276,008							
Skate	60	0.004%				Sandbar Shark	10	0.0005%	Hogfish	80	0.013%									
Monkfish	15	0.001%				Spotted Weakfish	10	0.0005%	Cod	60	0.010%									
Weakfish	5	0.0004%				Cod	5	0.0003%	Red Hake	55	0.009%									
Spanish Mackerel	4	0.0003%				Yellowtail Flounder	1	0.0001%	Haddock	40	0.007%									
Grand Total	1,374,757					Grand Total	1,894,274		Shark (Not Specified)	22	0.0036%									
									Sea Raven	17	0.0028%									
									Spotted Weakfish	7	0.0011%									
									Weakfish	4	0.0007%									
									Sea Robins	2	0.0003%									
									Skate Wings	2	0.0003%									
									Grand Total	612,291										

**Table 15 - Estimated Value of Federally-Reportable Commercial Landings in Nantucket Sound - 1994 to 2004**

1994				1995				1996			
Species	Total Pounds*	Price per pound**	Value	Species	Total Pounds*	Price per pound**	Value	Species	Total Pounds*	Price per pound**	Value
American Lobster	492	\$3.65	\$1,795.80	American Lobster	35	\$3.95	\$138.25	American Lobster	27	\$4.21	\$113.67
Black Sea Bass	17	\$2.29	\$38.93	American Plaice Flounder	2,600	\$1.34	\$3,484.00	Atlantic Mackerel	1,650	\$0.43	\$709.50
Channeled Whelk	27,303	\$1.56	\$42,592.68	Black Sea Bass	533	\$2.22	\$1,183.26	Black Sea Bass	235	\$2.39	\$561.65
King Whiting <sup>1</sup>	100	\$0.40	\$40.00	Bluefish	194	\$0.35	\$67.90	Bluefish	325	\$0.29	\$94.25
Knobbed Whelk	1,544	\$1.14	\$1,760.16	Channeled Whelk	17,709	\$1.59	\$28,157.31	Butterfish	900	\$0.31	\$279.00
Lightning Whelk <sup>2</sup>	315	\$1.27	\$400.05	Cod	1,005	\$1.15	\$1,155.75	Channeled Whelk	9,523	\$1.51	\$14,379.73
Loligo Squid	21,770	\$0.62	\$13,497.40	Horseshoe Crab <sup>1</sup>	310	\$0.36	\$110.19	Illex Squid <sup>2</sup>	950	\$0.70	\$665.00
Monkfish	18	\$1.29	\$23.22	King Whiting <sup>1</sup>	20	\$1.00	\$20.00	Knobbed Whelk	325	\$1.20	\$390.00
Sandbar Shark <sup>2</sup>	246	\$0.74	\$182.04	Knobbed Whelk	6,734	\$1.09	\$7,340.06	Lightning Whelk <sup>3</sup>	780	\$1.51	\$1,177.80
Scup	6,930	\$0.99	\$6,860.70	Loligo Squid	69,100	\$0.58	\$40,078.00	Loligo Squid	90,521	\$0.73	\$66,080.33
Skate	52	\$0.54	\$28.08	Monkfish	2,270	\$1.26	\$2,860.20	Rock Crab	12	\$0.40	\$4.80
Summer Flounder	27,047	\$1.67	\$45,168.49	Other Finfish	579	\$0.40	\$231.60	Scup	1,345	\$1.21	\$1,627.45
Tautog	104	\$0.74	\$76.96	Scup	7,038	\$1.51	\$10,627.38	Skate	91	\$0.47	\$42.77
Whelk (Not Specified)	655	\$1.27	\$831.85	Skate	949	\$0.39	\$370.11	Squid (Not Specified)	8,791	\$0.70	\$6,153.70
White Hake	4,881	\$0.68	\$3,319.08	Summer Flounder	37,418	\$2.04	\$76,332.72	Summer Flounder	25,295	\$2.23	\$56,407.85
Winter Flounder	12	\$1.35	\$16.20	Tautog	129	\$0.81	\$104.49	Tautog	129	\$0.88	\$113.52
<b>Grand Total</b>	<b>91,486</b>		<b>\$116,632</b>	Whelk (Not Specified) <sup>3</sup>	800	\$1.59	\$1,272.00	White Hake	100	\$0.80	\$80.00
				Windowpane Flounder	5	\$0.56	\$2.80	Winter Flounder	466	\$1.41	\$657.06
				Winter Flounder	8,437	\$1.37	\$11,558.69	<b>Grand Total</b>	<b>141,465</b>		<b>\$149,538</b>
				Witch Flounder	2,240	\$1.82	\$4,076.80				
				Yellowtail Flounder	1,310	\$1.42	\$1,860.20				
				<b>Grand Total</b>	<b>159,415</b>		<b>\$191,032</b>				

\* Source: NMFS VTR data for Area 075

\*\* Source: Price data obtained from NOAA dealer database and averaged from Dukes, Barnstable, Nantucket, Plymouth and Bristol counties unless indicated by another footnote.

<sup>1</sup> Price data were obtained from Massachusetts-wide landings data available on NOAA Fisheries website. [http://www.st.nmfs.gov/st1/commercial/landings/annual\\_landings.html](http://www.st.nmfs.gov/st1/commercial/landings/annual_landings.html)

<sup>2</sup> The dollar amount is from unspecified species (i.e. not genus and species name).

<sup>3</sup> Used highest dollar amount for whelk species from this year.

<sup>4</sup> No price data could be found in county data or Massachusetts-wide landings data for this species and year. It is possible that this fish was not actually sold to the dealer.

<sup>5</sup> No price data were available for menhaden during this year. Price data from 1999 was used.

<sup>6</sup> No price data were available for king whiting during this year. Price data from 2001 was used.

<sup>7</sup> No price data were available for blueback herring during this year. Price data for Atlantic herring from the same year was used.

<sup>8</sup> No price data were available for this year. Price data from 2003 was used.

<sup>9</sup> No price data were available for monk tails during this year. Price data from 2002 was used.

**Table 15 - Estimated Value of Federally-Reportable Commercial Landings in Nantucket Sound - 1994 to 2004**

1997				1998				1999			
Species	Total Pounds*	Price per pound**	Value	Species	Total Pounds*	Price per pound**	Value	Species	Total Pounds*	Price per pound**	Value
Black Sea Bass	82	\$2.26	\$185.32	American Lobster	1,007	\$4.35	\$4,380.45	American Lobster	181	\$4.49	\$812.69
Bluefin Tuna	375	\$9.25	\$3,468.75	Atlantic Herring <sup>1</sup>	500	\$0.05	\$26.26	Atlantic Mackerel	302,299	\$0.39	\$117,896.61
Bluefish	347	\$0.29	\$100.63	Atlantic Mackerel	229,310	\$0.34	\$77,965.40	Black Sea Bass	168,003	\$2.08	\$349,446.24
Butterfish	575	\$0.37	\$212.75	Black Sea Bass	86,785	\$2.26	\$196,134.10	Bluefish	172	\$0.41	\$70.52
Channeled Whelk	41,881	\$1.56	\$65,334.36	Bluefish	2,444	\$0.41	\$1,002.04	Butterfish	2,220	\$0.52	\$1,154.40
Horseshoe Crab <sup>1</sup>	545	\$0.62	\$340.11	Bonito	20	\$1.17	\$23.40	Channeled Whelk <sup>2</sup>	189,656	\$0.84	\$159,311.04
Knobbed Whelk	1,115	\$1.25	\$1,393.75	Butterfish	10,874	\$0.49	\$5,328.26	Cod	115	\$1.37	\$157.55
Loligo Squid	85,013	\$0.61	\$51,857.93	Channeled Whelk	58,427	\$1.79	\$104,584.33	Crab (Not Specified) <sup>1</sup>	40	\$0.45	\$18.20
Monkfish	200	\$1.26	\$252.00	Cod	180	\$1.28	\$230.40	Cusk	15	\$0.73	\$10.95
Scup	11,373	\$1.52	\$17,286.96	Common Pompano <sup>4</sup>	30	n/a	n/a	Horseshoe Crab <sup>1</sup>	773	\$0.55	\$424.75
Skate	300	\$0.34	\$102.00	Horseshoe Crab <sup>1</sup>	50	\$0.98	\$49.06	Illex Squid <sup>2</sup>	300	\$0.82	\$246.00
Summer Flounder	18,801	\$2.07	\$38,918.07	King Whiting	1,740	\$1.31	\$2,279.40	King Whiting	3,604	\$0.90	\$3,243.60
Tautog	264	\$1.07	\$282.48	Knobbed Whelk	1,297	\$1.34	\$1,737.98	Knobbed Whelk <sup>2</sup>	1,591	\$0.84	\$1,336.44
Whelk (Not Specified)	22,350	\$1.59	\$35,536.50	Loligo Squid	52,575	\$0.97	\$50,997.75	Loligo Squid	201,508	\$0.78	\$157,176.24
White Hake	900	\$0.83	\$747.00	Menhaden <sup>1,5</sup>	30,000	\$0.04	\$1,200.00	Menhaden <sup>1</sup>	28,510	\$0.04	\$1,140.40
Winter Flounder	25	\$1.45	\$36.25	Monkfish	30	\$1.27	\$38.10	Sandbar Shark <sup>2</sup>	1,870	\$1.44	\$2,692.80
<b>Grand Total</b>	<b>184,146</b>		<b>\$216,055</b>	Razor Clam <sup>1,2</sup>	283	\$0.50	\$141.70	Scup	15,951	\$1.18	\$18,822.18
				Sandbar Shark <sup>2</sup>	327	\$1.04	\$340.08	Sea Scallop	725	\$7.29	\$5,285.25
				Scup	43264	\$1.84	\$79,605.76	Silver Hake	500	\$0.39	\$195.00
				Seatrout, NK <sup>4</sup>	9	n/a	n/a	Skate	200	\$0.38	\$76.00
				Shark (Not Specified)	122	\$1.04	\$126.88	Squid (Not Specified)	36,770	\$0.82	\$30,151.40
				Shrimp <sup>1,2</sup>	742	\$0.77	\$571.16	Summer Flounder	117,516	\$2.09	\$245,608.44
				Silver Hake	20	\$0.46	\$9.20	Tautog	5,056	\$1.34	\$6,775.04
				Skate	565	\$0.38	\$214.70	Whelk (Not Specified)	6,353	\$0.84	\$5,336.52
				Spotted Weakfish <sup>1,2</sup>	57	\$0.71	\$40.73	White Hake	7,334	\$0.88	\$6,453.92
				Squid (Not Specified)	4430	\$1.29	\$5,714.70	Windowpane Flounder	145	\$0.33	\$47.85
				Summer Flounder	33753	\$1.92	\$64,805.76	Winter Flounder	1,625	\$1.30	\$2,112.50
				Tautog	7863	\$1.23	\$9,671.49	<b>Grand Total</b>	<b>1,093,032</b>		<b>\$1,116,003</b>
				Tuna (Not Specified) <sup>1</sup>	24	\$3.07	\$73.75				
				Weakfish	20	\$1.38	\$27.60				
				Whelk (Not Specified)	8327	\$1.31	\$10,908.37				
				White Hake	1640	\$0.92	\$1,508.80				
				Windowpane Flounder	340	\$0.43	\$146.20				
				Winter Flounder	3311	\$1.45	\$4,800.95				
				<b>Grand Total</b>	<b>580,366</b>		<b>\$624,685</b>				

\* Source: NMFS VTR data for Area 075

\*\* Source: Price data obtained from NOAA dealer database and averaged from Dukes, Barnstable, Nantucket, Plymouth and Bristol counties unless indicated by another footnote.

<sup>1</sup> Price data were obtained from Massachusetts-wide landings data available on NOAA Fisheries website. [http://www.st.nmfs.gov/st1/commercial/landings/annual\\_landings.html](http://www.st.nmfs.gov/st1/commercial/landings/annual_landings.html)

<sup>2</sup> The dollar amount is from unspecified species (i.e. not genus and species name).

<sup>3</sup> Used highest dollar amount for whelk species from this year.

<sup>4</sup> No price data could be found in county data or Massachusetts-wide landings data for this species and year. It is possible that this fish was not actually sold to the dealer.

<sup>5</sup> No price data were available for menhaden during this year. Price data from 1999 was used.

<sup>6</sup> No price data were available for king whiting during this year. Price data from 2001 was used.

<sup>7</sup> No price data were available for blueback herring during this year. Price data for Atlantic herring from the same year was used.

<sup>8</sup> No price data were available for this year. Price data from 2003 was used.

<sup>9</sup> No price data were available for monk tails during this year. Price data from 2002 was used.

**Table 15 - Estimated Value of Federally-Reportable Commercial Landings in Nantucket Sound - 1994 to 2004**

2000				2001				2002			
Species	Total Pounds*	Price per pound**	Value	Species	Total Pounds*	Price per pound**	Value	Species	Total Pounds*	Price per pound**	Value
American Lobster	827	\$4.93	\$4,077.11	American Lobster	398	\$4.64	\$1,846.72	American Lobster	250	\$4.39	\$1,097.50
American Plaice Flounder	620	\$1.06	\$657.20	Atlantic Herring <sup>1</sup>	5,600	\$0.06	\$316.74	Atlantic Herring <sup>1</sup>	1,700	\$0.06	\$95.91
Atlantic Mackerel	209,509	\$0.36	\$75,423.24	Atlantic Mackerel	133,565	\$0.33	\$44,076.45	Atlantic Mackerel	241,501	\$0.41	\$99,015.41
Black Sea Bass	151,286	\$1.83	\$276,853.38	Black Sea Bass	78,388	\$1.72	\$134,827.36	Black Sea Bass	124,956	\$1.61	\$201,179.16
Bluefish	5,686	\$0.42	\$2,388.12	Bluefish	3,135	\$0.42	\$1,316.70	Bluefish	2,598	\$0.42	\$1,091.16
Butterfish	3,077	\$0.44	\$1,353.88	Butterfish	26,920	\$0.27	\$7,268.40	Bonito <sup>1</sup>	23	\$2.18	\$50.14
Channeled Whelk <sup>2</sup>	248,468	\$1.23	\$305,615.64	Channeled Whelk <sup>1</sup>	273,925	\$2.16	\$591,678.00	Butterfish	7,031	\$0.41	\$2,882.71
Cod	1,500	\$1.26	\$1,890.00	Clam, Hard (Bay Quahog) <sup>1,2</sup>	292	\$0.55	\$159.71	Channeled Whelk <sup>1</sup>	108,714	\$1.86	\$202,208.04
Haddock	100	\$1.54	\$154.00	Clam, Ocean Quahog <sup>1,2</sup>	150	\$0.55	\$82.04	Clam, Hard <sup>1</sup>	30,900	\$0.61	\$18,772.53
Horseshoe Crab <sup>2</sup>	665	\$0.57	\$379.05	Clam, (Not Specified) <sup>1,2</sup>	83,886	\$0.55	\$45,882.60	Clam, Ocean Quahog <sup>1</sup>	46,170	\$0.54	\$24,750.20
Illex Squid <sup>2</sup>	57,924	\$0.35	\$20,273.40	Clams/Bushel (Not Specified) <sup>1,2</sup>	7,771	\$0.55	\$4,274.05	Clam (Not Specified) <sup>1</sup>	54,050	\$0.54	\$28,974.41
King Whiting <sup>1,6</sup>	1,296	\$0.51	\$660.96	Crab, Species (Not Specified)	192	\$0.55	\$105.60	Cod	5	\$1.31	\$6.55
Knobbed Whelk <sup>2</sup>	4,934	\$1.23	\$6,068.82	Cusk	30	\$0.44	\$13.20	Cusk	250	\$0.55	\$137.50
Loligo Squid	654161	\$0.63	\$412,121.43	Horseshoe Crab <sup>2</sup>	2,398	\$0.55	\$1,318.90	Horseshoe Crab	2,806	\$0.55	\$1,543.30
Monkfish	15	\$1.88	\$28.20	King Whiting <sup>1</sup>	1,840	\$0.51	\$937.07	Illex Squid <sup>1</sup>	3,615	\$0.51	\$1,829.10
Other Finfish	155	\$1.13	\$175.15	Knobbed Whelk <sup>1</sup>	4,883	\$1.57	\$7,666.31	King Whiting	25,976	\$0.88	\$22,858.88
Pollock	200	\$0.82	\$164.00	Knobbed Whelk - Bushel <sup>1</sup>	3,906	\$1.57	\$6,132.42	Knobbed Whelk	29,756	\$1.26	\$37,492.56
Scup	18672	\$1.46	\$27,261.12	Loligo Squid	442,466	\$0.62	\$274,328.92	Lightning Whelk <sup>1,2</sup>	50	\$2.22	\$111.00
Sea Robins <sup>4</sup>	63	n/a	n/a	Sculpins <sup>4</sup>	100	n/a	n/a	Loligo Squid	1,105,133	\$0.74	\$817,798.42
Skate	60	\$0.37	\$22.20	Scup	34,319	\$0.92	\$31,573.48	Menhaden <sup>1,5</sup>	76,500	\$0.04	\$3,060.00
Smooth Dogfish <sup>1,2</sup>	220	\$0.65	\$142.89	Sea Scallop	68,200	\$4.13	\$281,666.00	Monk Tails <sup>1</sup>	150	\$1.07	\$160.50
Spanish Mackerel <sup>4</sup>	4	n/a	n/a	Spotted Weakfish <sup>1,2</sup>	30	\$0.81	\$24.16	Other Finfish	700	\$0.93	\$651.00
Squid (Not Specified)	119784	\$0.35	\$41,924.40	Squid (Not Specified)	50	\$0.34	\$17.00	Quahogs - Bushel	659	\$0.61	\$401.99
Summer Flounder	130273	\$1.84	\$239,702.32	Summer Flounder	76,314	\$1.97	\$150,338.58	Rock Crab	5	\$0.50	\$2.50
Tautog	10262	\$1.39	\$14,264.18	Tautog	6,218	\$1.12	\$6,964.16	Sandbar Shark <sup>2</sup>	10	\$0.85	\$8.50
Weakfish	5	\$0.93	\$4.65	Tilefish <sup>1</sup>	3	\$0.94	\$2.81	Scup	104,715	\$0.78	\$81,677.70
Whelk (Not Specified)	74553	\$1.23	\$91,700.19	Whelk (Not Specified) <sup>1</sup>	1,767	\$2.56	\$4,523.52	Shrimp <sup>1</sup>	3,110	\$0.89	\$2,777.03
Windowpane Flounder	215	\$0.26	\$55.90	Winter Flounder	3,065	\$0.98	\$3,003.70	Skate	100	\$0.30	\$30.00
Winter Flounder	7370	\$1.10	\$8,107.00	<b>Grand Total</b>	<b>1,259,811</b>		<b>\$1,600,345</b>	Smooth Dogfish <sup>1,2</sup>	225	\$0.35	\$78.84
Witch Flounder	1800	\$1.35	\$2,430.00					Spotted Weakfish <sup>1,2</sup>	10	\$0.73	\$7.33
Yellowtail Flounder	500	\$1.00	\$500.00					Summer Flounder	176,290	\$1.66	\$292,641.40
<b>Grand Total</b>	<b>1,704,204</b>		<b>\$1,534,398</b>					Tautog	6,973	\$1.42	\$9,901.66
								Whelk (Not Specified) <sup>1</sup>	8,165	\$2.22	\$18,126.30
								White Hake	400	\$0.71	\$284.00
								White Marlin <sup>4</sup>	100	n/a	n/a
								Windowpane Flounder	131	\$0.41	\$53.71
								Winter Flounder	15,181	\$1.17	\$17,761.77
								Yellowtail Flounder	1	\$1.11	\$1.11
								<b>Grand Total</b>	<b>2,178,909</b>		<b>\$1,889,520</b>

\* Source: NMFS VTR data for Area 075

\*\* Source: Price data obtained from NOAA dealer database and averaged from Dukes, Barnstable, Nantucket, Plymouth and Bristol counties unless indicated by another footnote.

<sup>1</sup> Price data were obtained from Massachusetts-wide landings data available on NOAA Fisheries website. [http://www.st.nmfs.gov/st1/commercial/landings/annual\\_landings.html](http://www.st.nmfs.gov/st1/commercial/landings/annual_landings.html)

<sup>2</sup> The dollar amount is from unspecified species (i.e. not genus and species name).

<sup>3</sup> Used highest dollar amount for whelk species from this year.

<sup>4</sup> No price data could be found in county data or Massachusetts-wide landings data for this species and year. It is possible that this fish was not actually sold to the dealer.

<sup>5</sup> No price data were available for menhaden during this year. Price data from 1999 was used.

<sup>6</sup> No price data were available for king whiting during this year. Price data from 2001 was used.

<sup>7</sup> No price data were available for blueback herring during this year. Price data for Atlantic herring from the same year was used.

<sup>8</sup> No price data were available for this year. Price data from 2003 was used.

<sup>9</sup> No price data were available for monk tails during this year. Price data from 2002 was used.

**Table 15 - Estimated Value of Federally-Reportable Commercial Landings in Nantucket Sound - 1994 to 2004**

2003				2004			
Species	Total Pounds*	Price per pound**	Value	Species	Total Pounds*	Price per pound**	Value
American Plaice Flounder	148	\$1.23	\$182.04	American Lobster	33	\$4.84	\$159.72
Atlantic Herring	1,200	\$0.05	\$60.00	Atlantic Herring	9,000	\$0.07	\$630.00
Atlantic Mackerel	22,718	\$0.29	\$6,588.22	Atlantic Mackerel	128,552	\$0.35	\$44,993.20
Black Sea Bass	63,973	\$1.72	\$110,033.56	Bay Scallops	226	\$9.99	\$2,257.74
Blue Black Herring <sup>7</sup>	300	\$0.05	\$15.00	Black Sea Bass	62,603	\$1.88	\$117,693.64
Bluefish	8,060	\$0.50	\$4,030.00	Bluefish	7,011	\$0.44	\$3,084.84
Butterfish	13,979	\$0.47	\$6,570.13	Butterfish	4,458	\$0.42	\$1,872.36
Channeled Whelk	63,081	\$2.20	\$138,778.20	Channeled Whelk	111,066	\$2.25	\$249,898.50
Clam, Ocean Quahog <sup>1</sup>	23,652	\$0.51	\$12,177.68	Crab (Not Specified)	63	\$0.65	\$40.95
Cod	60	\$1.45	\$87.00	Horseshoe Crab <sup>2</sup>	1,781	\$0.65	\$1,157.65
Haddock	40	\$1.44	\$57.60	Illex Squid <sup>1,8</sup>	8,578	\$0.20	\$1,715.60
Hogfish <sup>4</sup>	80	n/a	n/a	King Whiting	6,600	\$0.80	\$5,280.00
Horseshoe Crab <sup>2</sup>	1,103	\$0.55	\$606.65	Knobbed Whelk	33,041	\$1.77	\$58,482.57
Illex Squid <sup>1</sup>	7,785	\$0.20	\$1,557.00	Lightning Whelk <sup>3</sup>	130	\$2.25	\$292.50
King Whiting <sup>1</sup>	9,404	\$0.76	\$7,147.04	Loligo Squid	681,927	\$0.74	\$504,625.98
Knobbed Whelk	23,616	\$1.88	\$44,398.08	Monk Tails <sup>1,7</sup>	517	\$1.07	\$553.19
Loligo Squid	178,960	\$0.91	\$162,853.60	Monkfish	7,030	\$1.42	\$9,982.60
Menhaden <sup>5</sup>	2,900	\$0.04	\$116.00	Ocean Pout <sup>4</sup>	200	n/a	n/a
Monkfish	360	\$1.26	\$453.60	Sandbar Shark <sup>1,2,8</sup>	1,543	\$0.53	\$817.79
Quahogs - Bushel <sup>1</sup>	462	\$0.45	\$207.90	Scup	171,880	\$1.02	\$175,317.60
Red Hake	55	\$0.33	\$18.15	Skate	4,970	\$0.39	\$1,938.30
Sandbar Shark <sup>1,2</sup>	1,005	\$0.53	\$534.63	Smooth Dogfish <sup>1,2,8</sup>	1,000	\$0.53	\$530.00
Scup	148,893	\$0.75	\$111,669.75	Summer Flounder	147,680	\$1.54	\$227,427.20
Sea Raven <sup>4</sup>	17	n/a	n/a	Tautog	5,655	\$1.52	\$8,595.60
Sea Robins <sup>4</sup>	2	n/a	n/a	Whelk (Not Specified) <sup>3</sup>	24,572	\$2.25	\$55,287.00
Sea Scallop	5,160	\$5.03	\$25,954.80	White Hake	40	\$0.82	\$32.80
Shark (Not Specified) <sup>1</sup>	22	\$0.53	\$11.70	Windowpane Flounder	1,772	\$0.35	\$620.20
Silver Hake	93	\$0.55	\$51.15	Winter Flounder	24,632	\$1.32	\$32,514.24
Skate	5,505	\$0.38	\$2,091.90	Witch Flounder	250	\$1.40	\$350.00
Skate Wings <sup>4</sup>	2	n/a	n/a	Yellowtail Flounder	110	\$1.14	\$125.40
Spider Crab <sup>2</sup>	500	\$0.55	\$275.00	<b>Grand Total</b>	<b>1,446,920</b>		<b>\$1,506,277</b>
Spotted Weakfish	7	\$1.00	\$7.00				
Summer Flounder	121,630	\$1.87	\$227,448.10				
Tautog	3,469	\$1.32	\$4,579.08				
Weakfish	4	\$1.00	\$4.00				
Whelk (Not Specified)	830	\$1.98	\$1,643.40				
White Hake	500	\$0.57	\$285.00				
Windowpane Flounder	373	\$0.32	\$119.36				
Winter Flounder	13,837	\$1.47	\$20,340.39				
Witch Flounder	6,910	\$1.86	\$12,852.60				
<b>Grand Total</b>	<b>730,695</b>		<b>\$903,805</b>				

\* Source: NMFS VTR data for Area 075

\*\* Source: Price data obtained from NOAA dealer database and averaged from Dukes, Barnstable, Nantucket, Plymouth and Bristol counties unless indicated by another footnote.

<sup>1</sup> Price data were obtained from Massachusetts-wide landings data available on NOAA Fisheries website. [http://www.st.nmfs.gov/st1/commercial/landings/annual\\_landings.html](http://www.st.nmfs.gov/st1/commercial/landings/annual_landings.html)

<sup>2</sup> The dollar amount is from unspecified species (i.e. not genus and species name).

<sup>3</sup> Used highest dollar amount for whelk species from this year.

<sup>4</sup> No price data could be found in county data or Massachusetts-wide landings data for this species and year. It is possible that this fish was not actually sold to the dealer.

<sup>5</sup> No price data were available for menhaden during this year. Price data from 1999 was used.

<sup>6</sup> No price data were available for king whiting during this year. Price data from 2001 was used.

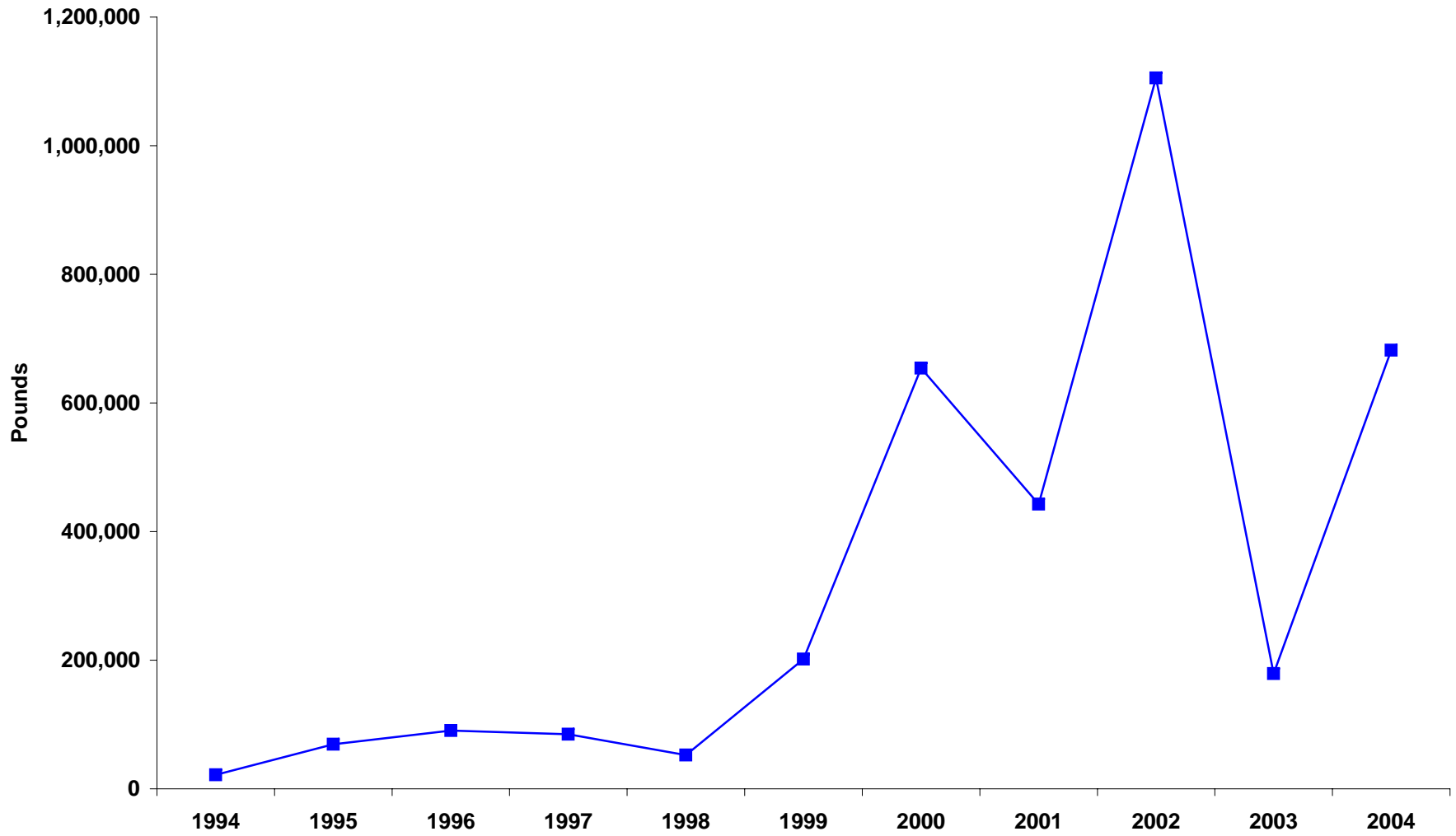
<sup>7</sup> No price data were available for blueback herring during this year. Price data for Atlantic herring from the same year was used.



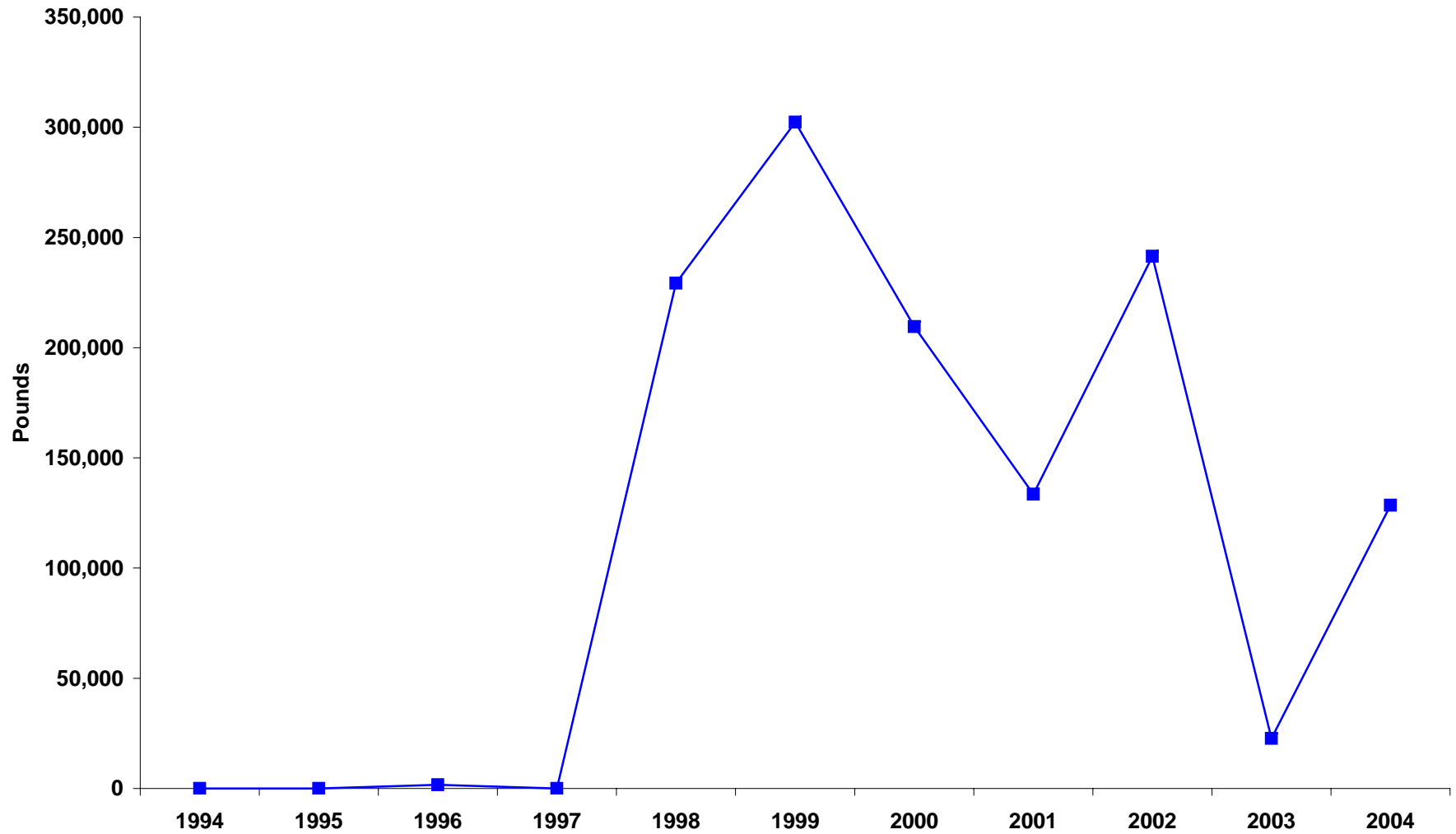
<sup>8</sup> No price data were available for this year. Price data from 2003 was used.

<sup>9</sup> No price data were available for monk tails during this year. Price data from 2002 was used.

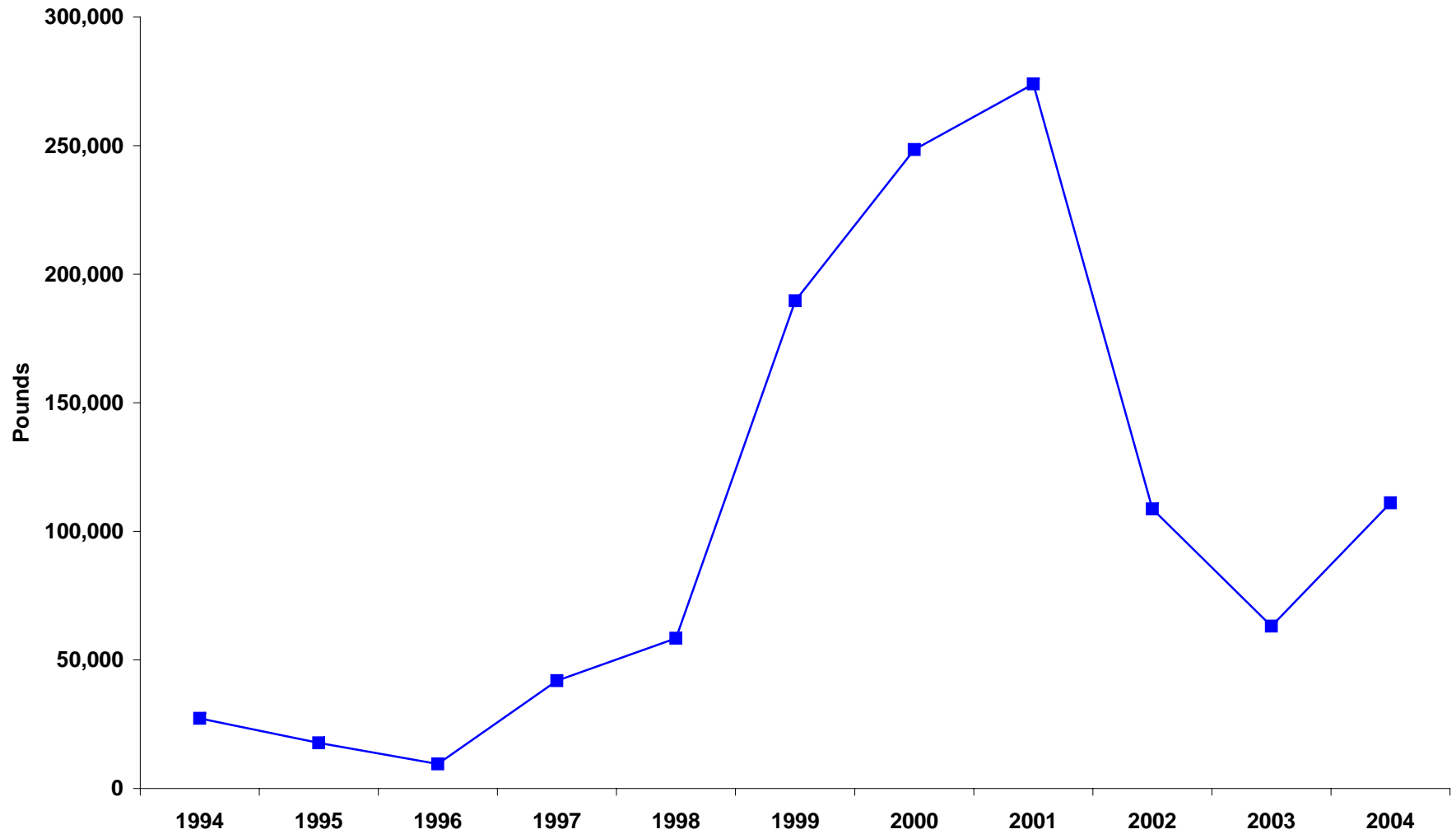
**Loligo Squid Landings: 1994-2004**  
**Area 075, Nantucket Sound**



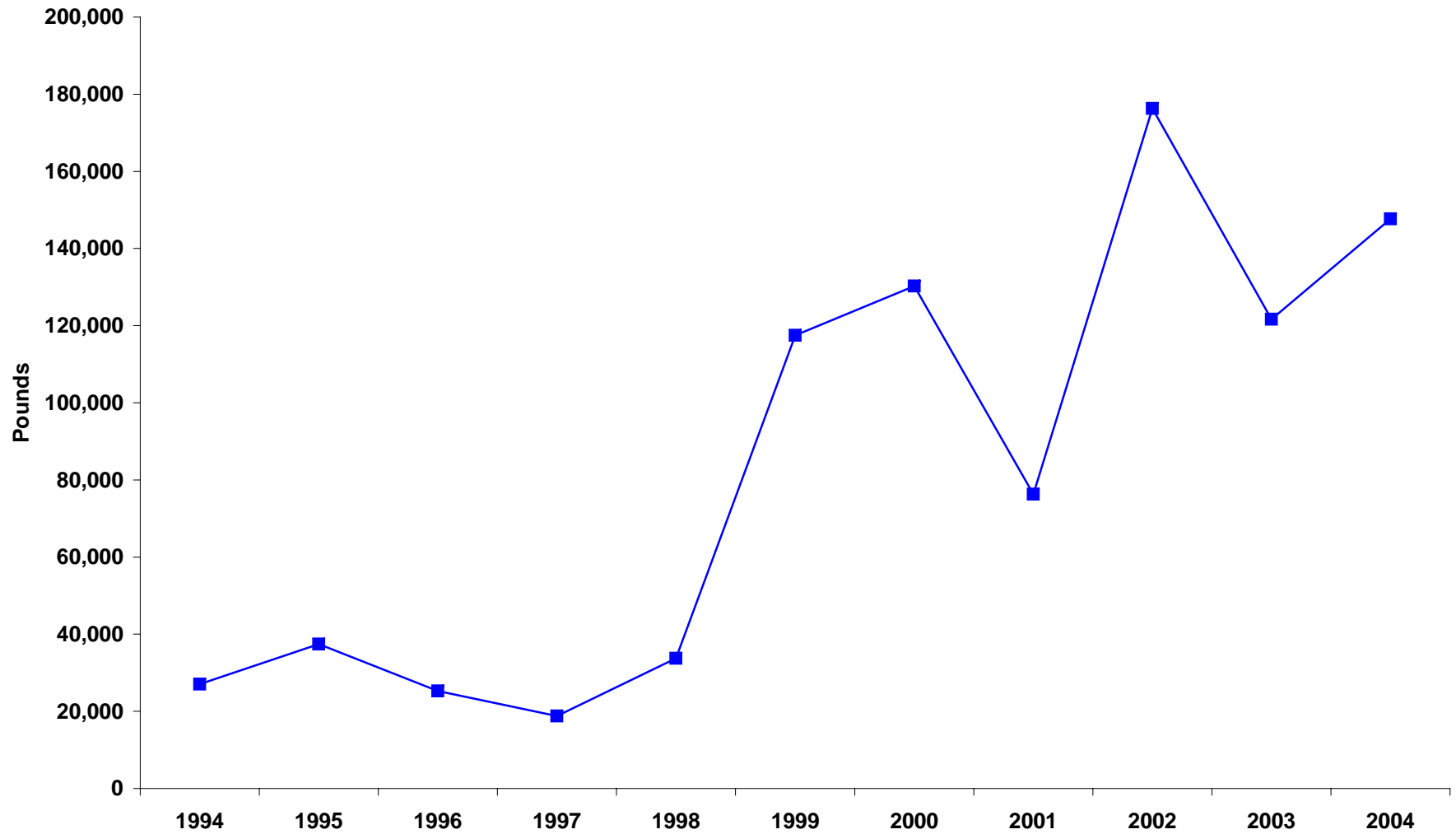
**Atlantic Mackerel Landings: 1994-2004**  
**Area 075, Nantucket Sound**



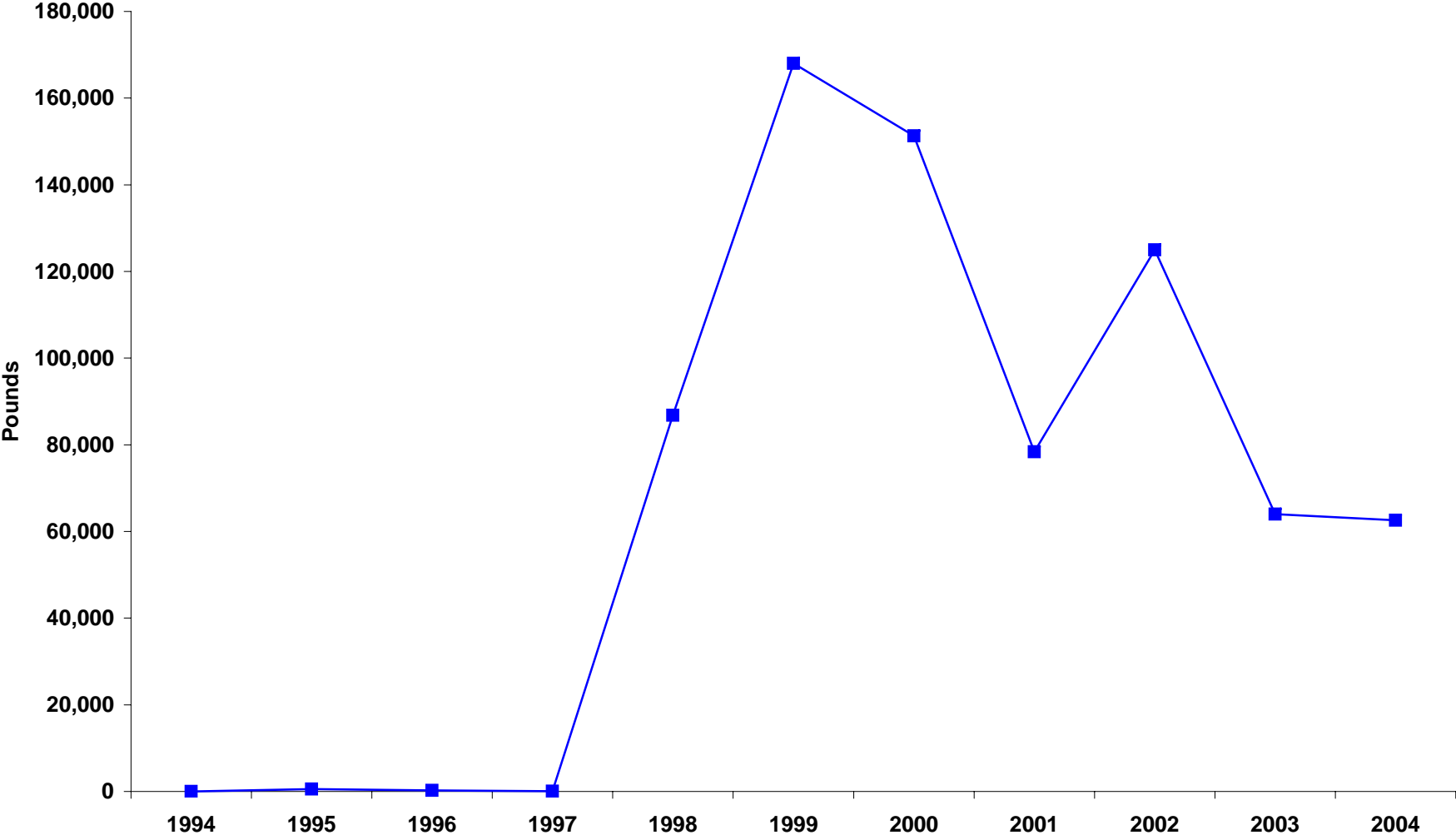
**Channeled Whelk Landings: 1994-2004**  
**Area 075, Nantucket Sound**



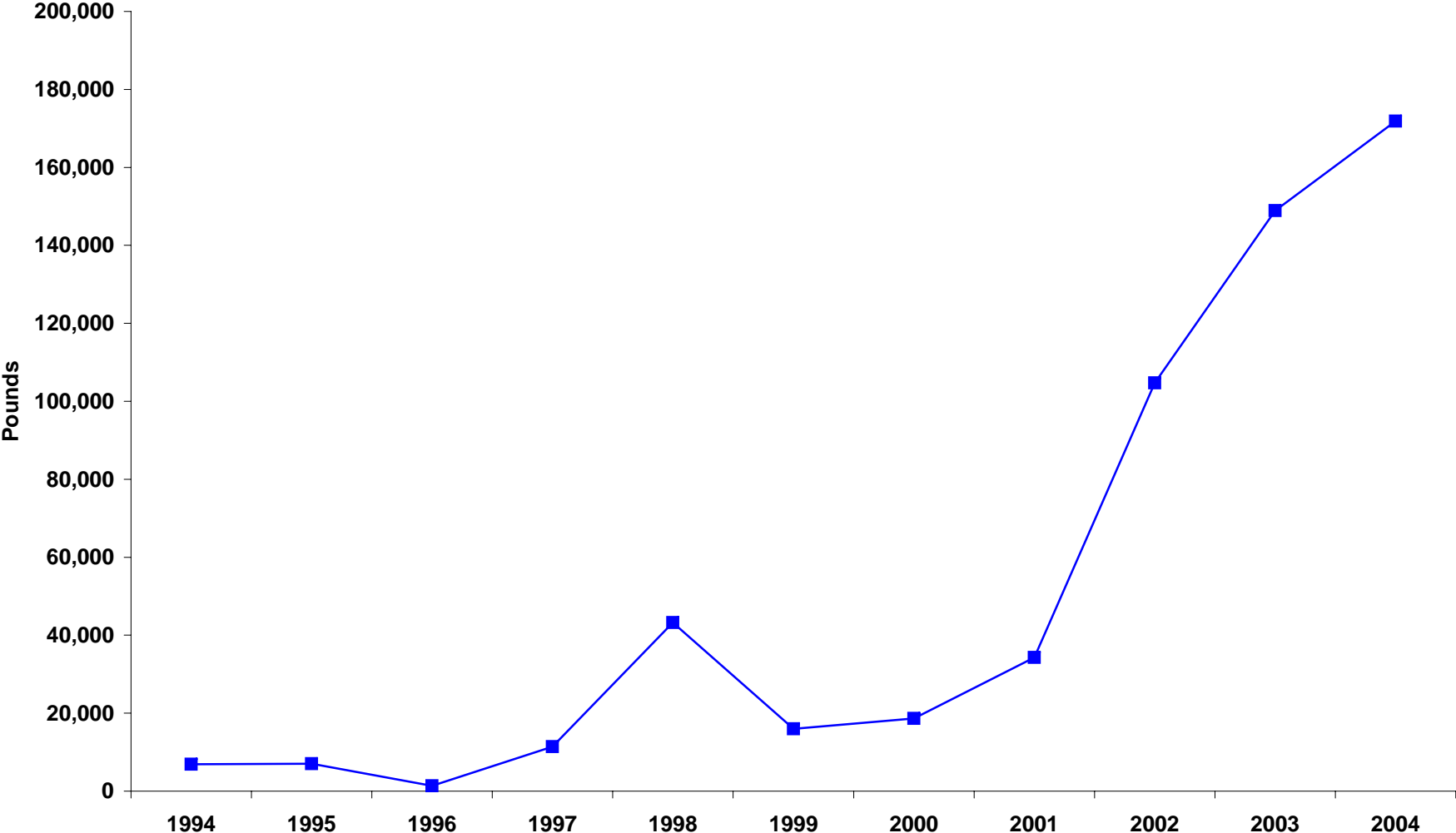
**Summer Flounder Landings: 1994-2004**  
**Area 075, Nantucket Sound**



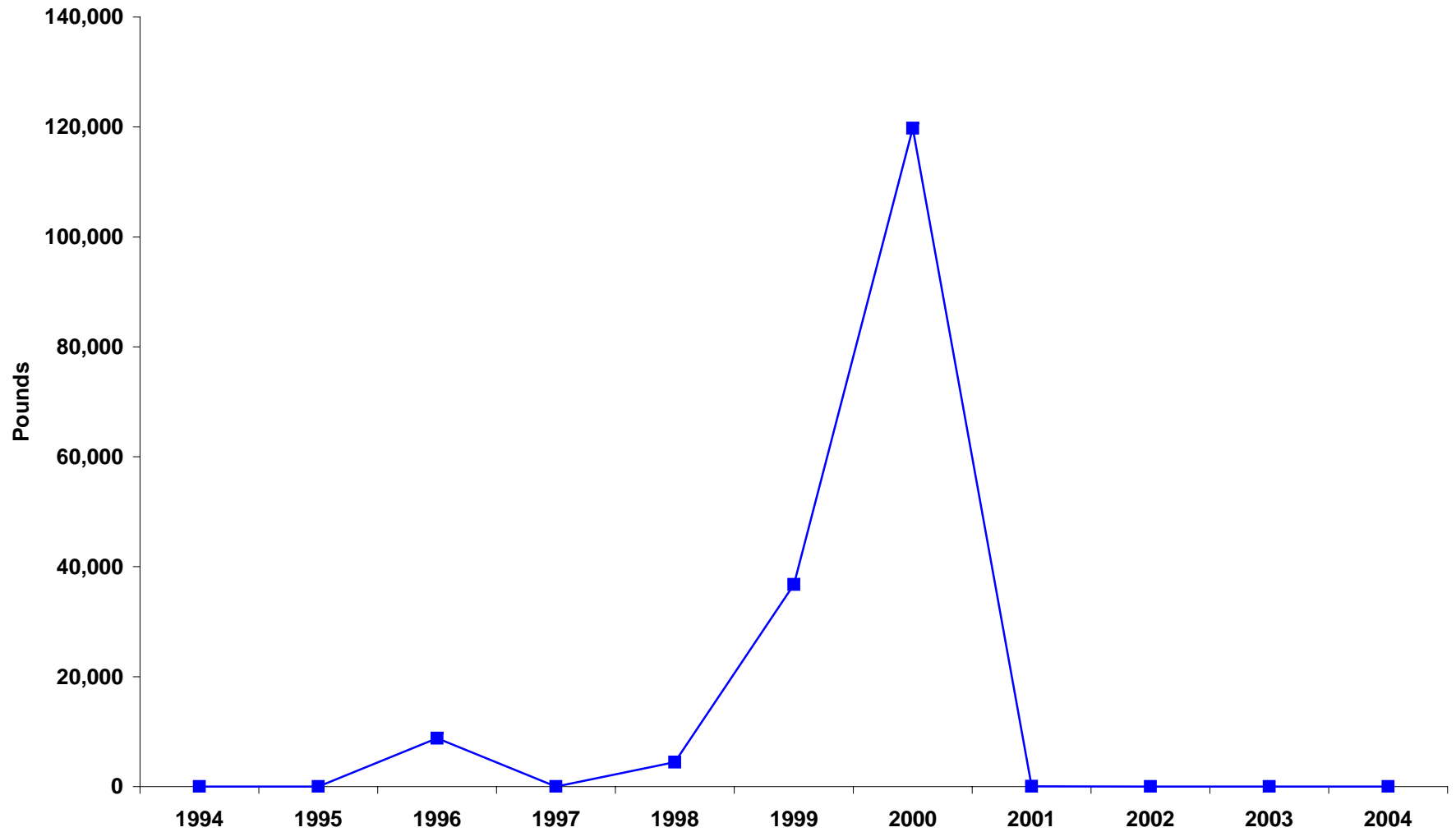
**Black Sea Bass Landings: 1994-2004**  
**Area 075, Nantucket Sound**



**Scup Landings: 1994-2004**  
**Area 075, Nantucket Sound**

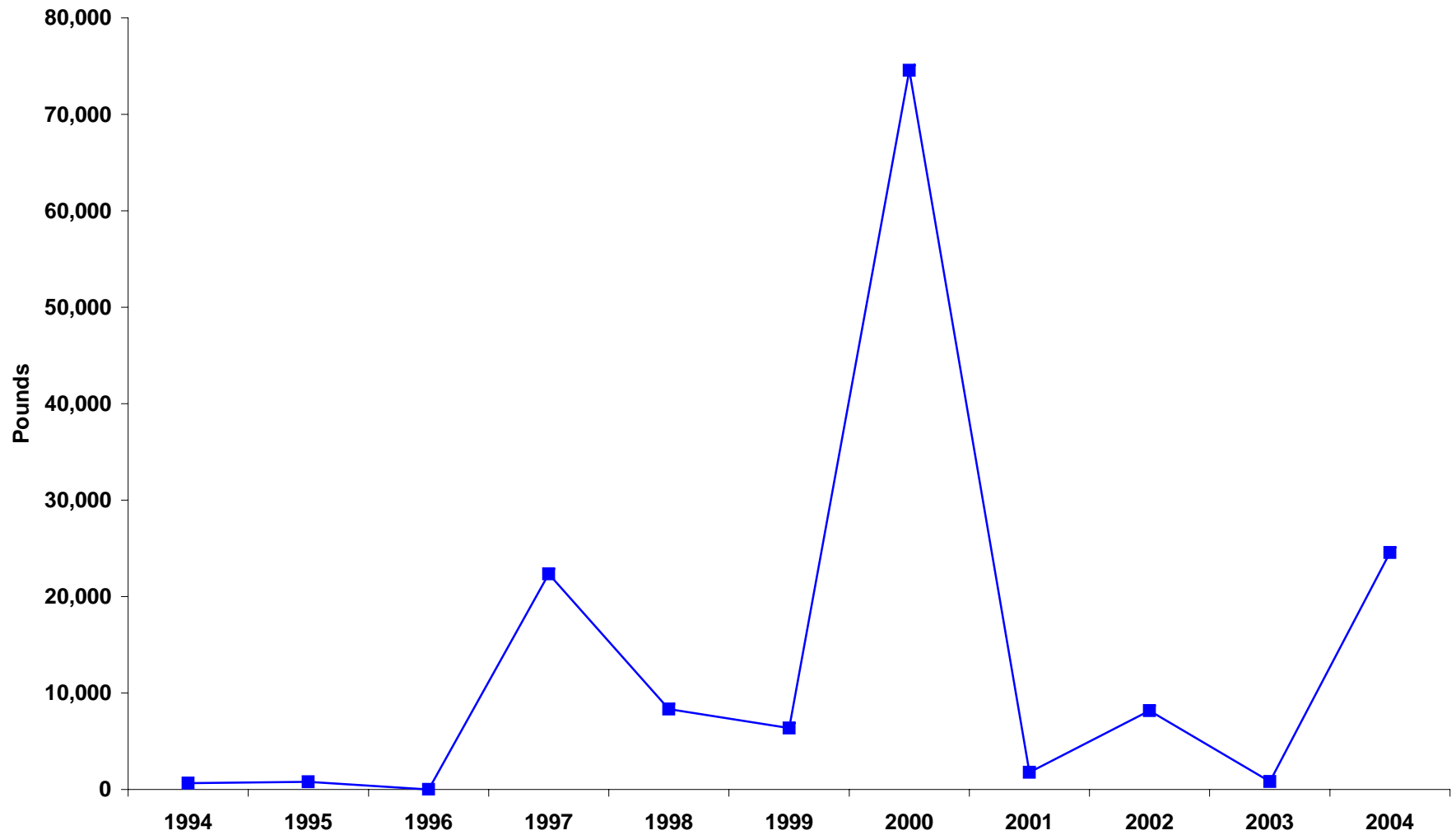


**Squid (not specified) Landings: 1994-2004**  
**Area 075, Nantucket Sound**

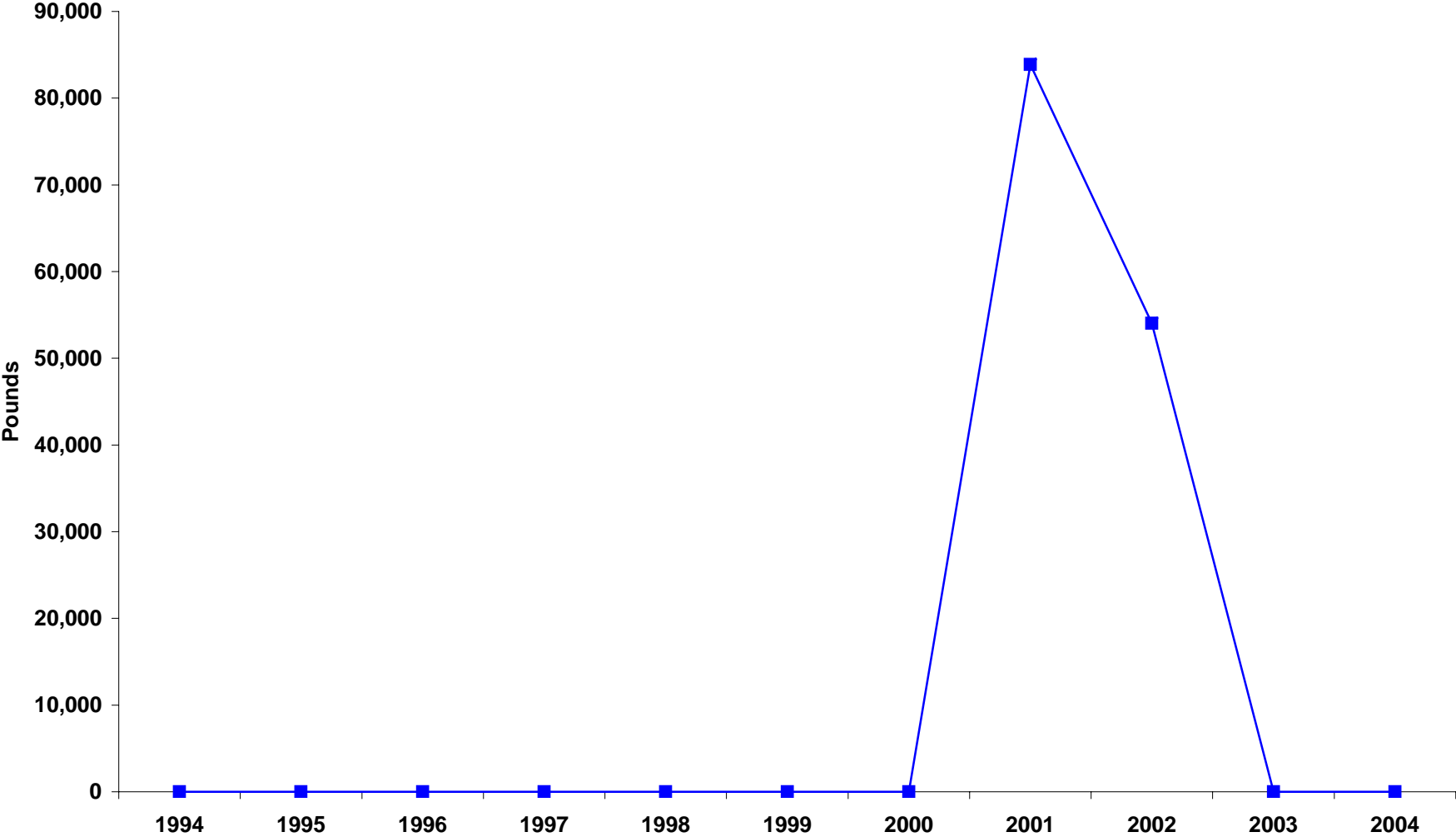




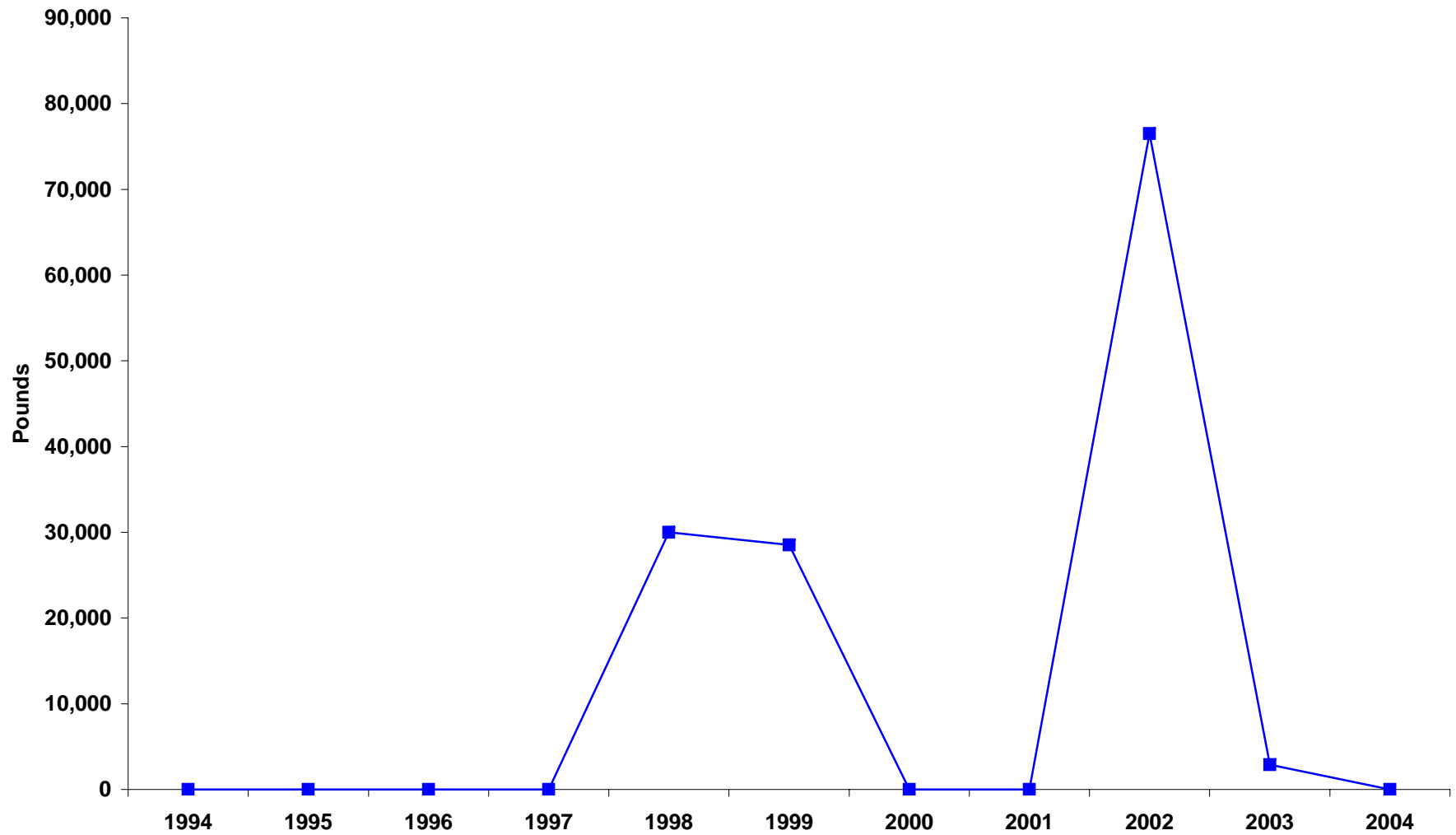
**Whelk (not specified) Landings: 1994-2004**  
**Area 075, Nantucket Sound**



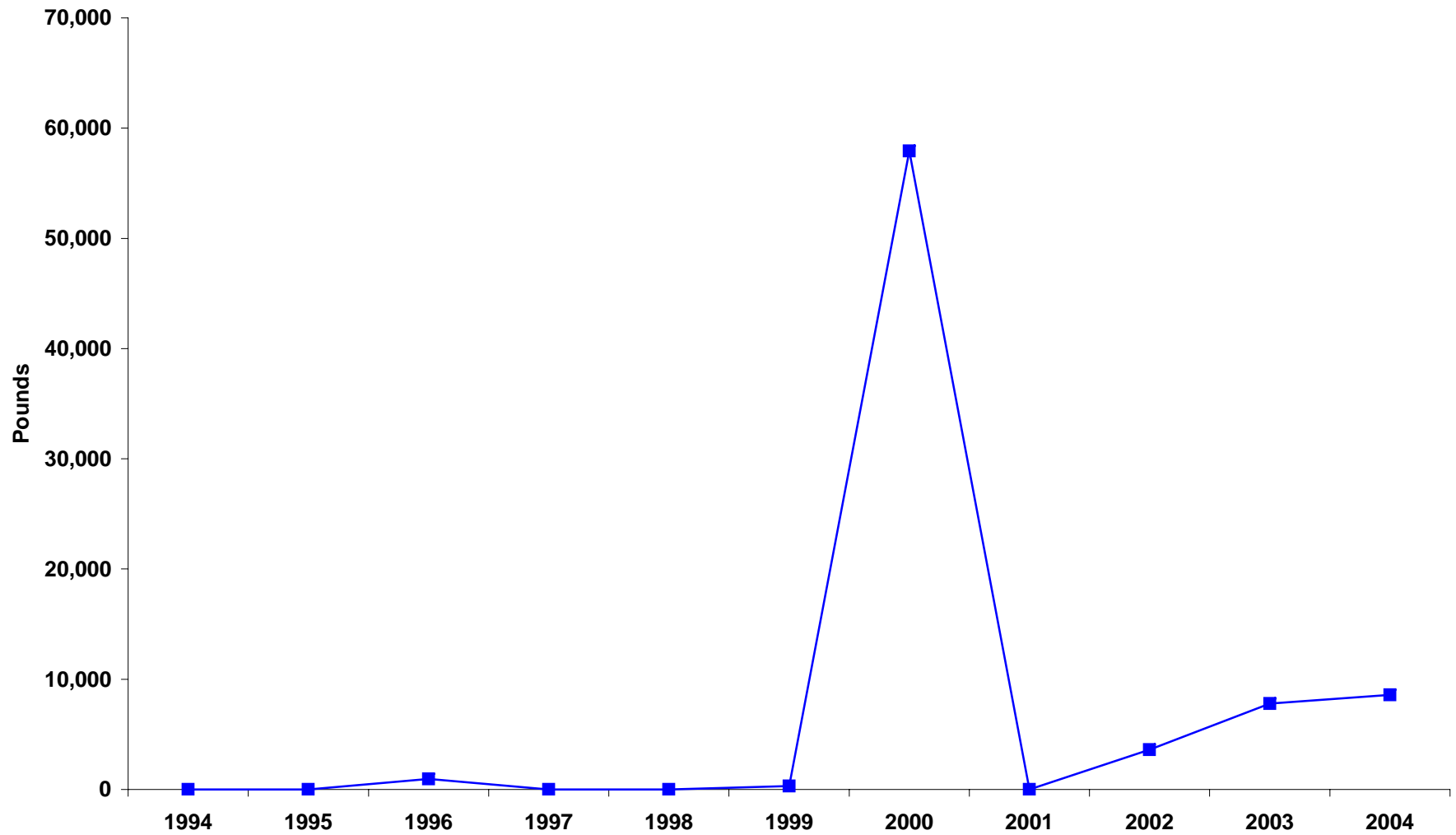
**Clam (not specified) Landings: 1994-2004**  
**Area 075, Nantucket Sound**



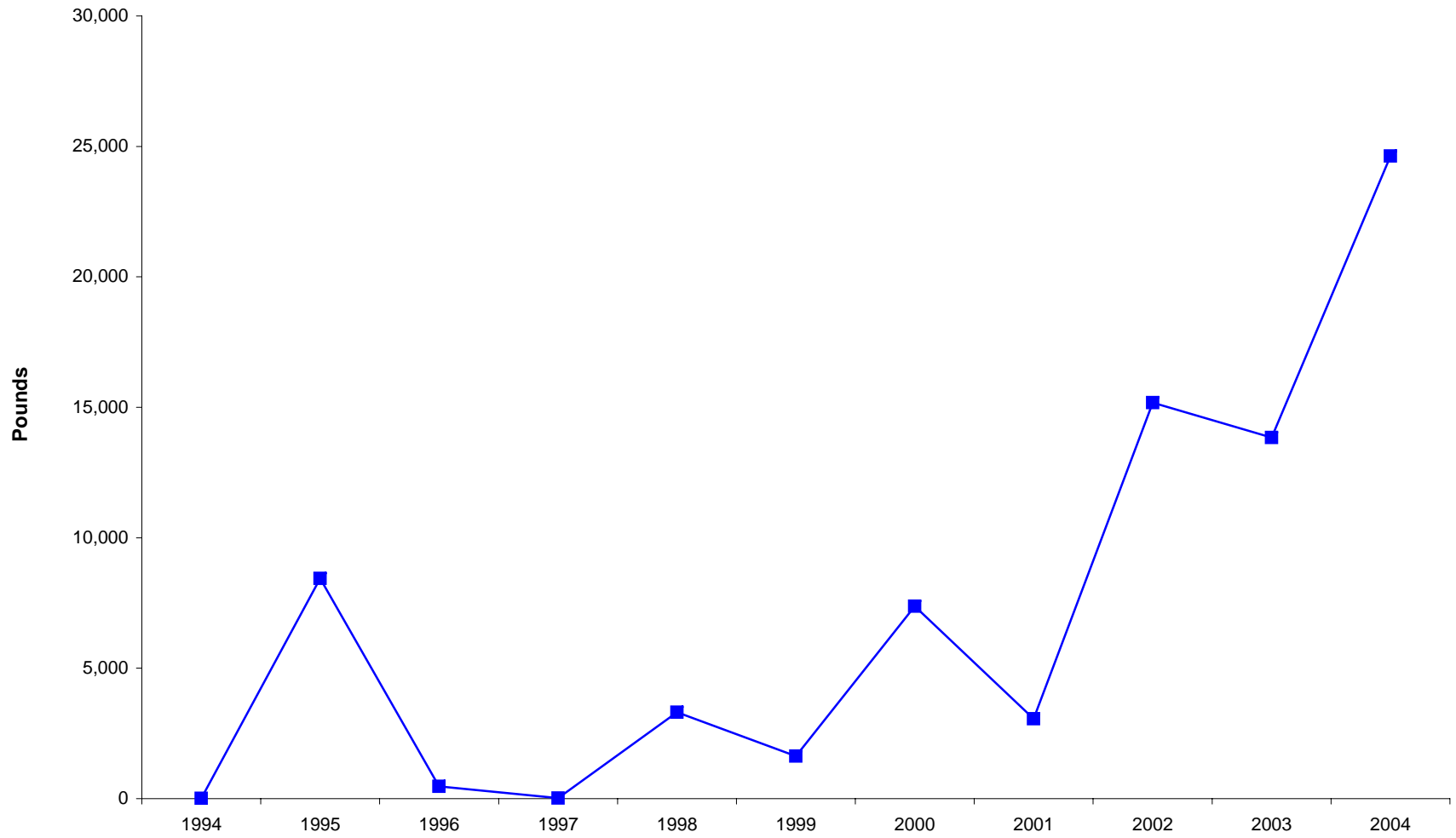
**Menhaden Landings: 1994-2004**  
**Area 075, Nantucket Sound**



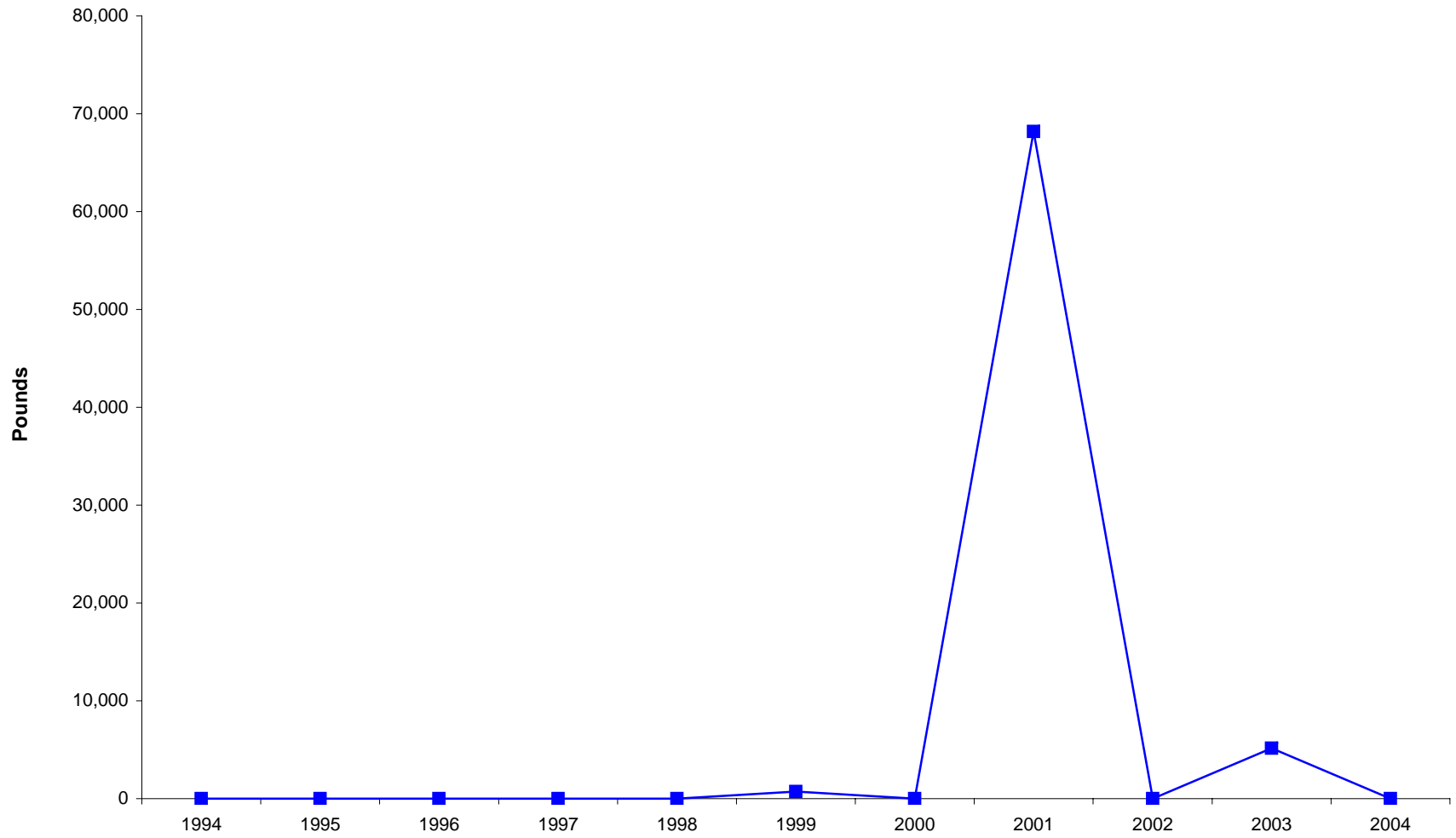
**Illex Squid Landings: 1994-2004**  
**Area 075, Nantucket Sound**



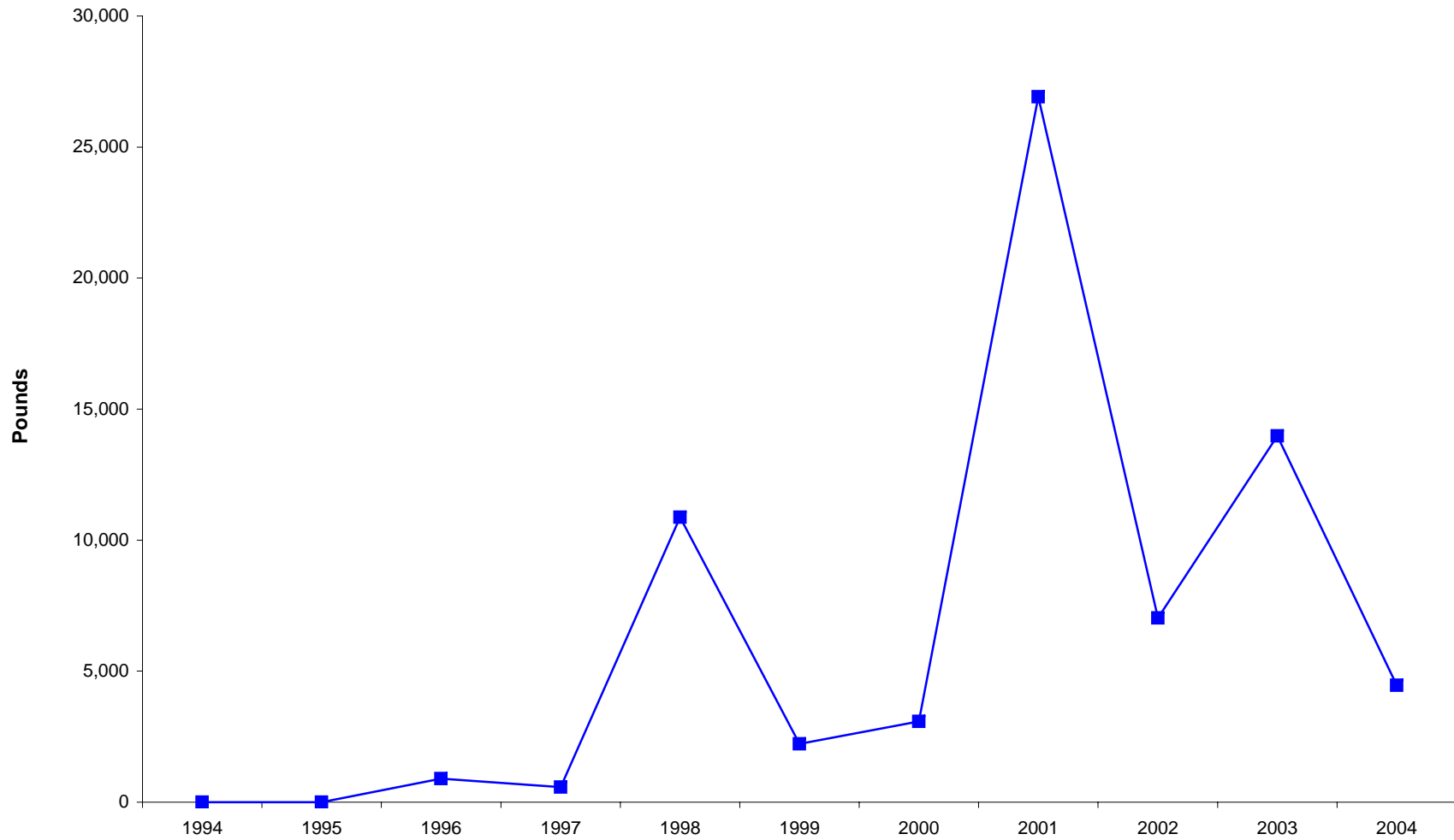
### Winter Flounder Landings: 1994-2004 Area 075, Nantucket Sound



**Sea Scallop Landings: 1994-2004**  
**Area 075, Nantucket Sound**

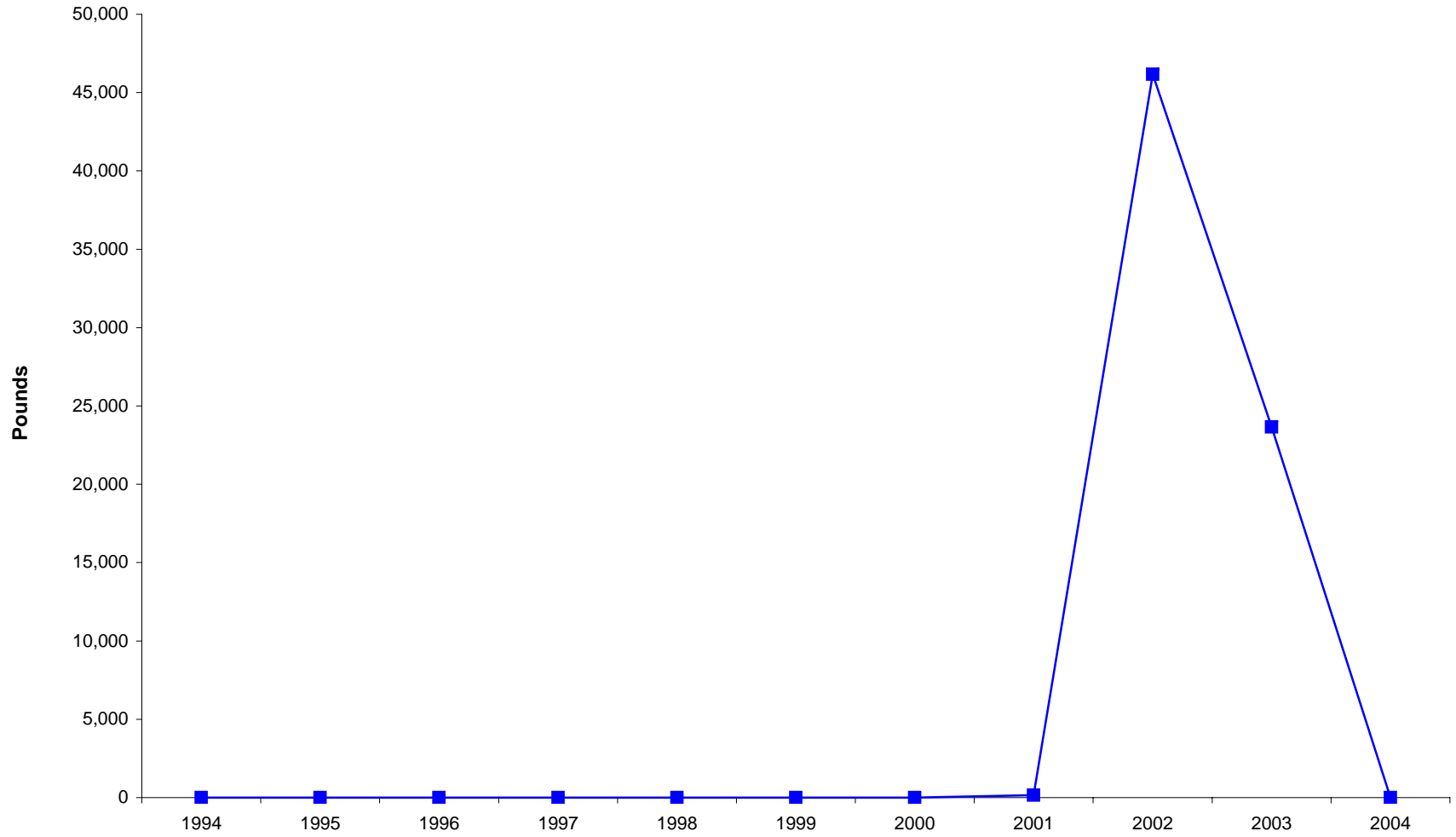


**Butterfish Landings: 1994-2004**  
**Area 075, Nantucket Sound**



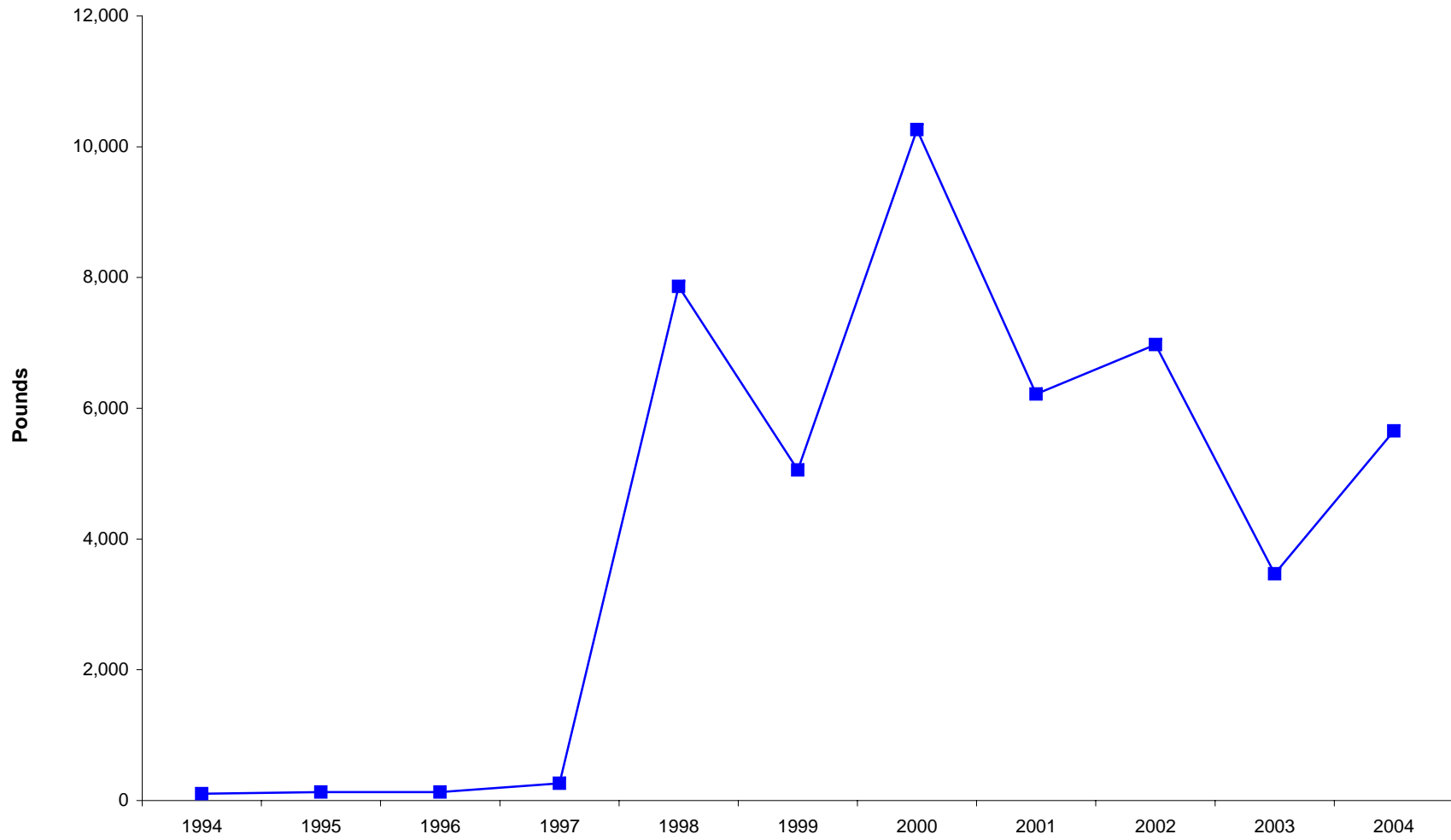
# Ocean Quahog Landings: 1994-2004

## Area 075, Nantucket Sound

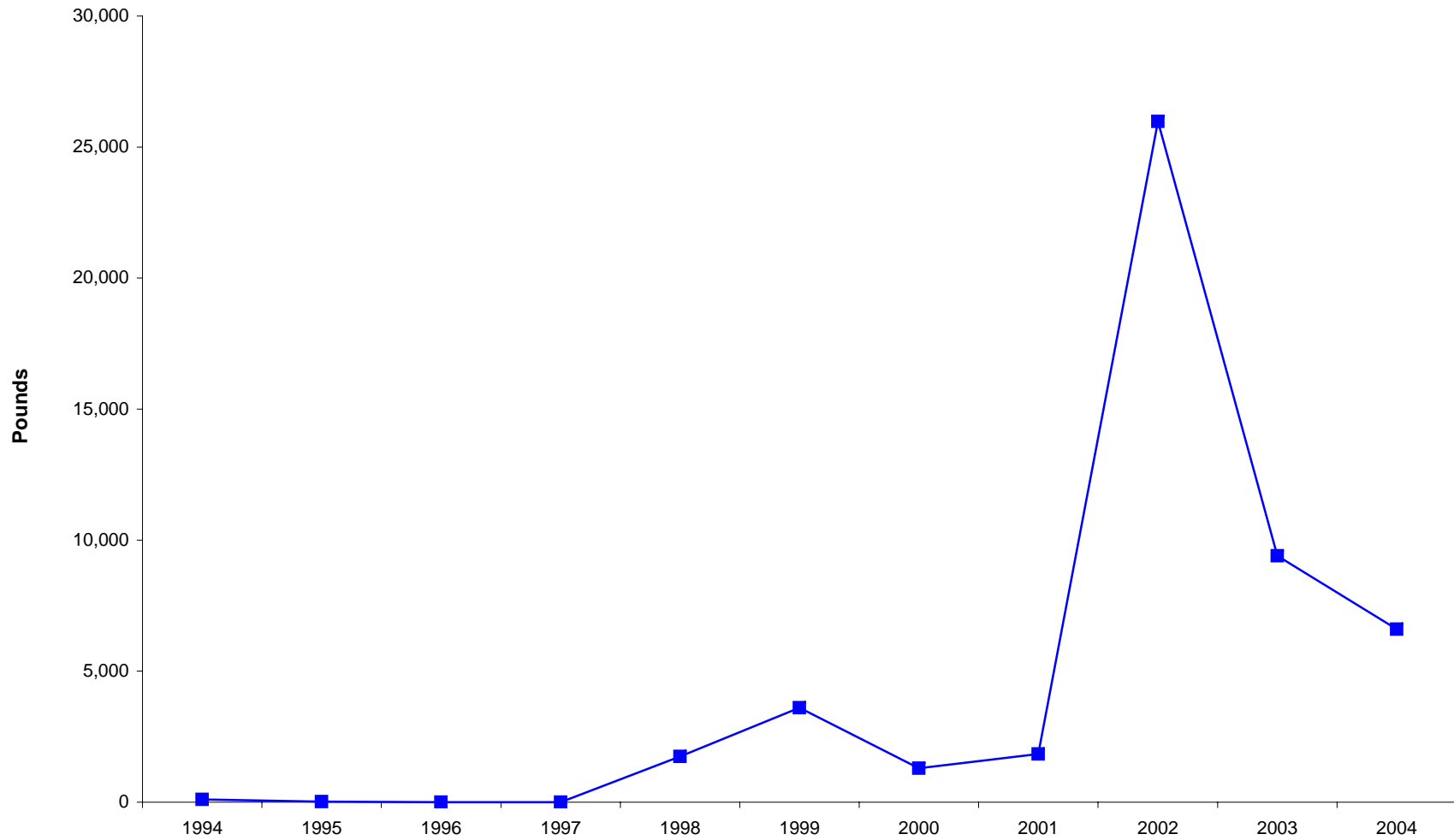




**Tautog Landings: 1994-2004**  
**Area 075, Nantucket Sound**

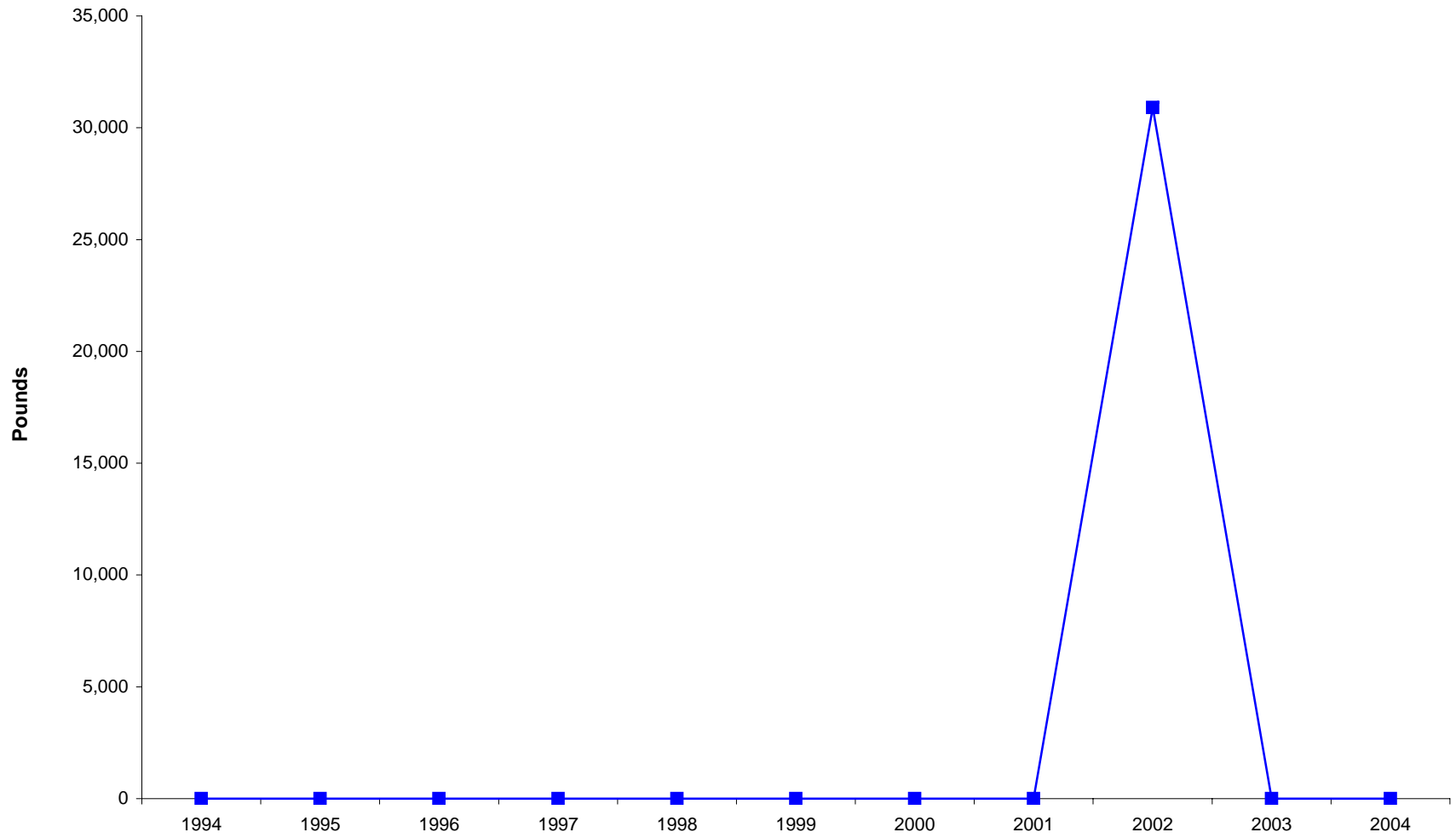


**King Whiting Landings: 1994-2004**  
**Area 075, Nantucket Sound**

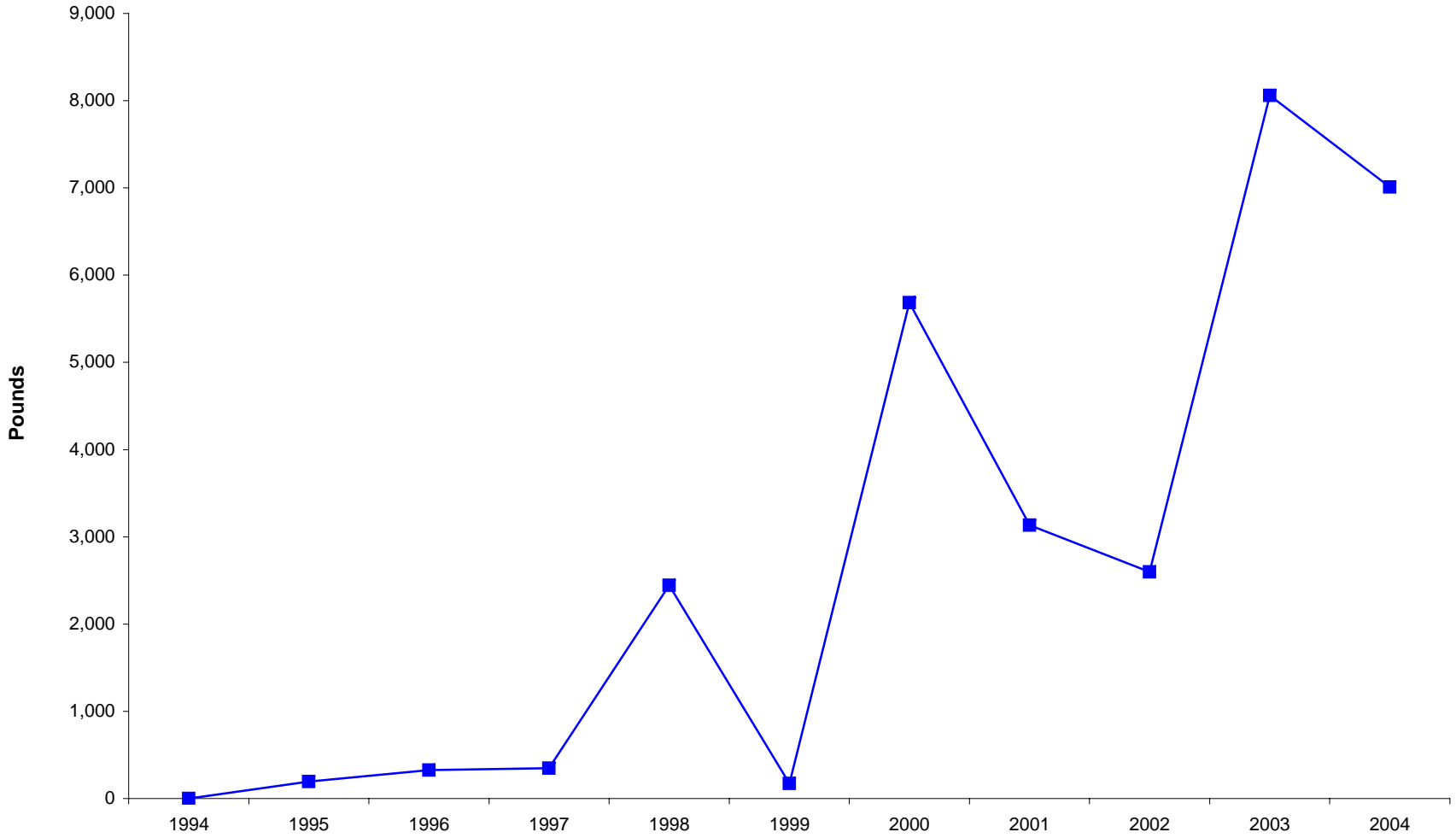


# Hard Clam Landings: 1994-2004

## Area 075, Nantucket Sound



**Bluefish Landings: 1994-2004**  
**Area 075, Nantucket Sound**



Attachment C

*Marine Fisheries*  
Commercial Data

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**Table 1. State-reported landings (pounds) from fish weirs in Nantucket Sound from 1990 through 2004**  
 (Source: DMF Commercial Data 1990-2004)

Species	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Total	Mean	Std. Dev.
Albacore	6,955	5,273	5,005	1,375	898	5,823	405	1,800	2,585	6,670	1,363	3,673	7,070	2,114	2,819	53,828	3,589	2,345
Amberjack	0	0	0	0	0	47	0	0	0	0	27	0	0	0	0	74	5	14
Atlantic herring	41,620	2,000	2,000	0	0	0	0	0	0	0	0	0	0	0	0	45,620	3,041	10,695
Atlantic mackerel	342,477	154,582	260,669	216,890	540,827	184,930	718,675	876,160	500,880	535,135	430,785	318,969	445,575	7,088	251,671	5,785,313	385,688	227,123
Black seabass	0	0	0	0	0	0	0	0	0	0	0	10,732	16,938	11,439	24,820	63,929	5,327	8,573
Bluefish	57,865	43,342	40,290	42,404	37,594	34,008	9,204	8,693	18,915	37,796	11,076	24,550	51,374	40,690	35,880	493,681	32,912	15,176
Bonito	3,802	2,886	62,852	83,880	57,190	38,953	13,167	24,647	21,278	29,403	356	15,712	2,397	356	164	357,043	23,803	26,253
Butterfish	22,823	7,023	2,801	1,147	1,915	5,229	17,990	46,053	5,899	5,293	12,464	45,400	7,413	1,587	8,777	191,814	12,788	14,677
Flounder, unclassified	0	68	40	0	0	81	41	35	100	0	0	11	0	0	0	376	25	34
Fluke	0	0	0	0	0	0	0	0	0	0	0	6,370	5,397	2,296	5,185	19,248	1,604	2,540
Gray Sole (Witch)	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	0	1
Herring, unclassified	0	0	0	10	0	0	0	0	500	0	0	15,500	0	0	0	16,010	1,067	3,995
King mackerel	562	1,214	107	0	81	210	4	0	86	179	1,615	6	0	769	77	4,910	327	499
Menhaden	0	0	0	0	0	5,850	35,700	0	30,000	15,800	0	200	81,000	4,000	2,475	175,025	11,668	22,360
Sea Herring	0	0	0	0	0	0	0	0	0	0	0	0	685	0	12,700	13,385	1,115	3,654
Sea Robbin	0	0	0	0	0	0	0	0	0	0	0	170	0	0	0	170	14	49
Scup	199,184	77,633	334,537	143,360	150,649	87,110	2,836	8,337	1,027	58,090	76,693	78,791	82,328	90,453	192,539	1,583,567	105,571	88,174
Sea bass, unclassified	2,681	361	160	12	197	141	5	1,796	11	912	14,630	0	0	0	0	20,906	1,394	3,745
Spanish mackerel	22,039	19,698	278	0	3,488	3,997	25	77	68	2,131	11,046	3,734	523	399	184	67,687	4,512	7,258
Squid, general	755,495	727,768	424,941	636,684	239,673	309,322	241,370	308,540	159,808	124,742	322,608	172,449	200,550	23,323	79,542	4,726,815	315,121	227,632
Summer flounder	1,123	4,235	2,611	2,759	9,714	86	982	4,370	1,360	3,899	3,924	0	0	0	0	35,063	2,338	2,653
Tautog	4,092	4,368	3,951	909	5,563	358	167	198	227	395	51	65	81	0	48	20,473	1,365	1,994
Weakfish	0	0	0	0	0	0	0	0	0	5	18	24	0	0	0	47	3	7
Winter flounder	0	0	0	0	86	0	0	0	1,980	25	0	2	0	0	0	2,093	140	510
Witch flounder	1,579	37	0	10	0	3,303	367	0	2,625	0	0	0	0	0	0	7,921	528	1,077
<b>Total annual</b>	<b>1,462,297</b>	<b>1,050,488</b>	<b>1,140,242</b>	<b>1,129,440</b>	<b>1,047,875</b>	<b>679,448</b>	<b>1,040,938</b>	<b>1,280,706</b>	<b>747,349</b>	<b>820,475</b>	<b>886,656</b>	<b>696,358</b>	<b>901,332</b>	<b>184,516</b>	<b>616,881</b>	<b>13,685,001</b>	<b>913,946</b>	
Mean	58,492	42,020	45,610	56,472	52,394	33,972	41,638	51,228	29,894	32,819	35,466	27,854	36,053	7,381	24,675			
Std. Dev.	164,365	146,887	114,394	148,328	130,294	78,533	149,063	182,591	103,248	108,208	105,024	71,188	96,321	19,611	62,483			

**Table 2. State-reported landings (pounds) from gill nets in Nantucket Sound  
(Source: DMF Commercial Data 1990-2004)**

<b>Species</b>	1992	1993	1995	1999	2002	Total
Dogfish	0	1,850	158,807	803	0	161,460
Monkfish	0	21	601	13,778	0	14,400
Mackerel, Atlantic	2,375	3,392	0	538	0	6,305
Flounder, Yellowtail	0	0	3,656	1	205	3,862
Pollock	0	0	0	2,414	0	2,414
Flounder, Winter	0	0	2,302	2	245	2,549
Cod, General	0	0	230	715	2,401	3,346
Skate, General	0	0	0	371	0	371
Bluefish	0	205	0	3	0	208
Flounder, Summer	0	0	0	112	0	112
Flounder, Unclassified	0	0	0	43	0	43
Tautog	0	9	25	0	0	34
Hake, General	0	0	0	13	0	13
Cusk	0	0	0	8	0	8
Haddock, General	0	0	0	6	0	6
Flounder, Witch	0	0	0	1	0	1
<b>Total</b>	2,375	5,477	165,621	18,808	2,851	195,132

**Table 3. State-reported conch landings (pounds) from fish pots in Nantucket Sound from 1992 through 2004**  
**(Source: DMF Commercial Data 1992-2004)**

Month	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Total	mean
Apr	0	117	0	0	0	0	2,361	56	44	0	6,420	134	2,213	11,345	873
May	105,668	58,674	20,983	33,170	28,303	21,524	17,920	30,953	47,705	26,855	85,546	43,280	58,733	579,314	44,563
Jun	421,076	194,153	126,326	172,937	213,089	113,593	58,789	176,099	168,664	177,300	298,184	236,480	243,344	2,600,034	200,003
Jul	541,539	336,715	216,246	246,990	262,562	111,894	96,129	167,510	251,371	153,413	240,256	288,948	269,289	3,182,862	244,836
Aug	460,696	317,296	191,555	181,619	254,212	294,763	71,362	119,100	118,400	96,398	136,748	75,034	65,787	2,382,970	183,305
Sep	326,173	259,534	173,610	210,473	200,109	125,333	74,127	150,071	138,949	83,323	244,125	96,751	196,107	2,278,685	175,283
Oct	218,044	237,944	199,210	263,152	225,167	126,750	76,056	180,275	169,319	76,946	236,533	159,324	185,533	2,354,253	181,096
Nov	81,704	96,403	67,708	91,703	62,168	23,462	60,998	94,785	82,259	55,429	136,950	116,423	88,397	1,058,389	81,415
Dec	7,504	9,509	3,479	7,860	409	3,000	20,580	20,237	2,685	15,280	13,254	19,361	9,801	132,959	10,228
<b>Total</b>	2,162,404	1,510,345	999,117	1,207,904	1,246,019	820,319	478,322	939,086	979,396	684,944	1,398,016	1,035,735	1,119,204	14,580,811	
mean	240,267	167,816	111,013	134,212	138,447	91,147	53,147	104,343	108,822	76,105	155,335	115,082	124,356		
stdev	204659.88	129947.5	88994.91	103017.83	112845.2	93765.85	31856.04	71274.58	83740.03	60235.25	106072.42	97722.158	100701.33		



**Table 4. State-reported sea bass landings (pounds) from fish pots in Nantucket Sound from 1990 through 2004**  
 (Source: DMF Commercial Data 1990-2004)

Month	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Total	mean	stdev
Apr	4,746	946	765	0	0	9	0	20	0	25	1,573	15	203	0	0	8,302	553	1,251
May	157,150	79,855	10,569	12,965	18,944	31,738	22,357	30,301	16,999	165,854	133,447	114,353	195,601	31,194	72,885	1,094,212	72,947	64,111
Jun	113,394	50,505	16,748	21,294	21,937	16,804	22,939	36,303	53,647	119,268	82,866	18,504	26,969	80,866	58,663	740,707	49,380	35,045
Jul	21,233	8,145	3,720	2,841	2,622	22,448	4,521	7,836	9,312	24,561	44,690	57,345	76,458	7,727	5,790	299,249	19,950	22,482
Aug	8,647	1,562	1,031	587	467	1,199	1,685	3,464	5,119	11,771	90	0	7,828	68,735	63,800	175,985	11,732	22,443
Sep	9,720	3,911	741	729	906	1,627	4,712	8,135	14,287	27,253	2,265	0	0	0	0	74,286	4,952	7,497
Oct	18,679	3,370	2,446	1,907	2,882	8,691	6,013	15,875	33,004	68,283	78,061	64,137	106,933	0	0	410,281	27,352	34,758
Nov	3,037	344	368	185	580	1,030	1,095	2,000	4,245	2,815	489	13,013	5,085	0	0	34,286	2,286	3,371
Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	336,606	148,638	36,388	40,508	48,338	83,546	63,322	103,934	136,613	419,830	343,481	267,367	419,077	188,522	201,138	2,837,308		
mean	37,401	16,515	4,043	4,501	5,371	9,283	7,036	11,548	15,179	46,648	38,165	29,707	46,564	20,947	22,349			
stdev	56,971	28,656	5,780	7,515	8,639	11,719	9,106	13,376	17,740	59,480	49,579	40,385	67,861	32,303	32,331			

**Table 5. State-reported scup landings (pounds) from fish pots in Nantucket Sound from 1994 through 2004**  
 (Source: DMF Commercial Data 1994-2004)

Month	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Total	mean	stdev
Apr	0	0	0	0	0	0	250	0	0	0	0	250	23	75
May	8,986	26,668	15,264	10,319	10,314	21,646	250	0	0	1,102	1,679	96,228	8,748	9,320
Jun	151,869	143,227	95,308	123,148	40,471	24,296	0	0	0	4,313	988	583,620	53,056	62,538
Jul	35,888	39,763	33,834	23,192	9,783	486	14,232	3,568	21,465	870	500	183,581	16,689	15,036
Aug	37,619	26,174	44,530	37,400	17,806	0	3,054	4,143	4,520	19,322	25,176	219,744	19,977	15,695
Sep	26,528	26,968	33,859	27,494	16,956	0	0	0	0	20,968	9,665	162,438	14,767	13,248
Oct	16,618	9,716	10,659	12,774	6,313	120	0	0	0	4,914	140	61,254	5,569	6,085
Nov	99	419	3	0	39	136	0	30	56	0	0	782	71	124
Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	277,607	272,935	233,457	234,327	101,682	46,684	17,786	7,741	26,041	51,489	38,148	1,307,897		
mean	30,845	30,326	25,940	26,036	11,298	5,187	1,976	860	2,893	5,721	4,239			
stdev	47,782	44,772	30,920	38,773	12,921	10,105	4,702	1,704	7,122	8,390	8,438			

**Table 6. State-reported shellfish landings (pounds) in Nantucket Sound from 1990 through 2004**  
 (Source: DMF Commercial Data 1990-2004)

Species	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	TOTAL	Mean	stdev
Bay scallop	26,082	6,757	162	58	7,340	68,746	9,830	1,192	1,961	538	4,443	0	1,300	1,250	0	129,658	233,235	459,713
Conch	52,174	2,186,847	65,556	315,600	63,858	164,226	70,704	54,946	126,476	56,425	72,565	38,315	452,235	48,476	29,908	3,798,311	253,221	547,713
Quahog (cherrystone)	0	0	0	0	0	0	0	0	0	0	0	149,400	402	0	0	149,802	9,987	38,568
Quahog (chowder)	0	0	0	0	0	0	0	0	0	0	0	118,736	300	0	0	119,036	7,936	30,652
Quahog (littleneck)	0	0	0	0	200	0	0	0	0	0	0	220,194	591	0	0	220,985	14,732	56,839
Quahog (mixed)	50	0	0	0	0	300	325	50	60	2,400	800	318,795	596,763	0	195,900	1,115,443	74,363	171,796
Mussel	100	115,283	0	0	3,538,150	3,476,550	767,980	646,635	550	1,925	1,100	44,000	0	0	0	8,592,273	572,818	1,216,149
Ocean Quahogs*	0	0	0	66,560	0	0	0	0	0	0	0	320	0	4,720	0	71,600	4,773	17,136
Sea Clam*	0	1,228,800	5,067,120	1,291,540	4,341,280	0	0	0	887,360	880	0	0	0	0	0	12,816,980	1,165,180	1,831,769
Sea Scallops (no shells)*	0	0	0	0	0	50	51	0	0	0	312	0	0	0	0	413	38	93
Soft Shell Clam	0	0	19,023	8,450	0	0	0	614	11,750	2,448	0	0	0	0	10,000	52,285	3,486	5,949
Total	83,097	3,543,486	5,152,023	1,682,266	7,952,495	3,726,985	858,720	703,740	1,029,844	65,154	83,253	889,760	1,052,891	55,696	235,808	27,115,217		
Mean	6,392	272,576	396,309	129,405	611,730	286,691	66,055	54,134	79,219	5,012	6,404	88,976	105,289	5,570	23,581			
stdev	15527.53	667067.455	1403524.4	359917.45	1486174.3	959590.38	211790.5	178666.7	245283.15	15475.92	19936.9	110941	223554.27	15147.87	61292.34			

\* If a shellfisherman harvested ONLY sea scallops, ocean quahogs or sea clams and no other shellfish in a given year, they are not required to report those landings. Therefore, there likely were more ocean quahogs, sea clams and sea scallops harvested in each given year than represented here.

<b>stdev</b>
1866.907
26637.24
90168.9
113410.4
118511.8
74276.29
59259.92
28690.13
7013.466

**Table 7. State-reported lobster landings (pounds) in Nantucket Sound from 1990 through 2004**  
 (Source: DMF Commercial Data 1990-2004)

Month	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Total	mean	stdev
Jan				294		85		50	41		21	10	0	0	0	501	56	94
Feb				91				674				0	0	0	0	765	128	270
Mar				577	1,167	322		136	68	125	49	250	0	0	0	2,693	245	352
Apr	302	99	50	423	893	915	786	983	1,537	1,144	614	148	3,270	0	0	11,162	744	843
May	309	568	186	653	1,263	785	1,457	1,010	2,282	2,359	568	254	1,158	477	232	13,560	904	695
Jun	1,736	2,644	2,449	10,141	8,106	4,518	8,178	6,969	12,331	10,913	4,414	4,462	9,680	4,294	4,441	95,275	6,352	3,356
Jul	3,024	5,705	9,372	21,340	14,393	11,179	16,910	13,767	19,181	12,112	7,230	11,095	14,207	8,842	9,510	177,868	11,858	4,956
Aug	1,663	1,545	4,570	8,406	4,828	6,431	7,833	5,120	4,065	5,356	2,897	2,489	3,102	4,106	6,485	68,895	4,593	2,084
Sep	535	780	2,925	4,600	2,006	1,328	3,921	3,808	2,689	3,127	1,181	2,050	5,232	1,746	1,313	37,240	2,483	1,428
Oct	390	546	2,239	2,380	2,273	922	2,984	4,910	3,343	1,847	1,006	2,472	2,498	3,748	273	31,831	2,122	1,328
Nov	119	391	1,676	1,462	554	1,151	1,261	1,238	1,608	670	372	324	2,531	499	52	13,908	927	702
Dec			620	372	729	160	192	12	390	90	13	276	62	150	31	3,096	238	231
<b>Total</b>	8,078	12,278	24,086	50,737	36,211	27,796	43,522	38,676	47,535	37,743	18,363	23,830	41,740	23,862	22,337	456,794		
mean	1,010	1,535	2,676	4,228	3,621	2,527	4,836	3,223	4,321	3,774	1,669	1,986	3,478	1,989	1,861			
stdev	1,029	1,870	2,895	6,357	4,458	3,493	5,389	4,071	5,998	4,379	2,297	3,198	4,390	2,757	3,198			

**Table 8. State-reported striped bass landings (pounds) in Nantucket Sound from 1990 through 2004**  
 (Source: DMF Commercial Data 1990-2004)

Consumed - personal consumption of permittee																Total	mean	stdev
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004			
Jul	404	1,437	507	1,323	716	2,678	2,540	5,334	4,268	4,449	5,149	3,406	4,951	6,084	4,617	47,863	3,191	1,947
Aug	185	1,348	288	927	496	1,891	2,723	6,106	4,846	3,017	2,959	2,914	2,870	5,330	3,204	39,104	2,607	1,815
Sept	1,052	2,184	527	718	867	817	1,776	4,341	1,944	1,554	2,059	1,869	1,048	2,582	836	24,175	1,612	983
Oct						340	388	2,530	700	255	878					5,091	849	857
<b>Total</b>	1,641	4,969	1,322	2,968	2,079	5,726	7,427	18,312	11,757	9,275	11,045	8,190	8,869	13,996	8,657	116,233		
mean	547	1,656	441	989	693	1,431	1,857	4,578	2,939	2,319	2,761	2,730	2,956	4,665	2,886			
stdev	451	459	133	307	186	1,054	1,062	1,545	1,950	1,814	1,805	785	1,953	1,843	1,910			
Released (legal) - catch and release by permittee																Total	mean	stdev
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004			
Jul	431	924	1,068	571	430	616	1,662	6,819	4,688	5,290	5,848	4,892	9,400	4,230	6,772	53,641	3,576	2,936
Aug	283	556	2,086	668	610	435	1,347	9,585	4,268	2,574	2,598	4,089	4,487	3,252	2,250	39,087	2,606	2,415
Sept	0	961	1,469	1,327	676	946	2,765	5,029	3,127	2,288	2,221	2,804	3,418	1,486	685	29,201	1,947	1,322
Oct						423	694	1,542	1,133	349	1,105					5,246	874	464
<b>Total</b>	714	2,441	4,623	2,565	1,716	2,419	6,468	22,974	13,217	10,501	11,771	11,785	17,305	8,968	9,707	127,175		
mean	238	814	1,541	855	572	605	1,617	5,744	3,304	2,625	2,943	3,928	5,768	2,989	3,236			
stdev	219	224	513	411	127	244	865	3,370	1,591	2,033	2,038	1,053	3,190	1,391	3,161			
Released (sublegal) catch and release by permittee																Total	mean	stdev
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004			
Jul	9,797	13,290	15,757	15,857	9,819	20,434	18,999	24,203	31,208	27,461	23,386	24,555	32,674	33,373	24,723	325,536	21,702	7,740
Aug	3,647	10,390	4,070	7,076	3,905	11,551	17,317	17,802	12,486	18,040	23,630	25,751	6,597	13,672	18,297	194,229	12,949	7,103
Sept	5,156	5,702	5,948	7,573	2,897	4,024	9,415	4,331	3,351	6,415	7,289	3,135	1,777	1,483	885	69,381	4,625	2,455
Oct						1,187	5,554	1,982	4,173	2,675	2,522					18,092	3,015	1,585
<b>Total</b>	18,600	29,381	25,775	30,506	16,621	37,195	51,284	48,318	51,218	54,591	56,826	53,441	41,048	48,528	43,905	607,237		
mean	6,200	9,794	8,592	10,169	5,540	9,299	12,821	12,080	12,804	13,648	14,207	17,814	13,683	16,176	14,635			
stdev	3,205	3,829	6,276	4,933	3,739	8,615	6,398	10,673	12,945	11,296	10,916	12,726	16,623	16,092	12,334			
Striped Bass sold to market																Total	mean	stdev
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004			
Jul	2,082	7,432	11,540	7,918	4,865	11,468	22,454	25,696	57,136	24,608	18,548	24,690	45,743	68,459	47,224	379,865	25,324	20,333
Aug	708	5,320	997	798		9,616	17,336	19,280	23,388	22,919	16,940	18,749	8,236	14,047	26,611	184,945	13,210	8,927
Sept	1,466					2,726	65	15	90	2,349	1,762	107	0	0	369	8,949	814	1,053
<b>Total</b>	4,256	12,753	12,537	8,717	4,865	23,810	39,854	44,992	80,614	49,877	37,250	43,546	53,979	82,506	74,204	573,759		
mean	1,419	6,376	6,268	4,358	4,865	7,937	13,285	14,997	26,871	16,626	12,417	14,515	17,993	27,502	24,735			
stdev	688	1,493	7,455	5,035		4,607	11,731	13,366	28,682	12,392	9,262	12,827	24,382	36,158	23,484			

Attachment D

NOAA Fisheries MRFSS  
Recreational Data

**Table 1. Recreational fishing effort by mode based on MRFSS interviews from Barnstable/Dukes/Nantucket Counties**

<b>Year</b>	<b>Wave</b>	<b>Shore</b>	<b>Party/Charter Boat</b>	<b>Private/Rental Boat</b>	<b>Total</b>
<b>1990</b>	wave 2	4	0	30	34
	wave 3	177	103	263	543
	wave 4	358	241	761	1,360
	wave 5	267	108	504	879
	wave 6	54	0	46	100
	<b>total</b>	<b>860</b>	<b>452</b>	<b>1,604</b>	<b>2,916</b>
<b>1991</b>	wave 2	81	0	40	121
	wave 3	122	47	230	399
	wave 4	345	208	459	1,012
	wave 5	396	66	353	815
	wave 6	115	0	17	132
	<b>total</b>	<b>1,059</b>	<b>321</b>	<b>1,099</b>	<b>2,479</b>
<b>1992</b>	wave 2	25	0	9	34
	wave 3	203	85	270	558
	wave 4	325	185	485	995
	wave 5	319	116	340	775
	wave 6	118	10	13	141
	<b>total</b>	<b>990</b>	<b>396</b>	<b>1,117</b>	<b>2,503</b>
<b>1993</b>	wave 2	59	0	2	61
	wave 3	285	87	326	698
	wave 4	452	210	740	1,402
	wave 5	391	65	384	840
	wave 6	69	0	35	104
	<b>total</b>	<b>1,256</b>	<b>362</b>	<b>1,487</b>	<b>3,105</b>
<b>1994</b>	wave 2	84	6	10	100
	wave 3	341	102	281	724
	wave 4	308	222	465	995
	wave 5	609	112	448	1,169
	wave 6	47	9	19	75
	<b>total</b>	<b>1,389</b>	<b>451</b>	<b>1,223</b>	<b>3,063</b>
<b>1995</b>	wave 2	93	0	2	95
	wave 3	318	88	431	837
	wave 4	337	239	941	1,517
	wave 5	460	60	395	915
	wave 6	56	15	11	82
	<b>total</b>	<b>1,264</b>	<b>402</b>	<b>1,780</b>	<b>3,446</b>
<b>1996</b>	wave 2	23	0	0	23
	wave 3	252	78	345	675
	wave 4	323	111	663	1,097
	wave 5	387	83	297	767
	wave 6	12	18	8	38
	<b>total</b>	<b>997</b>	<b>290</b>	<b>1,313</b>	<b>2,600</b>
<b>1997</b>	wave 2	14	23	8	45
	wave 3	297	74	321	692
	wave 4	319	145	456	920
	wave 5	411	149	210	770
	wave 6	87	29	51	167
	<b>total</b>	<b>1,128</b>	<b>420</b>	<b>1,046</b>	<b>2,594</b>



**Table 1. Recreational fishing effort by mode based on MRFSS interviews from Barnstable/Dukes/Nantucket Counties**

<b>Year</b>	<b>Wave</b>	<b>Shore</b>	<b>Party/Charter Boat</b>	<b>Private/Rental Boat</b>	<b>Total</b>
<b>1998</b>	wave 2	5	6	10	21
	wave 3	200	110	316	626
	wave 4	420	165	630	1,215
	wave 5	201	86	316	603
	wave 6	170	42	40	252
	<b>total</b>	<b>996</b>	<b>409</b>	<b>1,312</b>	<b>2,717</b>
<b>1999</b>	wave 2	81	11	44	136
	wave 3	375	70	344	789
	wave 4	459	99	431	989
	wave 5	337	63	183	583
	wave 6	66	31	33	130
	<b>total</b>	<b>1,318</b>	<b>274</b>	<b>1,035</b>	<b>2,627</b>
<b>2000</b>	wave 2	40	0	17	57
	wave 3	293	81	265	639
	wave 4	337	149	477	963
	wave 5	147	77	233	457
	wave 6	24	18	26	68
	<b>total</b>	<b>841</b>	<b>325</b>	<b>1,018</b>	<b>2,184</b>
<b>2001</b>	wave 2	79	26	42	147
	wave 3	253	97	215	565
	wave 4	375	103	570	1,048
	wave 5	279	79	217	575
	wave 6	84	31	24	139
	<b>total</b>	<b>1,070</b>	<b>336</b>	<b>1,068</b>	<b>2,474</b>
<b>2002</b>	wave 2	108	32	5	145
	wave 3	141	109	231	481
	wave 4	299	142	417	858
	wave 5	313	63	173	549
	wave 6	186	69	10	265
	<b>total</b>	<b>1,047</b>	<b>415</b>	<b>836</b>	<b>2,298</b>
<b>2003</b>	wave 2	104	79	4	187
	wave 3	286	144	299	729
	wave 4	366	221	525	1,112
	wave 5	291	124	302	717
	wave 6	126	18	17	161
	<b>total</b>	<b>1,173</b>	<b>586</b>	<b>1,147</b>	<b>2,906</b>
<b>2004</b>	wave 2	82	17	6	105
	wave 3	233	216	242	691
	wave 4	157	155	379	691
	wave 5	176	133	253	562
	wave 6	98	60	11	169
	<b>total</b>	<b>746</b>	<b>581</b>	<b>891</b>	<b>2,218</b>
<b>Grand Total</b>		<b>16,134</b>	<b>6,020</b>	<b>17,976</b>	<b>40,130</b>

Table 2. Recreational fishing effort by hours fished based on MRFSS interviews from Barnstable/Dukes/Nantucket Counties

Year	Wave	Total hours fished	Mean of hours fished		std dev
1990	wave 2	156.00	4.59	4.59	1.98
	wave 3	1,970.50	3.63	3.63	1.83
	wave 4	4,449.00	3.27	3.27	1.84
	wave 5	3,351.10	3.81	3.81	2.16
	wave 6	299.00	2.99	2.99	1.70
	<b>total</b>	<b>10,225.60</b>	<b>3.66</b>	<b>3.51</b>	<b>0.61</b>
1991	wave 2	345.00	2.85		1.90
	wave 3	1,284.00	3.22		1.70
	wave 4	3,214.50	3.18		1.83
	wave 5	3,075.00	3.77		2.33
	wave 6	347.00	2.63		1.45
	<b>total</b>	<b>8,265.50</b>	<b>3.13</b>	<b>3.33</b>	<b>0.43</b>
1992	wave 2	70.00	2.06		1.24
	wave 3	1,958.50	3.54		1.94
	wave 4	3,076.50	3.09		1.89
	wave 5	3,026.00	3.91		2.26
	wave 6	357.50	2.54		1.85
	<b>total</b>	<b>8,488.50</b>	<b>3.03</b>	<b>3.39</b>	<b>0.74</b>
1993	wave 2	117.00	1.92		1.03
	wave 3	2,234.00	3.20		1.93
	wave 4	4,436.00	3.16		1.96
	wave 5	2,704.00	3.22		1.91
	wave 6	260.50	2.50		1.73
	<b>total</b>	<b>9,751.50</b>	<b>2.80</b>	<b>3.14</b>	<b>0.58</b>
1994	wave 2	231.50	2.32		1.32
	wave 3	2,571.30	3.55		4.13
	wave 4	3,452.00	3.47		2.38
	wave 5	3,860.50	3.30		2.69
	wave 6	217.50	2.90		1.95
	<b>total</b>	<b>10,332.80</b>	<b>3.11</b>	<b>3.37</b>	<b>0.51</b>
1995	wave 2	197.00	2.07		1.26
	wave 3	2,929.00	3.50		3.96
	wave 4	4,642.00	3.06		1.82
	wave 5	2,940.00	3.21		2.11
	wave 6	344.00	4.19		10.94
	<b>total</b>	<b>11,052.00</b>	<b>3.21</b>	<b>3.21</b>	<b>0.77</b>
1996	wave 2	39.00	1.70		0.78
	wave 3	2,323.00	3.44		2.17
	wave 4	3,632.00	3.33		4.66
	wave 5	2,478.00	3.24		2.15
	wave 6	185.00	4.87		4.67
	<b>total</b>	<b>8,657.00</b>	<b>3.32</b>	<b>3.33</b>	<b>1.12</b>
1997	wave 2	213.00	4.72		3.94
	wave 3	2,355.00	3.42		2.13
	wave 4	3,233.00	3.53		2.37
	wave 5	2,848.00	3.72		2.55
	wave 6	628.00	3.76		2.99
	<b>total</b>	<b>9,277.00</b>	<b>3.83</b>	<b>3.58</b>	<b>0.52</b>

**Table 2. Recreational fishing effort by hours fished based on MRFSS interviews from Barnstable/Dukes/Nantucket Counties**

<b>Year</b>	<b>Wave</b>	<b>Total hours fished</b>	<b>Mean of hours fished</b>		<b>std dev</b>
<b>1998</b>	wave 2	87.00	4.12		3.40
	wave 3	2,094.00	3.35		2.16
	wave 4	4,127.00	3.40		2.07
	wave 5	2,186.00	3.62		2.14
	wave 6	720.00	2.86		2.29
	<b>total</b>	<b>9,214.00</b>	<b>3.47</b>	<b>3.39</b>	<b>0.46</b>
<b>1999</b>	wave 2	371.00	2.73		1.86
	wave 3	2,626.00	3.33		1.97
	wave 4	3,368.00	3.40		1.97
	wave 5	1,936.00	3.32		1.95
	wave 6	566.00	4.35		2.55
	<b>total</b>	<b>8,867.00</b>	<b>3.43</b>	<b>3.38</b>	<b>0.58</b>
<b>2000</b>	wave 2	127.00	2.23		1.35
	wave 3	2,270.00	3.57		2.07
	wave 4	3,315.50	3.44		2.02
	wave 5	1,723.50	3.77		2.09
	wave 6	311.50	4.58		2.95
	<b>total</b>	<b>7,747.50</b>	<b>3.52</b>	<b>3.55</b>	<b>0.85</b>
<b>2001</b>	wave 2	492.50	3.35		2.65
	wave 3	1,976.00	3.50		1.90
	wave 4	3,287.50	3.14		1.70
	wave 5	1,980.00	3.45		2.59
	wave 6	584.00	4.20		3.44
	<b>total</b>	<b>8,320.00</b>	<b>3.53</b>	<b>3.36</b>	<b>0.40</b>
<b>2002</b>	wave 2	463.50	3.20		2.94
	wave 3	1,853.50	3.85		2.19
	wave 4	2,750.00	3.21		1.84
	wave 5	1,738.50	3.17		2.23
	wave 6	811.00	3.06		2.12
	<b>total</b>	<b>7,616.50</b>	<b>3.32</b>	<b>3.31</b>	<b>2.14</b>
<b>2003</b>	wave 2	697.00	3.73		2.72
	wave 3	2,329.50	3.20		1.82
	wave 4	3,694.50	3.33		2.05
	wave 5	2,536.50	3.54		2.14
	wave 6	495.50	3.08		2.44
	<b>total</b>	<b>9,753.00</b>	<b>3.36</b>	<b>3.36</b>	<b>2.10</b>
<b>2004</b>	wave 2	313.00	3.01		2.67
	wave 3	2,534.00	3.69		1.91
	wave 4	2,381.50	3.45		1.84
	wave 5	1,982.00	3.53		1.99
	wave 6	722.00	4.27		3.08
	<b>total</b>	<b>7,932.50</b>	<b>3.58</b>	<b>3.58</b>	<b>2.07</b>
<b>Grand Total</b>		<b>135,500.40</b>	<b>3.35</b>		<b>0.64</b>

**Table 3. Gear used by surveyed recreational anglers based on MRFSS interviews from Barnstable/Dukes/Nantucket Counties**

Year	Wave	hook & line	dip/ A frame net	cast net	gill net	seine	trawl	trap	spear	hand	other
<b>1990</b>	wave 2	34									
	wave 3	541							2		
	wave 4	1,359					1				
	wave 5	875	2	2							
	wave 6	100									
	<b>total</b>	<b>2,909</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>
<b>1991</b>	wave 2	118						2	1		
	wave 3	396						1	2		
	wave 4	1,002	5			1		1	2	1	
	wave 5	815									
	wave 6	132									
	<b>total</b>	<b>2,463</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>5</b>	<b>1</b>	<b>0</b>
<b>1992</b>	wave 2	34									
	wave 3	556	2								
	wave 4	993							2		
	wave 5	767							8		
	wave 6	141									
	<b>total</b>	<b>2,491</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>
<b>1993</b>	wave 2	61									
	wave 3	693				2		1	2		
	wave 4	1,394	1					3	1	3	
	wave 5	837			1	1		1			
	wave 6	104									
	<b>total</b>	<b>3,089</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>5</b>	<b>3</b>	<b>3</b>	<b>0</b>
<b>1994</b>	wave 2	100									
	wave 3	722	1						1		
	wave 4	990	1						2		2
	wave 5	1,160		2		1		1		1	4
	wave 6	75									
	<b>total</b>	<b>3,047</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>6</b>
<b>1995</b>	wave 2	95									
	wave 3	834	1	1							1
	wave 4	1,512						2	1		2
	wave 5	915									
	wave 6	82									
	<b>total</b>	<b>3,438</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>3</b>
<b>1996</b>	wave 2	23									
	wave 3	674				1					
	wave 4	1,091	1							1	
	wave 5	760									
	wave 6	38									
	<b>total</b>	<b>2,586</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>
<b>1997</b>	wave 2	43									
	wave 3	673	4								
	wave 4	903	5						1		
	wave 5	758	4								4
	wave 6	167									
	<b>total</b>	<b>2,544</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>4</b>

**Table 3. Gear used by surveyed recreational anglers based on MRFSS interviews from Barnstable/Dukes/Nantucket Counties**

Year	Wave	hook & line	dip/ A frame net	cast net	gill net	seine	trawl	trap	spear	hand	other
<b>1998</b>	wave 2	21									
	wave 3	624									
	wave 4	1,208						1			1
	wave 5	599							4		
	wave 6	252									
	<b>total</b>	<b>2,704</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>1</b>
<b>1999</b>	wave 2	136									
	wave 3	788	1								
	wave 4	987	1						1		
	wave 5	582	1								
	wave 6	130									
	<b>total</b>	<b>2,623</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>
<b>2000</b>	wave 2	56									1
	wave 3	638	1								
	wave 4	959						4			
	wave 5	456									1
	wave 6	68									
	<b>total</b>	<b>2,177</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>2</b>
<b>2001</b>	wave 2	147									
	wave 3	564						1			
	wave 4	1,048									
	wave 5	575									
	wave 6	139									
	<b>total</b>	<b>2,473</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>2002</b>	wave 2	145									
	wave 3	479					1				
	wave 4	856						2			
	wave 5	549									
	wave 6	265									
	<b>total</b>	<b>2,294</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>2003</b>	wave 2	187									
	wave 3	729									
	wave 4	1,112									
	wave 5	717									
	wave 6	161									
	<b>total</b>	<b>2,906</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>2004</b>	wave 2	105									
	wave 3	681	10								
	wave 4	690									1
	wave 5	561	1								
	wave 6	169									
	<b>total</b>	<b>2,206</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
<b>TOTAL</b>		<b>39,950</b>	<b>42</b>	<b>5</b>	<b>1</b>	<b>6</b>	<b>2</b>	<b>20</b>	<b>30</b>	<b>6</b>	<b>17</b>

**Table 4. Number of fish reported by surveyed anglers and number of fish observed by interviewer based on MRFSS interviews from Barnstable/Dukes/Nantucket Counties**

Year	Wave	Shore		Party/Charter Boat		Private/Rental Boat		Total	
		Reported	Observed	Reported	Observed	Reported	Observed	Reported	Observed
<b>1990</b>	wave 2	2				6	16	8	16
	wave 3	159	29	93	87	264	100	516	216
	wave 4	444	55	252	220	800	113	1,496	388
	wave 5	270	47	430	264	745	159	1,445	470
	wave 6	174	92			108	6	282	98
	<b>total</b>	<b>1,049</b>	<b>223</b>	<b>775</b>	<b>571</b>	<b>1,923</b>	<b>394</b>	<b>3,747</b>	<b>1,188</b>
<b>1991</b>	wave 2	7	4			19	71	26	75
	wave 3	86	77	139	59	1,572	222	1,797	358
	wave 4	237	92	466	168	627	120	1,330	380
	wave 5	349	106	228	61	786	146	1,363	313
	wave 6	210	109			11	4	221	113
	<b>total</b>	<b>889</b>	<b>388</b>	<b>833</b>	<b>288</b>	<b>3,015</b>	<b>563</b>	<b>4,737</b>	<b>1,239</b>
<b>1992</b>	wave 2					1	2	1	2
	wave 3	98	41	478	69	723	111	1,299	221
	wave 4	210	41	419	381	488	111	1,117	533
	wave 5	1,190	74	613	129	1,057	106	2,860	309
	wave 6	760	64	57		1	14	818	78
	<b>total</b>	<b>2,258</b>	<b>220</b>	<b>1,567</b>	<b>579</b>	<b>2,270</b>	<b>344</b>	<b>6,095</b>	<b>1,143</b>
<b>1993</b>	wave 2								
	wave 3	161	23	267	77	420	127	848	227
	wave 4	634	49	764	108	1,148	212	2,546	369
	wave 5	511	112	200	48	765	179	1,476	339
	wave 6	78	57			102	74	180	131
	<b>total</b>	<b>1,384</b>	<b>241</b>	<b>1,231</b>	<b>233</b>	<b>2,435</b>	<b>592</b>	<b>5,050</b>	<b>1,066</b>
<b>1994</b>	wave 2		2					0	2
	wave 3	267	57	231	136	444	127	942	320
	wave 4	266	37	524	193	924	163	1,714	393
	wave 5	644	58	530	63	1,051	125	2,225	246
	wave 6	36		96	1	30	5	162	6
	<b>total</b>	<b>1,213</b>	<b>154</b>	<b>1,381</b>	<b>393</b>	<b>2,449</b>	<b>420</b>	<b>5,043</b>	<b>967</b>
<b>1995</b>	wave 2	3				12		15	0
	wave 3	288	31	453	44	1,478	174	2,219	249
	wave 4	179	21	816	168	1,727	279	2,722	468
	wave 5	1,570	32	266	22	1,210	82	3,046	136
	wave 6	213		81	30	5		299	30
	<b>total</b>	<b>2,253</b>	<b>84</b>	<b>1,616</b>	<b>264</b>	<b>4,432</b>	<b>535</b>	<b>8,301</b>	<b>883</b>
<b>1996</b>	wave 2	22						22	0
	wave 3	227	24	1,230	37	1,222	174	2,679	235
	wave 4	282	3	553	40	1,670	103	2,505	146
	wave 5	519	8	365	44	939	70	1,823	122
	wave 6	2	13	276	10			278	23
	<b>total</b>	<b>1,052</b>	<b>48</b>	<b>2,424</b>	<b>131</b>	<b>3,831</b>	<b>347</b>	<b>7,307</b>	<b>526</b>
<b>1997</b>	wave 2			297	10			297	10
	wave 3	244	28	876	20	1,374	83	2,494	131
	wave 4	266	22	659	33	848	78	1,773	133
	wave 5	414	21	1,522	49	791	44	2,727	114
	wave 6	100	13	185	40	813	13	1,098	66
	<b>total</b>	<b>1,024</b>	<b>84</b>	<b>3,539</b>	<b>152</b>	<b>3,826</b>	<b>218</b>	<b>8,389</b>	<b>454</b>

**Table 4. Number of fish reported by surveyed anglers and number of fish observed by interviewer based on MRFSS interviews from Barnstable/Dukes/Nantucket Counties**

Year	Wave	Shore		Party/Charter Boat		Private/Rental Boat		Total	
		Reported	Observed	Reported	Observed	Reported	Observed	Reported	Observed
<b>1998</b>	wave 2	2		218		4		224	0
	wave 3	252	17	1,280	95	1,929	91	3,461	203
	wave 4	381	20	548	31	2,077	127	3,006	178
	wave 5	358	7	1,023	10	1,129	48	2,510	65
	wave 6	169	13	985	8	636	29	1,790	50
	<b>total</b>	<b>1,162</b>	<b>57</b>	<b>4,054</b>	<b>144</b>	<b>5,775</b>	<b>295</b>	<b>10,991</b>	<b>496</b>
<b>1999</b>	wave 2	78		35		22	3	135	3
	wave 3	377	25	1,683	2	3,026	77	5,086	104
	wave 4	351	15	882	17	1,311	59	2,544	91
	wave 5	155	2	1,216		587	20	1,958	22
	wave 6	267	4	135	8	1,234	8	1,636	20
	<b>total</b>	<b>1,228</b>	<b>46</b>	<b>3,951</b>	<b>27</b>	<b>6,180</b>	<b>167</b>	<b>11,359</b>	<b>240</b>
<b>2000</b>	wave 2	9				39		48	0
	wave 3	370	15	1,863	19	1,372	54	3,605	88
	wave 4	340	22	1,057	50	1,587	139	2,984	211
	wave 5	85	2	1,732	14	489	40	2,306	56
	wave 6	7		384		1		392	0
	<b>total</b>	<b>811</b>	<b>39</b>	<b>5,036</b>	<b>83</b>	<b>3,488</b>	<b>233</b>	<b>9,335</b>	<b>355</b>
<b>2001</b>	wave 2	97	3	1,233	1	9		1,339	4
	wave 3	210	20	2,028	27	1,390	39	3,628	86
	wave 4	354	21	743	77	1,668	172	2,765	270
	wave 5	399	19	842	36	755	19	1,996	74
	wave 6	46		745		207	13	998	13
	<b>total</b>	<b>1,106</b>	<b>63</b>	<b>5,591</b>	<b>141</b>	<b>4,029</b>	<b>243</b>	<b>10,726</b>	<b>447</b>
<b>2002</b>	wave 2	146	2	612				758	2
	wave 3	163	19	5,171	205	1,955	45	7,289	269
	wave 4	319	27	848	44	1,645	89	2,812	160
	wave 5	296	32	572	25	515	68	1,383	125
	wave 6	199	84	221	101	396		816	185
	<b>total</b>	<b>1,123</b>	<b>164</b>	<b>7,424</b>	<b>375</b>	<b>4,511</b>	<b>202</b>	<b>13,058</b>	<b>741</b>
<b>2003</b>	wave 2	9		1,595				1,604	0
	wave 3	241	15	2,402	53	1,460	89	4,103	157
	wave 4	351	10	1,854	216	1,550	100	3,755	326
	wave 5	483	12	720	96	887	22	2,090	130
	wave 6	238	54	581	137	5		824	191
	<b>total</b>	<b>1,322</b>	<b>91</b>	<b>7,152</b>	<b>502</b>	<b>3,902</b>	<b>211</b>	<b>12,376</b>	<b>804</b>
<b>2004</b>	wave 2	202	2	88	37			290	39
	wave 3	149	19	4,367	316	1,433	20	5,949	355
	wave 4	147	15	617	174	1,036	104	1,800	293
	wave 5	155	4	734	124	1,189	30	2,078	158
	wave 6	131	26	1,033	55	56	3	1,220	84
	<b>total</b>	<b>784</b>	<b>66</b>	<b>6,839</b>	<b>706</b>	<b>3,714</b>	<b>157</b>	<b>11,337</b>	<b>929</b>
<b>TOTAL</b>		<b>18,658</b>	<b>1,968</b>	<b>53,413</b>	<b>4,589</b>	<b>55,780</b>	<b>4,921</b>	<b>127,851</b>	<b>11,478</b>

**Table 5. Numbers and species observed by MRFSS interviewers from surveys conducted in Dukes/Barnstable/Nantucket counties**

Year	Shore		Party/Charter		Private/Rental	
	Species Name	Total Number	Species Name	Total Number	Species Name	Total Number
1990	Atlantic mackerel	72	scup	456	bluefish	171
	bluefish	68	bluefish	41	tautog	83
	scup	37	winter flounder	28	scup	51
	pollock	26	black sea bass	17	winter flounder	40
	summer flounder	7	tautog	16	summer flounder	15
	winter flounder	4	striped bass	4	black sea bass	9
	black sea bass	3	smooth dogfish shark	3	Atlantic mackerel	8
	Atlantic menhaden	2	Atlantic cod	2	striped bass	7
	Atlantic bonito	1	Atlantic bonito	1	white perch	3
	smooth dogfish shark	1	fourspot flounder	1	northern searobin	2
	striped bass	1	ocean pout	1	American eel	1
	tautog	1	summer flounder	1	Atlantic cod	1
					Atlantic menhaden	1
				cunner	1	
				searobins	1	
1991	bluefish	185	scup	165	Atlantic mackerel	162
	Atlantic mackerel	89	bluefish	101	bluefish	160
	scup	22	tautog	9	scup	70
	windowpane	18	black sea bass	5	winter flounder	61
	pollock	12	striped bass	3	tautog	58
	Atlantic bonito	11	cunner	2	summer flounder	21
	butterfish	9	northern searobin	1	Atlantic cod	6
	winter flounder	9	searobins	1	striped bass	6
	Atlantic herring	7	summer flounder	1	Little tunny	5
	tautog	7			black sea bass	5
	cunner	5			pollock	4
	little tunny	4			albacore	2
	striped bass	3			Atlantic bonito	2
	black sea bass	2			American eel	1
	summer flounder	2				
	Atlantic menhaden	1				
	needlefish	1				
Spanish mackerel	1					
1992	Atlantic mackerel	82	scup	429	scup	100
	bluefish	55	bluefish	83	bluefish	64
	scup	41	striped bass	21	winter flounder	43
	winter flounder	16	tautog	17	tautog	39
	summer flounder	8	black sea bass	11	Atlantic mackerel	28
	albacore	4	northern searobin	11	summer flounder	20
	striped bass	4	Atlantic mackerel	3	striped bass	15
	Atlantic bonito	3	left-eye flounder	2	Atlantic cod	13
	Atlantic herring	2	summer flounder	2	black sea bass	11
	pollock	2			Atlantic bonito	5
	northern searobin	1			Atlantic silverside	2
	rainbow smelt	1			bluefin tuna	2
	searobin	1			haddock	1
					yellowtail flounder	1



**Table 5. Numbers and species observed by MRFSS interviewers from surveys conducted in Dukes/Barnstable/Nantucket counties**

Year	Shore		Party/Charter		Private/Rental	
	Species Name	Total Number	Species Name	Total Number	Species Name	Total Number
1993	bluefish	52	bluefish	126	bluefish	215
	Atlantic bonito	50	scup	51	Atlantic bonito	100
	rainbow smelt	45	striped bass	18	winter flounder	81
	scup	21	tautog	16	scup	66
	winter flounder	20	Atlantic cod	11	summer flounder	43
	Atlantic silverside	15	Atlantic bonito	4	tautog	40
	cunner	14	black sea bass	2	striped bass	24
	striped bass	5	ocean pout	2	Atlantic cod	6
	tautog	5	winter flounder	2	black sea bass	6
	windowpane	5	summer flounder	1	Spanish sardine	4
	pollock	2			windowpane	2
	summer flounder	2			Atlantic menhaden	1
	Atlantic tomcod	1			lamprey sea	1
	blueback herring	1			shortfin mako shark	1
	mummichog	1			Spanish mackerel	1
	northern searobin	1			spiny dogfish shark	1
	winter skate	1				
1994	bluefish	55	scup	224	bluefish	107
	sand lance	18	bluefish	87	Atlantic mackerel	88
	American sandlance	15	summer flounder	21	summer flounder	68
	scup	15	Atlantic mackerel	18	striped bass	40
	Atlantic mackerel	14	striped bass	17	winter flounder	35
	summer flounder	13	northern searobin	12	scup	29
	striped bass	6	tautog	6	Atlantic bonito	20
	winter flounder	5	Atlantic bonito	2	tautog	17
	albacore	2	Atlantic cod	2	skipjack tuna	6
	Atlantic bonito	2	black sea bass	1	Atlantic cod	2
	cunner	2	blueback herring	1	bigeye tuna	2
	windowpane	2	shortfin mako shark	1	cunner	2
	Atlantic menhaden	1	skipjack tuna	1	black sea bass	1
	blueback herring	1			chub mackerel	1
	pollock	1			striped searobin	1
	rainbow smelt	1			yellowfin tuna	1
	skipjack tuna	1				
1995	bluefish	66	bluefish	107	bluefish	169
	Atlantic bonito	5	scup	67	Atlantic mackerel	101
	white perch	3	striped bass	39	summer flounder	84
	winter flounder	3	finescale menhaden	29	striped bass	53
	striped bass	2	tautog	6	scup	43
	Atlantic herring	1	black sea bass	5	winter flounder	39
	cunner	1	Atlantic bonito	4	tautog	19
	scup	1	white perch	2	yellowfin tuna	7
	summer flounder	1	winter flounder	2	Atlantic bonito	6
	tautog	1	pollock	1	black sea bass	4
			summer flounder	1	Atlantic menhaden	3
			yellowfin tuna	1	bluefin tuna	2
					skipjack tuna	2
					bigeye tuna	1
				blueback herring	1	
				cunner	1	

**Table 5. Numbers and species observed by MRFSS interviewers from surveys conducted in Dukes/Barnstable/Nantucket counties**

Year	Shore		Party/Charter		Private/Rental	
	Species Name	Total Number	Species Name	Total Number	Species Name	Total Number
1996	bluefish	14	bluefish	57	bluefish	79
	Atlantic mackerel	13	scup	30	Atlantic mackerel	60
	winter flounder	11	striped bass	25	winter flounder	54
	striped bass	3	finescale menhaden	7	scup	43
	Atlantic bonito	2	tautog	4	striped bass	43
	summer flounder	2	pollock	3	summer flounder	28
	windowpane flounder	2	black sea bass	2	tautog	24
	tautog	1	summer flounder	2	Atlantic bonito	6
			Atlantic mackerel	1	cunner	2
				little skate	2	
				smooth dogfish	2	
				Atlantic herring	1	
				black sea bass	1	
				northern searobin	1	
				shorthorn sculpin	1	
1997	bluefish	26	finescale menhaden	49	bluefish	68
	striped bass	22	striped bass	36	striped bass	50
	Atlantic mackerel	12	scup	31	summer flounder	27
	summer flounder	10	bluefish	18	scup	22
	blueback herring	5	black sea bass	6	Atlantic mackerel	17
	scup	4	tautog	4	winter flounder	15
	windowpane flounder	4	Atlantic bonito	3	black sea bass	4
	winter flounder	1	summer flounder	3	tautog	4
			pollock	2	Atlantic bonito	3
				finescale menhaden	3	
				spiny dogfish	2	
				little skate	1	
				sand lance	1	
				skate	1	
1998	striped bass	21	striped bass	47	summer flounder	103
	bluefish	12	pollock	39	striped bass	69
	Atlantic mackerel	11	bluefish	30	bluefish	56
	Atlantic croaker	2	finescale menhaden	7	Atlantic mackerel	29
	pollock	2	scup	7	winter flounder	11
	summer flounder	2	Atlantic mackerel	3	scup	10
	tautog	2	Atlantic herring	2	black sea bass	7
	American eel	1	black sea bass	2	tautog	6
	American shad	1	spiny dogfish	2	cunner	4
	scup	1	winter flounder	2		
	white perch	1	summer flounder	1		
	yellowtail flounder	1	tautog	1		
1999	bluefish	18	striped bass	10	summer flounder	47
	striped bass	7	finescale menhaden	8	striped bass	46
	winter flounder	5	scup	6	Atlantic mackerel	23
	cunner	3	bluefish	2	bluefish	18
	summer flounder	3	winter flounder	1	winter flounder	17
	Atlantic mackerel	2			scup	5
	white perch	2			tautog	5
	Atlantic bonito	1			black sea bass	4
	Atlantic tomcod	1			albacore tuna	1
	longhorn sculpin	1			Atlantic bonito	1
	pollock	1				
	shark (NS)	1				
	tautog	1				

**Table 5. Numbers and species observed by MRFSS interviewers from surveys conducted in Dukes/Barnstable/Nantucket counties**

Year	Shore		Party/Charter		Private/Rental	
	Species Name	Total Number	Species Name	Total Number	Species Name	Total Number
2000	striped bass	10	scup	35	summer flounder	83
	bluefish	7	striped bass	18	scup	44
	scup	5	summer flounder	9	striped bass	40
	black sea bass	4	bluefish	7	bluefish	28
	rainbow smelt	4	Atlantic cod	6	bluefin tuna	9
	summer flounder	3	black sea bass	6	black sea bass	8
	winter flounder	3	Atlantic bonito	2	tautog	7
	northern searobin	2			winter flounder	7
	Spanish mackerel	1			Atlantic mackerel	4
2001	striped bass	20	bluefish	85	bluefish	85
	scup	19	scup	27	striped bass	66
	bluefish	15	striped bass	22	summer flounder	28
	alewife	3	summer flounder	5	scup	27
	Spanish mackerel	3	Atlantic cod	1	Atlantic bonito	15
	Little tunny	1	black sea bass	1	black sea bass	12
	black sea bass	1			tautog	4
	tautog	1			Atlantic cod	3
2002	Atlantic mackerel	84	scup	197	striped bass	73
	striped bass	29	Atlantic cod	99	bluefish	50
	scup	15	striped bass	36	summer flounder	29
	cunner	15	bluefish	21	black sea bass	15
	summer flounder	7	summer flounder	11	scup	14
	bluefish	5	black sea bass	9	winter flounder	6
	winter flounder	5	pollock	2	tautog	5
	Atlantic herring	1			Atlantic cod	5
	Brown trout	1			yellowtail flounder	1
	little tunny	1			windowpane	1
	albacore tuna	1			little skate	1
					Atlantic mackerel	1
				Atlantic bonito	1	
2003	Atlantic mackerel	49	scup	274	striped bass	75
	striped bass	19	Atlantic cod	68	summer flounder	41
	bluefish	12	cunner	60	bluefish	33
	tautog	3	striped bass	44	scup	20
	summer flounder	3	black sea bass	34	Atlantic mackerel	20
	little tunny	2	bluefish	13	black sea bass	7
	spiny dogfish	1	tautog	4	winter flounder	4
	scup	1	winter flounder	3	tautog	3
	winter flounder	1	summer flounder	2	bluefin tuna	3
					Atlantic cod	2
					spiny dogfish	1
				blueback herring	1	
				little tunny	1	
2004	Atlantic mackerel	25	scup	473	striped bass	54
	striped bass	12	Atlantic cod	89	bluefish	42
	alewife	10	black sea bass	85	summer flounder	27
	scup	10	striped bass	34	scup	22
	winter flounder	4	bluefish	15	black sea bass	8
	bluefish	3	tautog	4	Atlantic mackerel	3
	Brown trout	1	haddock	2	Atlantic bonito	1
	little tunny	1	northern searobin	2		
			Atlantic wolfish	1		
			Atlantic bonito	1		

Attachment E

NOAA Fisheries  
Recreational VTR Data

**Table 1. 1994 recreational landings (counts) reported by federally-permitted charter and party boats for Nantucket Sound (Source: NMFS Vessel Trip Report Data for Area 075)**

	<b>July</b>	<b>August</b>	<b>September</b>	<b>October</b>	<b>Grand Total</b>
Black Sea Bass				3	3
Bluefish	1	1			2
Bonito		1			1
Scup			1	3	4
Skate				1	1
Spiny Dogfish				1	1
Summer Flounder		1	1	3	5
Tautog				2	2
Winter Flounder				2	2
<b>Grand Total</b>	1	3	2	15	21

**Table 2. 1995 recreational landings (counts) reported by federally-permitted charter and party boats for Nantucket Sound (Source: NMFS Vessel Trip Report Data for Area 075)**

	May	June	July	August	September	October	Grand Total
Black Sea Bass	3	4	3	4	3	2	19
Bluefish		1	3	3	2	2	11
Bonito			1		1		2
Butterfish			1				1
Flounder (Not Specified)	2						2
Scup	3	4	3	4	3	2	19
Sea Robins	2	4	1	1		1	9
Skate	3	1			1	2	7
Squid (Not Specified)		1					1
Summer Flounder		3	3	3	1		10
Tautog	3	4	3	3	2	2	17
<b>Grand Total</b>	<b>16</b>	<b>22</b>	<b>18</b>	<b>18</b>	<b>13</b>	<b>11</b>	<b>98</b>

**Table 3. 1996 recreational landings (counts) reported by federally-permitted charter and party boats for Nantucket Sound (Source: NMFS Vessel Trip Report Data for Area 075)**

	April	May	June	July	August	September	October	Grand Total
American Plaice Flounder		1						1
Atlantic Mackerel		1						1
Black Sea Bass		2	7	4	5	4	4	26
Bluefish		1	1	1	1	2	2	8
Butterfish				1				1
Cunner			1					1
Lemon Shark				1				1
Loligo Squid	1							1
Scup		2	7	6	5	4	4	28
Sea Robins		1	2	2	2			7
Skate		1	2			1	3	7
Smooth Dogfish					2	1	3	6
Spiny Dogfish						2	3	5
Striped Bass			1					1
Summer Flounder		2	3	2	2	2	2	13
Tautog		2	5	3	2	2	2	16
Winter Flounder	1	1	1			1	2	6
<b>Grand Total</b>	<b>2</b>	<b>14</b>	<b>30</b>	<b>20</b>	<b>19</b>	<b>19</b>	<b>25</b>	<b>129</b>

**Table 4. 1997 recreational landings (counts) reported by federally-permitted charter and party boats for Nantucket Sound (Source: NMFS Vessel Trip Report Data for Area 075)**

	May	June	July	August	September	October	Grand Total
Albacore Tuna			1				1
American Plaice Flounder	1						1
Atlantic Mackerel	1						1
Black Sea Bass	4	5	5	5	5	2	26
Bluefish		3	3	2	1	2	11
Cunner				1			1
Scup (Porgy)	3	5	5	5	5	2	25
Sea Robins	2	4	2	1			9
Skate	1	2			1	1	5
Smooth Dogfish			2	1	1		4
Striped Bass			1	1	2		4
Summer Flounder	2	2	4	4	4	2	18
Tautog	4	6	2	3	3	2	20
Winter Flounder	3				1		4
<b>Grand Total</b>	21	27	25	23	23	11	130



**Table 5. 1998 recreational landings (counts) reported by federally-permitted charter and party boats for Nantucket Sound (Source: NMFS Vessel Trip Report Data for Area 075)**

	May	June	July	August	September	October	Grand Total
Black Sea Bass	5	15	3	2	4	4	33
Bluefish	3	4	3	5	2	3	20
Bonito						1	1
Cunner	1						1
Scup (Porgy)	6	18	4	3	4	4	39
Sea Robins	2	3	1	1		1	8
Skate		1		1	1	1	4
Smooth Dogfish			1	1	1	1	4
Spiny Dogfish						1	1
Striped Bass	2	3	2	3	2		12
Summer Flounder (Fluke)	2	8	4	4	1	2	21
Tautog	6	10	2	2	1	2	23
Winter Flounder (Blackback)	2		1				3
<b>Grand Total</b>	29	62	21	22	16	20	170

**Table 6. 1999 recreational landings (counts) reported by federally-permitted charter and party boats for Nantucket Sound (Source: NMFS Vessel Trip Report Data for Area 075)**

	April	May	June	July	August	September	October	Grand Total
Atlantic Croaker						1	1	2
Black Sea Bass		12	8	4	4	3	6	37
Blacktip Shark						1		1
Bluefish		2	5	3	3	2	1	16
Channeled Whelk				1				1
Illex Squid		1						1
Loligo Squid	1							1
Northern Puffer						1		1
Scup		12	8	4	5	3	6	38
Sea Robins		4	1	2				7
Skate			1		1	1	1	4
Smooth Dogfish		1	1		1			3
Spiny Dogfish							1	1
Squid (Not Specified)		1						1
Striped Bass		1	1	1	2			5
Summer Flounder		1	4	3	2	1		11
Tautog		6	3	3	3	1	4	20
Winter Flounder		1	1	1				3
<b>Grand Total</b>	<b>1</b>	<b>42</b>	<b>33</b>	<b>22</b>	<b>21</b>	<b>14</b>	<b>20</b>	<b>153</b>

**Table 7. 2000 recreational landings (counts) reported by federally-permitted charter and party boats for Nantucket Sound (Source: NMFS Vessel Trip Report Data for Area 075)**

	May	June	July	August	September	October	Grand Total
Black Sea Bass	16	11	6	2	7	3	45
Blacktip Shark					1		1
Bluefish	3	4	3	1	3	2	16
Loligo Squid	1						1
Scup (Porgy)	20	15	7	2	7	3	54
Sea Robins	3	3	1	1			8
Skate		1					1
Smooth Dogfish		2	1	1	3		7
Spiny Dogfish		1			1	1	3
Striped Bass	3	6	2				11
Summer Flounder	4	4	3	1	2		14
Tautog	8	5	3	1	3	3	23
Weakfish				1	1		2
<b>Grand Total</b>	58	52	26	10	28	12	186

**Table 8. 2001 recreational landings (counts) reported by federally-permitted charter and party boats for Nantucket Sound (Source: NMFS Vessel Trip Report Data for Area 075)**

	May	June	July	August	September	Grand Total
American Plaice Flounder	3					3
Black Sea Bass	9	13	4	4	6	36
Bluefish	3	4	2	1	2	12
Dogfish (Not Specified)		1				1
Loligo Squid	3					3
Scup	9	13	2	2	6	32
Sea Robins	2	3	2			7
Skate		1				1
Smooth Dogfish		2	1	1	2	6
Striped Bass	3	2		1	1	7
Summer Flounder	4	3	4	4	1	16
Tautog	7	3	2	1		13
Winter Flounder	2	1				3
Wolffish	1					1
<b>Grand Total</b>	<b>46</b>	<b>46</b>	<b>17</b>	<b>14</b>	<b>18</b>	<b>141</b>

**Table 9. 2002 recreational landings (counts) reported by federally-permitted charter and party boats for Nantucket Sound (Source: NMFS Vessel Trip Report Data for Area 075)**

	April	May	June	July	August	September	October	Grand Total
American Plaice Flounder		1						1
Black Sea Bass		8	11	2	2	3	1	27
Bluefish		6	10	1	1	3	1	22
Bonito						1		1
Crevalle						1		1
Dogfish (Not Specified)			1					1
Loligo Squid	1	3						4
Other Finfish						1		1
Oyster Toadfish						1		1
Scup		7	9	2	2	3	1	24
Sea Robins		4	3	1				8
Skate			1					1
Smooth Dogfish		1	3	2	1	3		10
Spanish Mackerel						1		1
Spiny Dogfish					1	1		2
Striped Bass		4	5	2	1	1		13
Summer Flounder		1	5	2	2	3		13
Tautog	2	4	2	1	1	1		11
Winter Flounder		1				1		2
<b>Grand Total</b>	<b>3</b>	<b>40</b>	<b>50</b>	<b>13</b>	<b>11</b>	<b>24</b>	<b>3</b>	<b>144</b>

**Table 10. 2003 recreational landings (counts) reported by federally-permitted charter and party boats for Nantucket Sound (Source: NMFS Vessel Trip Report Data for Area 075)**

	May	June	July	August	September	October	Grand Total
American Plaice Flounder		2					2
Black Sea Bass	6	14	5	1	4	2	32
Bluefish	1	6	4	1	2	1	15
Loligo Squid	2						2
Scup	6	14	4	1	4	1	30
Sea Robins	2	2	1				5
Skate					1		1
Smooth Dogfish		1	1	1	1		4
Spiny Dogfish					1	1	2
Starfish				1			1
Striped Bass	3	8	2	1	1		15
Summer Flounder	2	5	5	1	4		17
Tautog	5	5	2	1	2	2	17
Winter Flounder	2						2
<b>Grand Total</b>	29	57	24	8	20	7	145

**Table 11. 2004 recreational landings (counts) reported by federally-permitted charter and party boats for Nantucket Sound (Source: NMFS Vessel Trip Report Data for Area 075)**

	May	June	July	August	September	October	Grand Total
Black Sea Bass	14	11	6	6	4	4	45
Bluefish	2	8	4	5	6	3	28
Loligo Squid	7						7
Sandbar Shark			1				1
Scup	10	12	6	7	5	3	43
Sea Robins	2	1	1				4
Smooth Dogfish	1		1		1		3
Striped Bass	8	13	5	2	1		29
Summer Flounder	3	3	5	6	2	2	21
Tautog	7	2	2	2	2	3	18
<b>Grand Total</b>	54	50	31	28	21	15	199

**Table 12. Recreational landings (counts) by species and month reported by federally-permitted charter and party boats for Nantucket Sound from 1994-2004 (Source: NMFS Vessel Trip Report Data for Area 075)**

	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>August</b>	<b>September</b>	<b>October</b>	<b>Grand Total</b>
Scup		102,180	175,543	77,501	72,412	57,139	23,354	508,129
Black Sea Bass		13,192	14,705	6,520	11,658	9,952	2,844	58,871
Loligo Squid	1,409	18,271						19,680
Summer Flounder		37	1,435	3,235	811	466	52	6,036
Tautog	66	1,976	1,145	827	761	506	259	5,540
Bluefish		141	444	1,471	1,568	397	113	4,134
Sea Robins		705	1,129	300	171		6	2,311
Channeled Whelk				1,621				1,621
Squid (Not Specified)		1,030	1					1,031
Striped Bass		272	420	164	54	30		940
Illex Squid		500						500
Albacore Tuna				425				425
Skate		15	27		3	36	93	174
Winter Flounder	5	104	6	3		47	4	169
Smooth Dogfish		6	54	34	27	37	7	165
Spiny Dogfish			2		2	20	59	83
Crevalle						19		19
Cunner		5	1		11			17
American Plaice Flounder		10	3					13
Bonito				1	6	2	1	10
Atlantic Croaker						2	3	5
Flounder (Not Specified)		5						5
Dogfish (Not Specified)			4					4
Wolfish		4						4
Atlantic Mackerel		2						2
Blacktip Shark						2		2
Butterfish				2				2
Weakfish					1	1		2
Lemon Shark				1				1
Northern Puffer						1		1
Other Finfish						1		1
Oyster Toadfish						1		1
Sandbar Shark				1				1
Spanish Mackerel						1		1
Starfish					1			1
<b>Grand Total</b>	<b>1,480</b>	<b>138,455</b>	<b>194,919</b>	<b>92,106</b>	<b>87,486</b>	<b>68,660</b>	<b>26,795</b>	<b>609,901</b>



**Table 13. Top 10 recreational species landings (counts) reported by federally-permitted charter and party boats for Nantucket Sound from 1994-2004 (Source: NMFS Vessel Trip Report Data for Area 075)**

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Grand Total
Scup	1,884	31,439	29,197	15,595	36,365	59,152	71,792	43,409	71,062	63,404	84,830	508,129
Black Sea Bass	82	1,739	1,550	1,857	1,172	4,232	8,362	6,421	10,627	10,735	12,094	58,871
Loligo Squid			300			709	2,886	7,060	2,350	375	6,000	19,680
Summer Flounder	263	54	82	3,045	834	357	272	245	308	261	315	6,036
Tautog	17	929	854	423	683	481	750	155	532	386	330	5,540
Bluefish	11	321	130	112	1,662	294	153	124	381	389	557	4,134
Sea Robins		198	198	170	357	380	189	276	110	288	145	2,311
Channeled Whelk						1,621						1,621
Squid (Not Specified)		1				1,030						1,031
Striped Bass			1	7	25	13	93	12	86	261	442	940
<b>Grand Total</b>	2,257	34,681	32,312	21,209	41,098	68,269	84,497	57,702	85,456	76,099	104,713	608,293

Attachment F

*Marine Fisheries*

Resource Trawl Data

Table 1. Total annual catch number for each species reported in the fall trawls from 1978-2004

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Grand Total	
African Pompano													1								1							2	
Alewife										2									1	5	5		1					3	17
American Eel			4																									4	
American Lobster	4	1	2	3	3		1	1	9	9	5	29	32	15	26	16	1		2	4	1	1	4	2			1	172	
Atlantic Cod																											6	6	
Atlantic Herring				1						2	53		9	21	17		4							26			1	134	
Atlantic Menhaden			1																			11			9		1	22	
Atlantic Moonfish							1	9	1		2		5	33	1				3	28	503	79	12	4	74	44	28	827	
Atlantic Rock Crab	18	2	23	11	86	160	24	64	369	200	30	87	38	47	70	14	226	24	405	31	3	26	8	11	27	10	63	2077	
Atlantic Surfclam			3	25	4	1	1			2				6			8	1	1			5				1	3	61	
Banded Rudderfish							1																	1				2	
Bay Anchovy			11145	43		12		4	296				944	1		53		1421		65	10252		422	26	3445			28129	
Bay Scallop		10	36	4	137	117	20	5	16		6			41	2		2			1		1	2	2	8	1	1	412	
Bigeye							6				19	4		1		1		1	9	1	24				29	1		96	
Bigeye Scad												4		2													1	7	
Black Sea Bass	3882	1423	3729	255	7029	7541	5993	7218	3034	1402	2169	316	135	181	332	24	403	1122	352	118	278	202	3861	789	2614	2623	7925	64950	
Blue Crab										2	1						1			1		1						6	
Blue Mussel				47										6			2								3			58	
Blue Runner																1		1				2	6	1				11	
Blueback Herring		5					1					15									1							22	
Bluefish	10	1	5	35	1	4	38	10	27	354	31	3	13	183	1	49	28	2		37	584	69	18	10	11	11	10	1545	
Bluespotted Cornetfish	4										5			3						6	5	38		1				63	
Butterfish	4394	1181	16685	3003	1676	2466	1114	2216	4070	338	20176	1253	4545	4007	13925	12156	8549	3510	2167	3979	32470	11334	4714	2691	9308	42391	2720	217038	
Cancer Crab Uncl										2																		2	
Channeled Whelk	139	71	106	3	45	51	41	138	147	112	87	31	11	77	25	6	94	11	82	3	1	8	39		15	14	79	1436	
Conger Eel																						1						1	
Cunner	10	16	284	1	16	12	1	15	17	1	9	165	3	11	15	10	21	18	26	21	21	66	14	1	15	59	71	919	
Flame Box Crab																								1				1	
Flying Gurnard																			12								1	13	
Fourbeard Rockling									1	1																		2	
Fourspot Flounder	2	4	2	1	1	1		3	15		1	2			3	5	4	3	1	1		2	1			4	3	59	
Gag																						1						1	
Glasseye Snapper																						36						36	
Goby Uncl																		3										3	
Gray Triggerfish											5									9								14	
Grubby			19		1							7								5								32	
Guaguanche								3														1					1	5	
Gulf Stream Flounder						1	1	123	49											3				4				181	
Hogchoker																	1											1	
Horseshoe Crab	34	9	22	3	15	1	6	15	35	40	6	6	13	6	4	9	20	20	37	10	4	5	25	3	7		49	404	
Inshore Lizardfish									3								2					2		2				9	
Jonah Crab			1									1							1									3	
Knobbed Whelk	245	197	402	8	112	192	42	169	188	134	131	30	16	104	38	6	136	158	142	5	1	93	176	3	98	15	34	2875	
Lady Crab	294	74	275	60	290	432	204	1496	1545	2123	1053	964	1004	4031	2906	572	2880	989	1120	442	64	319	74	220		3	76	23510	
Little Skate	365	308	298	63	579	134	88	344	196	151	48	22	12	481	277	127	465	91	397	178	94	69	340	40	114	856	397	6534	
Lizardfish Uncl		1								1											1							3	
Longfin Squid	12310	8283	12136	7658	17350	6499	2808	19192	7549	11731	6814	2773	7819	4083	10303	6815	9875	9937	17282	3794	4879	3648	1547	13662	3484	13200	3386	228817	
Longfin Squid Egg Mops																													0
Longhorn Sculpin														3											1			4	
Lookdown																										3		3	
Mackerel Scad	59	22		4	12	3	5	10	2	2	21	46	2	8	3	2	9		16	118	3		44	3	7	13	414		
Mantis Shrimp Uncl									1					1						1		1						4	
Moon Snail, Shark Eye, And Baby-Ear	13		9				7	8	23	7	2	2	1	23	2		4	1	13	3	2					1	121		
Northern Horsemussel					1					16											9				1			27	
Northern Kingfish	15	11	15	5			9	7	4	2	2	14		4	17	4	20	14	3	33	10	12	8		9	3	2	223	

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Grand Total	
Northern Moonsnail																											5	5	
Northern Pipefish	18	30	54	10		1		18	29	34	48	43	2	3	1	2	54	19	9	6	2	5	1	47	1	11	90	538	
Northern Puffer	2	4	8	1	12	36	1	7	3	1				4	2	1	3	5		4	5	4	4	11	2	22	3	145	
Northern Quahog																											2	2	
Northern Sand Lance	8	59		408	19		2	9			62	2	1			13												583	
Northern Searobin	2012	1854	757	64	929	939	201	814	932	741	258	115	12	209	774	33	485	759	573	69	14	6	82	45	54	97	496	13324	
Northern Sennet														3							1	1						5	
Ocean Quahog																		1										1	
Orange Filefish											1	1	1	4			4											11	
Oyster Toadfish										1																		1	
Planehead Filefish	23	11	2		14		1	13			1	3				3	2	2	8			1		7	1	1	2	95	
Rainbow Smelt			2																									2	
Razor And Jackknife Clam Uncl									1																			1	
Red Cornetfish																										2	1	3	
Red Goatfish			11								1			1						2		4						19	
Red Hake			1					5		5		2								8	2				6		13	42	
Rock Gunnel					1	1						61			1		1	2	3		1		1				25	97	
Rock Hind																			1									1	
Rough Scad								1	38		2	1					1								2	9	1	55	
Roughtail Stingray				1										2	1									1	1	2		8	
Round Scad																											1	1	
Sand Dollar Uncl	16																											16	
Sand Tiger				1															1									2	
Scamp																									1		1	2	
Scrawled Filefish																		1										1	
Scup	125280	37875	46342	21190	63865	71089	34666	17365	37725	28366	58920	19277	43423	52764	135840	35252	53455	25880	62326	48152	26462	66976	39392	85253	35044	216284	71074	1559537	
Sea Raven	4																											4	
Short Bigeye							8							1			15					4					1	29	
Shrimp Uncl			4																									4	
Silver Hake					37		19	2	3					4	7		67			1							3	143	
Smallmouth Flounder											37	13	16		58	57	1	236	181	11	21	7	50	43	74	151	87	251	1294
Smooth Dogfish	340	393	451	120	232	383	659	824	739	288	55	22	204	303	61	37	59	152	162	172	61	32	55	37	160	103	72	6176	
Snakefish	32							1			1			1														36	
Snowy Grouper					1															1	1	1						4	
Spider Crab Uncl	141	77	260	80	545	475	218	673	715	1242	460	580	122	245	112	116	636	634	468	127	184	460	262	73	38	243	417	9603	
Spiny Dogfish									3		1				19						2		6	41	8	48		128	
Spot								1		1																		2	
Spotfin Butterflyfish																						9					1	10	
Spotted Hake								1								4	11		1				1				2	20	
Striped Anchovy	6109	22			594		56	132		4975		20	1381	2140			145			9	184	1223	1	1			138	17130	
Striped Bass																		1					1					2	
Striped Searobin	59	6	3	1	2	1	4	3	5	3	3	1		12	16		8	5	8	8	4	7	9	3	17	32	11	231	
Summer Flounder	28	3	16	8	45	18	13	55	86	73	39	12	6	29	33	25	120	23	62	83	30	38	181	73	108	203	99	1509	
Tautog	21	22	295	26	34	31	8	72	19	3	12	7	1	2	2	5	1	11	1	5		99	34	8	152	13	55	939	
Trunkfish														1														1	
Weakfish		1																										1	
White Hake		29						5	14			5			1	2		4					1					61	
Windowpane	75	60	35	29	61	11	15	30	88	19	5	11	3	11	15	14	80	8	29	5	2	3	11	1	10	8	16	655	
Winter Flounder	336	12	60	11	25	2	6	34	36	62	12	47	4	24	64	14	136	19	78	28	1	8	59	5	2		9	1094	
Winter Skate	67	40	119	58	365	81	30	82	133	85	41	31	26	329	152	214	1101	233	446	69	105	50	9	18	55	147	119	4205	
Yellow Jack														1														1	
Grand Total	156369	52117	93622	33241	94139	90695	46319	51197	58166	52570	90611	26031	59789	69530	165125	55606	79375	45280	86247	57672	76285	85022	51463	103200	55092	276564	87770	2199097	

Table 2. Total annual catch weight for each species reported in the fall trawls from 1978-2004

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Grand Total	
African Pompano													0								0							0	
Alewife										0									0	0.2	0.3		0				0	0.5	
American Eel			0.4																									0.4	
American Lobster	4.1	0.3	0.2	0.7	3.2		0	0	5	2.7	0.8	11.3	8.1	7	9.8	4.8	0.3		0.8	1.5	1.3	0.2	1.5	1.5			1.2	66.3	
Atlantic Cod																											0	0	
Atlantic Herring				0						0	0.6		0.1	0.1	0		0.1							0			0	0.9	
Atlantic Menhaden			0.5																			0			0		0	0.5	
Atlantic Moonfish							0	0.1	0		0		0	0.3	0				0	0.1	2.9	0.4	0	0	0.4	0.2	0.1	4.5	
Atlantic Rock Crab	2.5	0.1	0.3	0	7.1	3.8	2.6	1.8	26.1	14.2	0.9	3.8	2.2	2.7	3.1	0.7	16.9	1	4.8	1.4	0	0.1	0.2	0.4	0.2	0.1	7	104	
Atlantic Surfclam			0.2	1	0.1	0	0.1			0.3				2.5			0.3	0.6	0.1			0.4				0.1	1.2	6.9	
Banded Rudderfish							0.3																	0.1				0.4	
Bay Anchovy			13.5	0.1		0		0	0.2				1.2	0		0		1.5		0	10.4		0.3	0	3.7			30.9	
Bay Scallop		0.5	2.8	0.1	6.3	10.2	1.6	0.4	1		0.1			3	0.1		0			0		0	0.1	0.1	0.6	0	0	26.9	
Bigeye							0.1				0.3	0		0		0		0	0	0	0.4				0.2	0		1	
Bigeye Scad												0.1		0													0	0.1	
Black Sea Bass	41.2	35.3	25.3	23.6	35	35.5	67.5	35	38.1	14.4	14.5	3.1	0.6	0.6	3.2	0	1.8	6.6	1.3	9.3	1.5	13.8	70.2	36.9	129.2	48.5	28.2	720.2	
Blue Crab										0.3	0.2						0.2			0.2		0						0.9	
Blue Mussel				1										0			0.2					9.2			0.1			10.5	
Blue Runner															0		0.1				0.1	0.2	0					0.4	
Blueback Herring		0.3					0.1					0.4									0							0.8	
Bluefish	13.5	0.2	6.2	2.6	3.7	3.7	5.1	10.6	9	14.9	8.1	4.6	3.1	13.4	2	3.3	2.1	1.8		8.6	5.7	1.2	3.3	3	0.6	0.5	13.1	143.9	
Bluespotted Cornetfish	0.2										0.1			0						0.1	0.2	1		0				1.6	
Butterfish	44.3	12.3	158.5	49.4	12.1	17.5	32.7	27	35	13.9	192.5	16.3	42.1	47.8	140.6	148.7	147.9	21.9	13.5	37.2	369	174	108.3	42.2	91.1	122.2	38.7	2156.7	
Cancer Crab Uncl										0																			0
Channeled Whelk	43.6	17.9	26.4	0.9	21.8	10.5	12.7	34.6	38.5	20.9	19.4	7	2.4	20.5	7.8	1.6	24.2	3	20.2	0.9	0.5	2.5	11.7		3.9	3.1	16.6	373.1	
Conger Eel																						0							0
Cunner	0	0.3	2	0	0.2	0.4	0	0.3	0.1	0	0.1	1.9	0	0	0	0	0.2	0.2	0.1	0.2	0	0.7	0.1	0	0.2	0.2	0.3	7.5	
Flame Box Crab																								0					0
Flying Gurnard																		0.6										0	0.6
Fourbeard Rockling									0.1	0																		0.1	
Fourspot Flounder	0.1	0.2	0	0.1	0.2	0.1		0.4	0.7		0	0			0.4	0.5	0.4	0	0.1	0		0.1	0.2			0	0.2	3.7	
Gag																						0.1							0.1
Glasseye Snapper																						0.7							0.7
Goby Uncl																		0											0
Gray Triggerfish											1.7										9								10.7
Grubby			0.1		0							0									0								0.1
Guaguanche								0.1															0.1				0		0.2
Gulf Stream Flounder						0	0	1.1	1.5												0			0					2.6
Hogchoker																	0.1												0.1
Horseshoe Crab	47.1	16.2	27.2	3.1	25.1	3	9.1	27.1	62.4	68.4	8.3	11.5	21	12.9	9.3	16	36.7	38.8	62	14	5.7	12.5	46.3	7	14.6		79.8	685.1	
Inshore Lizardfish									0.2								0					0.1		0.2					0.5
Jonah Crab			0									0.2								0.2									0.4
Knobbed Whelk	86.8	68.6	154	2.9	65.5	91.4	20.4	66.3	68.7	40.3	43.4	13.6	3.7	37.5	13.3	1.6	60.3	55.4	48.5	1.6	0.3	38.1	72.4	1.5	30.3	5.8	13.4	1105.6	
Lady Crab	12.3	2.1	3.7	2.2	12.5	9.7	12.2	67.7	99.4	76.8	53	68.5	51.8	171.7	109.2	23.5	177.4	56.6	67.5	26.8	5.6	13.1	1.6	2.3	0	1.4		1128.6	
Little Skate	235.9	201.5	170.1	31.9	317.1	84.2	55.2	207.7	121.3	90.7	27.2	12.2	6	274.4	160.6	71.1	275.5	60.6	227.4	97.5	54	39	201.8	22.9	65.9	453.5	221.3	3786.5	
Lizardfish Uncl		0								0											0								0
Longfin Squid	158.5	43.9	107	103.3	68.2	97.3	34.9	89.7	62.5	88	63.5	70.3	73.7	33.4	95.8	112.2	103.5	74.2	98.8	48.3	56.5	47.6	17.1	35.9	44.8	78.8	41.5	1949.2	
Longfin Squid Egg Mops																						1.3	0.2		0.4	0.2	0.1		2.2
Longhorn Sculpin														0											0				0
Lookdown																									0				0
Mackerel Scad	2.1	0.3		0	0.1	0	0.1	0.2	0	0	0.3	0.7	0	0	0	0	0.1		0.1	0.2	0		0.3	0	0	0.2		4.7	
Mantis Shrimp Uncl									0					0						0	0								0
Moon Snail, Shark Eye, And Baby-Ear	2		1.3				0.6	1.2	2.8	0.6	0	0.3	0.1	1.8	0		0.2	0	1.4	0.6	0.4						0.1	13.4	
Northern Horsemussel					0					0.7												1.5				0.1			2.3
Northern Kingfish	1.6	1.2	1.4	0.5			1.2	1.1	0.5	0.3	0.2	1.3		0.4	1.1	0.5	1.9	0.8	0.3	2.4	0.9	1.8	0.6		0.6	0.1	0.3	21	
Northern Moonsnail																												0.6	0.6
Northern Pipefish	0.1	0.4	0.3	0		0		0	0.1	0	0.1	0	0	0	0	0	0.2	0	0	0	0	0	0	0.1	0	0	0.1	1.4	

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Grand Total
Northern Puffer	0	0.1	0.1	0	0.6	0.2	0	1.1	0	0				0	0	0	0.1	0		0	0	0	0	0.4	0	0.3	0	2.9
Northern Quahog																											0.1	0.1
Northern Sand Lance	0	0.3		1.3	0.1		0	0			0.6	0	0			0.1												2.4
Northern Searobin	373.4	322.6	56.8	10.9	75.4	29.9	48.3	74.8	33.7	23.7	8.8	2.6	0.1	2.8	4.5	0.2	4.5	10.3	4.5	0.7	0	0.3	8.6	0.9	6.2	1.6	2.5	1108.6
Northern Sennet														0							0	0						0
Ocean Quahog																	0.6											0.6
Orange Filefish											0.1	0	0	0.1			0.1											0.3
Oyster Toadfish										0.2																		0.2
Planehead Filefish	0.1	0.5	0.2		0.1		0	0.2			0	0				0	0.1	0	0			0		0.3	0	0	0	1.5
Rainbow Smelt			0																									0
Razor And Jackknife Clam Uncl									0.1																			0.1
Red Cornetfish																										0	0.1	0.1
Red Goatfish			0.3								0		0							0	0							0.3
Red Hake			0				0	0	0.1		0									0.3	0				0		0	0.4
Rock Gunnel					0	0						0.4			0		0	0	0		0		0				0.1	0.5
Rock Hind																			0									0
Rough Scad								0.1	1.3		0.1	0					0								0.1	0.2	0	1.8
Roughtail Stingray				70										193	100.3									110.9	115.3	124.7		714.2
Round Scad																											0	0
Sand Dollar Uncl	0.5																											0.5
Sand Tiger				13.1															12.3									25.4
Scamp																						0			0			0
Scrawled Filefish																		0										0
Scup	861.4	353.7	499.4	452.3	342.4	593.1	427.4	630	354.2	335.9	559.7	236.2	244.9	337.5	576.6	348	621.9	170.3	486.7	355.7	258.2	893.6	342	629.3	336.9	788.5	457.1	12492.9
Sea Raven	0.3																											0.3
Short Bigeye							0.3							0			0.3					0.1					0	0.7
Shrimp Uncl			0.1																									0.1
Silver Hake					0.5		0	0	0.1					0	0		0.5			0							0	1.1
Smallmouth Flounder										0.5	0	0.1		0.4	0.8		0.6	1.5	0.2	0.4	0	0.5	0.6	0.2	1.5	0.5	1.8	9.6
Smooth Dogfish	202.7	192.4	301.6	71.3	100.6	261.9	356.1	358.9	392.7	148.3	51.3	45.8	224.9	205.8	109.2	55.6	81.9	107.7	189.9	179.3	136.8	70.8	71.8	101.8	424.2	253	168	4864.3
Snakefish	0.3							0			0			0								0						0.3
Snowy Grouper					0															0	0	0						0
Spider Crab Uncl	8.4	10	16.8	6.3	41.5	39.6	20.5	38.2	58.5	67.6	37.4	57.6	7.8	18.4	12.2	11.4	45.2	86.9	33.1	13.8	9.8	62.4	40	9.1	4.9	10.7	33.9	802
Spiny Dogfish									11.7		2.9					55.8					3.2		2	74.2	17.9	97.9		265.6
Spot								0.8		0.1																		0.9
Spotfin Butterflyfish																						0					0	0
Spotted Hake								0.2								0.4	1.4		0.1				0.1				0.4	2.6
Striped Anchovy	8.4	0.1			0.9		0.1	0.1		4		0	1.8	4.4			0.3			0	0.3	1.5	0	0		0.4	22.3	
Striped Bass																		6.9				3.5						10.4
Striped Searobin	4.6	2.3	1.8	0	0.1	0.1	0.3	1	1	0.2	0.2	0.1		1	4.2		1.3	0.4	2.5	3.3	2	2.8	2.8	1.4	5.9	16.6	5.8	61.7
Summer Flounder	34.9	4.4	24	7	28.6	20.8	15	46.1	52.7	45.7	35.5	15.7	6.7	34.1	28.9	30	89.7	27	59	68.3	29.9	37.1	145.2	58.3	58.6	126.2	76.7	1206.1
Tautog	34.5	18.9	33.3	13.3	15	3	3.2	13.9	0	0	0.9	0.5	0.2	3	0.3	1.1	0.1	0.1	0	0.3		7.8	14.3	0.3	8.4	5.6	1.6	179.6
Trunkfish														0														0
Weakfish		2.6																										2.6
White Hake		0.3						0.3	0.5			0.2			0.1	0.2		0.3					0				1.9	
Windowpane	17.9	13.2	9.1	9.3	17.2	2.6	5.4	11.3	19.2	1	0.7	2.5	1	1.4	2.1	2.9	14.6	1.1	6.6	0.7	0.5	0.8	2	0.2	2.4	1.4	3.9	151
Winter Flounder	26.8	2.5	6.5	3.2	6.6	0.6	1.6	3.4	4.7	4.6	1.5	3.2	0.5	2.8	1.9	1.5	19.9	1.8	8.7	2	0.2	1.2	4.6	0.5	0.2		0.9	111.9
Winter Skate	72.5	57.5	71.3	50.7	321.3	50.7	29	74.5	112.8	121.8	29.3	41.1	25.3	200.6	140.6	166.2	843.5	240.7	407.2	99.1	155.4	53	6	34.9	135.3	175.2	77.4	3792.9
Yellow Jack														0														0
Grand Total	2342.6	1383	1722.7	932.1	1529.1	1369.8	1163.7	1827.3	1616.4	1201.1	1164.3	633.1	729.3	1635.3	1593.8	1002.1	2576.5	979.3	1757.9	984	1113.5	1493.6	1176.2	1176.8	1504.7	2315.9	1295.9	38220

**Table 3. Total annual catch number for each species reported in the spring trawls from 1979-2004**

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Grand Total	
Alewife						8	16	2	14	30	1	1	29	81	38	22	11	29	23	299	159	5	9		7	2	786	
Alligatorfish	2																										2	
American Eel								1																			1	
American Lobster	1		40	4	10	7	20	6	11	13	19	34	34	24	24	12	16	3	44	16	16	5	2	5	1	12	379	
American Shad										1	1		12	4			4	4		4	1	1			3		35	
Atlantic Cod	30	21	528	150	29	8	56	112	4	41	9	8	2	25	322	158	66	129	39	1041	14	18	69	1	1631	257	4768	
Atlantic Herring		15						593	175	2		1	30	44	1105	3	89	1	2	3	10839	27	648		59	27	13663	
Atlantic Mackerel		2	1			7	1	1			1		37	3					1	14							68	
Atlantic Menhaden						1		1		1			1				1										5	
Atlantic Rock Crab	125	70	257	21	142	46	525	398	495	254	35	77	26	1771	369	383	318	795	219	132	140	159	169	45	58	31	7060	
Atlantic Seasnail															1												1	
Atlantic Silverside																				1					4		5	
Atlantic Surfclam		1	4			1	3	5									1							1		1	17	
Atlantic Tomcod												1															1	
Bay Anchovy			4										1														5	
Bay Scallop	89	16	6	6	5	8	16	8		1			5	24				2		2	1	2	6	8			205	
Black Sea Bass	34	21	74	95	184	37	42	28	10	10	33	14	14	2	4	9	10	3	2		7	156	39	46	4	13	891	
Blue Crab											1									1		2					4	
Blue Mussel			200			7						1				2				11			78				299	
Blueback Herring			1			18			5					18				25			1	1			1		70	
Bluefish								3	1	2											1						7	
Butterfish	5	2		2	86	7	216	41	41	20	24	522	1300	4	1	9	424		104	160	27	1901	842	140	699	2	6579	
Channeled Whelk	126	53	127	33	12	50	113	91	94	138	21	13	12	48	18	26	61	106	13	22	24	23	15	3	3	5	1250	
Cunner	8		28	11	7	2	3	2	3	1	31			6	8	6	6	26	34	21	4	2	1	4	1	4	219	
Fourbeard Rockling	1																										1	
Fourspot Flounder	2	2	10	3	7	2	6	8	1	10	26	27	2		1	25	15	2	10	1		1		1			162	
Goosefish											1																1	
Green Crab																								1			1	
Grubby	3			5			1			1								3	2	3							18	
Gulf Stream Flounder								11																	1			18
Haddock																												5
Hermit Crab Uncl	3																										3	
Horseshoe Crab	8	8	8	2	2		4	12	6	3	6	4	2	14	11	8	16	22	17	10	15	6	7	4	5	4	204	
Jonah Crab			10																		2							12
Knobbed Whelk	142	42	11	3	50	34	325	116	19	58	3	3	17	55	5	1	54	100	4	7	28	30	14	1		1	1123	
Lady Crab	1	1	37	8	9	4	73	17	60	303	136	523	138	253	217	28	164	349	151	26	152	61	39	4	4	93	2851	
Little Skate	573	434	899	209	321	260	280	151	145	217	101	278	41	688	332	480	535	404	125	79	62	72	41	32	12	23	6794	
Longfin Squid	1028	1601	294	427	2894	2242	3813	2263	2593	7518	1725	4577	955	472	954	454	2273	1177	606	1117	1589	6969	713	3524	93	2537	54408	
Longfin Squid Egg Mops																												0
Longhorn Sculpin	65	4	18	53	23	18	12	11	22	1	20	4	1	62	171	165	95	43	22	8		2				1	821	
Lumpfish	2														1					1							4	
Mantis Shrimp Uncl															2						2	2				1	7	
Moon Snail, Shark Eye, And Baby-Ear	42	27	71	1	7	10	167	141	87	12	4	2	6	68	8	18	132	144	9	9	6	1				6	978	
Northern Kingfish																	1											1
Northern Moonsnail																							7	2	4			13
Northern Pipefish	1	21	15		1					1				1	1	2	8	3	3	50		5		5	1		118	
Northern Quahog		1																										1
Northern Sand Lance	426	163	625	6	2	1	156	6			2		550	5	54	1	45		3	58	597		352	7	56	1547	4662	
Northern Searobin	5373	4333	13660	30577	25224	1011	14722	2022	3709	161	3765	230	594	8006	1587	1146	2124	943	250	26	31	78	72	123	5	78	119850	
Northern Shortfin Squid				1																								1

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Grand Total
Ocean Quahog							2																				2
Oyster Toadfish						1																					1
Pollock	39	2	2	169	1			1	14					1	22	1	4	54	33	202	7	10	58	3	1277	2	1902
Rainbow Smelt														1													1
Red Hake	1	1	13	5	6		6	11	19	6	2	6	1	6	1	16	3	9	5	2	5	2		1			127
Rock Gunnel		1	1	4	2	4	3	1			2		1	5	2	3	6	16	21	9		1		1		2	85
Scup	2207	154	3467	169	464	303	379	1637	218	532	9201	1158	1302	646	218	396	980	112	46	18	203	1316	8	1993	4	485	27616
Sea Lamprey																									1		1
Sea Raven	1	12	11	1	6	5	2	2	9	2		6	2			1	1		7	1	3	2	1	1		1	77
Sea Scallop			1		4	1							2									1	5			1	15
Silver Hake			6	2	1	31	4	11	26	3	6	39	2	9	3	11	24			3	8		2				191
Smallmouth Flounder												1		4	1	4	18	7	6		6	7					54
Smooth Dogfish	22	93	9	4	11	8	8	23	1	4	2	31	18	5		14	2				12	113	2	12		3	397
Spider Crab Uncl	266	163	488	282	4488	196	1692	933	1531	1707	230	364	954	5438	553	395	1050	6518	676	555	14872	783	1340	670	994	1763	48901
Spiny Dogfish	20	34	14	2	3	68		38	1	4	2	8	4						1			1					200
Spotted Hake					2		1	3	1								8			11	1	5			1		33
Striped Bass													3		1	10	256		2		2	25	8	1	1	4	313
Striped Searobin			2		11			1			4	4	1			9	17	6	4		2	11	4	3		1	80
Summer Flounder	15	21	30	16	66	3	32	44	61	48	10	15	1	30	29	62	40	17	48	17	62	54	49	54	11	11	846
Tautog	137	81	63	147	78	59	67	33	14	31	60	3	8	6	12	16	7	41	40	2	23	4	34	14	6	3	989
White Hake	1	5	8	13		1	4	4		1				7	6	20	5	14	2	5	2	2		1	10	2	113
Windowpane	1307	1416	1742	986	1219	462	556	434	402	191	1147	745	151	1262	818	971	1766	1655	871	172	120	190	63	24	41	57	18768
Winter Flounder	822	749	900	581	754	392	386	363	912	616	343	657	211	704	712	892	829	515	636	238	261	322	161	73	230	192	13451
Winter Skate	101	206	693	146	381	252	406	495	408	323	206	235	3	416	172	459	290	193	21	41	7	9	6	8	3	1	5481
Yellowtail Flounder	3		2		1	1			2	1			1		1			2									14
Grand Total	15011	11756	26361	36126	38496	7560	26103	12070	13101	14257	19168	11582	8465	22209	9779	8232	13770	15468	6100	6406	31315	14385	6865	8818	7234	9177	348035



Table 4. Total annual catch weight for each species reported in the spring trawls from 1979-2004

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Grand Total
Alewife						0.4	2.4	0.3	1.4	2.7	0.1	0.3	2.4	5	1.7	2	1.1	0.6	2.4	10.6	8.9	0.4	1.1		0.2	0.1	44.1
Alligatorfish	0																										0
American Eel								0.3																			0.3
American Lobster	0.5		8.3	1.6	3.7	1.2	3.7	1.3	1.1	2.6	4.5	6	7.8	5.2	3.6	2.8	4.3	0.8	9.4	3.9	6	3.2	0.5	1.3	0.5	1.4	85.2
American Shad										0.1	0.1		1	0.5			0.2	0.2		0.2	0	0			0		2.3
Atlantic Cod	0	0	2.7	0.2	0	0	0	0.7	0	0.1	0	0	0	0	0.4	0.2	0.1	0.1	0	1.2	0	0	0	0	1.3	0.3	7.3
Atlantic Herring		0						1	0.7	0.4		0.3	0	4.7	1.4	0.4	0.8	0	0.3	0.1	8.1	0	0.7		0.5	0	19.4
Atlantic Mackerel		1.1	0.8			6.1	0.7	0.8			0.9		19.2	1.5					0.4	1.1							32.6
Atlantic Menhaden						0.3		0.7		0.6			0.3				0.5										2.4
Atlantic Rock Crab	11.7	4.8	15.8	1.3	20.3	8.3	54.9	43.4	52	31.6	4.8	10.3	2	134.6	42.8	52.4	42	82.4	17.7	10.4	13.8	13.2	12.5	3.8	8.1	2.7	697.6
Atlantic Seasnail															0											0	0
Atlantic Silverside																				0						0	0
Atlantic Surfclam		0	0.4			0.1	0.6	0.7									0							0		0.2	2
Atlantic Tomcod												0.2															0.2
Bay Anchovy			0										0														0
Bay Scallop	2.9	0.7	0.1	0.6	0.3	0.5	1.2	0.7		0.1			0.1	0.1				0.1		0	0	0.1	0.4	0.2			8.1
Black Sea Bass	27.7	16.9	44.9	37.9	58.8	17.6	18.2	14.8	2.8	5	7.9	6.4	16.2	0.5	1.7	7.9	4.5	2.2	1.7		3.3	81.2	21.6	37	3.9	10.5	451.1
Blue Crab											0.2									0.1		0.4					0.7
Blue Mussel	3.5		5			0.7						0				0.2				2.6	0.1		5.3				17.4
Blueback Herring			0			0.9			0.4					1.4				0.5			0	0			0		3.2
Bluefish								6.9	1.8	4.6											1.9						15.2
Butterfish	0.4	0		0.4	10.1	0.7	13.2	4.3	3.2	2.1	2.2	30.2	52.7	0.4	0.1	0.2	15.9		4.3	14.2	1.8	70.4	62.9	5.9	44.7	0	340.3
Channeled Whelk	30.4	18.2	32.6	12.3	3.5	12.7	31.3	18.1	22.6	17.5	4.4	4	3.1	9.9	5	3.7	12.4	19.9	2.2	6	7.4	7.3	3.8	1.2	0.5	1	291
Cunner	0.2		0.3	0.2	0.1	0	0	0	0	0	0			0	0	0	0	0.1	0.3	0	0	0	0	0	0	0	1.2
Fourbeard Rockling	0.1																										0.1
Fourspot Flounder	0.7	0.3	2.8	1	2.7	0.6	1.2	2.1	0.3	2.7	4.2	5.3	0.3		0.2	7	3.4	0.6	1.9	0.2		0.2		0.2			37.9
Goosefish										23.1																	23.1
Green Crab																								0			0
Grubby	0			0			0			0								0	0	0							0
Gulf Stream Flounder								0.1												0					0		0.1
Haddock																					0						0
Hermit Crab Uncl	0.2																										0.2
Horseshoe Crab	11.4	8.2	11.4	3.7	1.1		8	18	10.3	1.8	6.7	6.1	3.5	17.3	17.3	14.3	27.1	23	20	13.1	20.2	8.2	7.2	7.1	5.2	5.5	275.7
Jonah Crab			1.4																		0.4						1.8
Knobbed Whelk	47.4	15.4	5	0.7	22.7	11.8	109.9	34.4	5.8	15.8	1.6	1.4	3.3	10.9	0.7	0.4	19.5	23.8	1.1	3	12.1	10	5	0.2	0.3	362.2	
Lady Crab	0.2	0	0.9	0.4	0.4	0.3	2.8	1.8	7.8	21.4	10.1	45.6	14.1	20.5	20.3	2.8	15	28.8	12.6	2.5	13.8	4.5	3	0.2	0.3	7.6	237.7
Little Skate	367.9	262.6	535.4	112.5	204.5	141.1	174.8	89	88	121.1	54.2	143.8	17.3	388.6	196.2	305.4	349.7	262	72.1	47.9	39.7	46.7	25.6	18.6	6.7	12	4083.4
Longfin Squid	98.8	226.5	41.9	31.1	321.2	176.1	256.3	291.7	254.8	484.5	167.3	339.8	97.2	54	157.8	44.4	162	138.6	39.5	22.3	90.5	210.1	58.9	100.2	4.7	100.5	3970.7
Longfin Squid Egg Mops																					20.4	10.9	5.2	53.6		0	90.1
Longhorn Sculpin	22.4	1.1	6.1	16.7	6	6	4.1	3.9	7.6	0.1	5.2	1.1	0.1	19.4	58.1	48.1	28.7	13.9	6	2.1		0.4			0.3	257.4	
Lumpfish	0														0.1					0.1							0.2
Mantis Shrimp Uncl															0						0	0.1				0.1	0.2
Moon Snail, Shark Eye, And Baby-Ear	4.9	1.9	5.4	0.1	0.8	0.8	15.8	9.5	8	0.7	0.3	0.2	0.3	8	0.8	1.8	5.2	9.1	1.4	1.1	0.4	0.1			0.4	77	
Northern Kingfish																		0.2									0.2
Northern Moonsnail																								0.7	0.1	0.7	1.5
Northern Pipefish	0	0	0.1		0					0					0	0	0	0	0	0		0		0	0		0.1
Northern Quahog		0.6																									0.6
Northern Sand Lance	1.7	0.6	5.1	0	0.1	0	1.1	0			0		2.5	0	0.4	0	0.2		0	0.2	1.4		0.4	0	0.3	5.7	19.7
Northern Searobin	1003.9	990.3	2724	5656.9	4243.2	257.1	3131.6	269.8	653.8	24.9	619.6	34.7	135.4	1226.6	248.4	186.4	309.4	150.6	33.2	4	4.8	11.9	12.6	27	0.7	18	21978.8
Northern Shortfin Squid				0																							0
Ocean Quahog							0.9																				0.9
Oyster Toadfish						0.6																					0.6
Pollock	0.3	0	0.5	0.5	0			0	0					0	0	0	0	0.1	0.1	0.1	0	0	0.2	0	1.4	0	3.2
Rainbow Smelt															0												0
Red Hake	1	0	0.4	1.2	2.6		1	2.2	2.6	0.6	0	1.1	0.2	0.2	0	0.3	0.1	0.3	0.1	0	0.1	0.3		0.1			14.4

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Grand Total
Rock Gunnel		0	0.1	0.1	0	0	0.1	0			0		0	0	0	0	0	0	0.2	0.1		0	0		0	0	0.6
Scup	564.9	53.9	344.1	23.5	79.9	151.1	45.7	270.7	51.3	75.8	1123.9	137.3	282.5	104.1	59.3	127.5	78.4	14.7	11.6	2.6	35	61.6	2.3	154.1	1.1	185.3	4042.2
Sea Lamprey																								0			0
Sea Raven	1.2	5.2	3.1	1.8	3.1	4.7	2.2	0.5	3.8	0.2		2.4	0.2			0.1	0.4		3.8	0.1	2.6	0.2	0.2	1.1		0.1	37
Sea Scallop			0.2		0.3	0.1							0.1									0	0.2			0	0.9
Silver Hake			1	0	0	6.7	1.4	0.2	1.9	0.8	1	7.4	0	0	0.1	0	0.9			0	0.3		0.2				21.9
Smallmouth Flounder												0		0	0	0	0	0.1	0.1		0	0					0.2
Smooth Dogfish	104.2	251.9	28.6	18.4	31	24.6	25.6	74.3	2.8	14	11.7	60.7	54.5	20.1		89.4	6.6				36.6	604.2	7.1	48.5		8	1522.8
Spider Crab Uncl	29.6	12.9	44.1	28.6	351.2	33.9	197.5	109.5	132.9	149.6	25.1	42	75.2	643.8	85.2	81.8	176.7	981.1	124.2	91.2	1083.7	116.9	225.2	121.5	165.2	252.6	5381.2
Spiny Dogfish	86.6	143.7	74.5	10.3	14.2	162.9		173.5	4	18.1	0.9	43.2	28.1						0.9			3.3					764.2
Spotted Hake					0		0	0.1	0								0.2		0.4	0	0			0			0.7
Striped Bass													11.6		2.9	17.8	118		3.3		6	40.4	17.6	3	4	4.6	229.2
Striped Searobin			1		5.3			0.6			3.6	1.4	0.2			2.8	8.5	1.1	1.2		1.1	6.5	1.8	1.2		0.5	36.8
Summer Flounder	29.7	39.5	33.6	17.5	66	3.9	23.9	21.3	20.4	26.3	8.9	7	0.4	20.2	28.7	40.5	36.8	14.9	29.9	13.3	54.8	55.7	52.1	51.8	6.7	9.5	713.3
Tautog	254.9	166.2	135.1	225.8	107.2	115	100.3	81.7	23.8	65.7	98.9	4.4	9.5	7.6	19.4	18.2	11.5	54.9	36.5	2.4	26.8	3.7	52.2	17.5	2.4	7	1648.6
White Hake	0	0	0.4	0.3		0	0	0.5		0				0	0	0	0	0	0	0	0	0		0	0	0	1.2
Windowpane	405	441.4	584.7	331.9	430.5	162.8	191	136.6	120.6	55.8	301	203.8	35.3	349.2	227.9	242.9	415	395.3	218.6	40.8	30.4	48	17.3	5.5	11.3	15.4	5418
Winter Flounder	305.1	297.3	324.1	223.5	330.9	144	130.3	106	185.3	135.1	129.4	122.3	38.2	183	175.7	169.9	170.3	206.4	191.1	58.1	39.1	57.6	35.2	28	51.1	58.5	3895.5
Winter Skate	335.5	417.9	950.7	342.7	359.3	255.2	514	561	742.2	633	219.4	177.9	5.2	389.1	166.4	405.3	294.1	245.9	17.8	64.3	16.8	13.1	11.4	9.8	9.5	0.4	7157.9
Yellowtail Flounder	1.3		0.1		0	0			0	0			0		0.1			0									1.5
Grand Total	3756.2	3379.1	5976.7	7103.7	6681	1708.8	5065.7	2353	2414	1938.5	2818.1	1446.6	920	3626.4	1522.7	1876.9	2319.7	2672.1	866	420.2	1588.7	1490.4	650.4	698.7	331	708.5	64333.1