

ATLANTIC WHITE-SIDED DOLPHIN (*Lagenorhynchus acutus*): Western North Atlantic Stock

STOCK DEFINITION AND GEOGRAPHIC RANGE

White-sided dolphins are found in temperate and sub-polar waters of the North Atlantic, primarily in continental shelf waters to the 100m depth contour. The species inhabits waters from central West Greenland to North Carolina (about 35°N) and perhaps as far east as 43°W (Evans 1987). Distribution of sightings, strandings and incidental takes suggest the possible existence of three stocks units: Gulf of Maine, Gulf of St. Lawrence and Labrador Sea stocks (Palka *et al.* 1997). Evidence for a separation between the population in the southern Gulf of Maine and the Gulf of St. Lawrence comes from a virtual absence of summer sightings along the Atlantic side of Nova Scotia. This was reported in Gaskin (1992), is evident in Smithsonian stranding records, and was obvious during abundance surveys conducted in the summers of 1995 and 1999 which covered waters from Virginia to the Gulf of St. Lawrence. White-sided dolphins were seen frequently in Gulf of Maine waters and in waters at the mouth of the Gulf of St. Lawrence, but only a few sightings were recorded between these two regions.

The Gulf of Maine population of white-sided dolphins is most common in continental shelf waters from Hudson Canyon (approximately 39°N) on to Georges Bank, and in the Gulf of Maine and lower Bay of Fundy. Sightings data indicate seasonal shifts in distribution (Northridge *et al.* 1997). During January to May, low numbers of white-sided dolphins are found from Georges Bank to Jeffreys Ledge (off New Hampshire), with even lower numbers south of Georges Bank, as documented by a few strandings collected on beaches of Virginia and North Carolina. From June through September, large numbers of white-sided dolphins are found from Georges Bank to the lower Bay of Fundy. From October to December, white-sided dolphins occur at intermediate densities from southern Georges Bank to southern Gulf of Maine (Payne and Heinemann 1990). Sightings south of Georges Bank, particularly around Hudson Canyon, occur year round but at low densities. The Virginia and North Carolina observations appear to represent the southern extent of the species' range.

Prior to the 1970s, white-sided dolphins in U.S. waters were found primarily offshore on the continental slope, while white-beaked dolphins (*L. albirostris*) were found on the continental shelf. During the 1970s, there was an apparent switch in habitat use between these two species. This shift may have been a result of the decrease in herring and increase in sand lance in the continental shelf waters (Katona *et al.* 1993; Kenney *et al.* 1996).

POPULATION SIZE

The total number of white-sided dolphins along the eastern U.S. and Canadian Atlantic coast is unknown. However, seven estimates are available for portions of the habitat: a 1978-1982 estimate; a shipboard survey estimate from the summers of 1991 and 1992; a shipboard estimate from June-July 1993; an estimate made from a combination of shipboard and aerial surveys conducted during July to September 1995; an aerial survey estimate of the entire Gulf of St. Lawrence conducted in August to September 1995; an aerial survey estimate from the northern Gulf of St. Lawrence conducted during July and August 1996; and an aerial/shipboard survey conducted from Georges Bank to the mouth of the Gulf of St. Lawrence during July and August 1999.

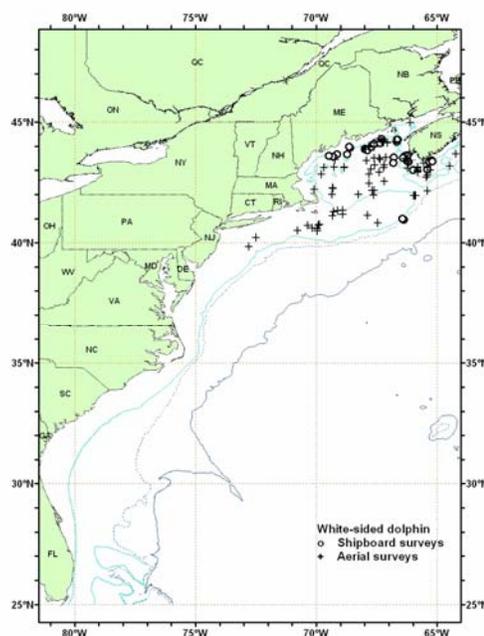


Figure 1. Distribution of white-sided dolphin sightings from NEFSC and SEFSC vessel and aerial summer surveys during 1998 and 2004. Isobaths are at 100 m, 1,000 m, and 4,000 m

An abundance estimate of 28,600 white-sided dolphins (CV=0.21) was obtained from an aerial survey program conducted from 1978 to 1982 on the continental shelf and shelf edge waters between Cape Hatteras, North Carolina and Nova Scotia (CETAP 1982).

An abundance estimated of 20,400 (CV=0.63) white-sided dolphins was derived from two shipboard line transect surveys conducted during July to September 1991 and 1992 in the northern Gulf of Maine-lower Bay of Fundy region (Palka *et al.* 1997). This population size is a weighted-average of the 1991 and 1992 estimates, where each annual estimate was weighted by the inverse of its variance.

An abundance estimate of 729 (CV=0.47) white-sided dolphins was obtained from a June and July 1993 shipboard line transect sighting survey conducted principally between the 200 and 2,000m isobaths from the southern edge of Georges Bank, across the Northeast Channel, to the southeastern edge of the Scotian Shelf (NMFS 1993).

An abundance estimate of 27,200 (CV=0.43) white-sided dolphins was calculated from a July to September 1995 sighting survey conducted by two ships and an airplane that covered waters from Virginia to the mouth of the Gulf of St. Lawrence (NMFS unpublished data). Total track line length was 32,600 km. The ships covered waters between the 50 and 1000 fathom contours, the northern edge of the Gulf Stream, and the northern Gulf of Maine/Bay of Fundy region. The airplane surveyed waters in the mid-Atlantic from the coastline to the 50 fathom line, the southern Gulf of Maine, and shelf waters off Nova Scotia from the coastline to the 1000 fathom line. Data collection and analysis methods used were described in Palka (1996).

Kingsley and Reeves (1998) estimated that there were 11,740 (CV=0.47) white-sided dolphins in the Gulf of St. Lawrence during 1995 and 560 (CV=0.89) white-sided dolphins in the northern Gulf of St. Lawrence during 1996. It is assumed these estimates apply to the Gulf of St. Lawrence stock. During the August-September 1995 survey, 8,427km of track lines were flown in an area encompassing 221,949 km². During the July-August 1996 survey, 3,993km of track lines were flown in an area encompassing 94,665 km². These estimates were uncorrected for visibility biases such as $g(0)$, the probability of detecting a group on the track line.

An abundance estimate of 51,640 (CV=0.38) white-sided dolphins was obtained from a 28 July to 31 August 1999 line-transect sighting survey conducted from a ship and an airplane covering waters from Georges Bank to the mouth of the Gulf of St. Lawrence (Table 1; Palka 2006). Total track line length was 8,212 km. Shipboard data were analyzed using the modified direct duplicate method (Palka 1995) which accounts for school size bias and for $g(0)$, the probability of detecting a group on the track line. Aerial data were not corrected for $g(0)$ (Palka 2000). The 1999 survey covered the upper Bay of Fundy and the northern edge of Georges Bank for the first time and white-sided dolphins were seen in both areas.

The best available current abundance estimate for white-sided dolphins in the Western North Atlantic stock is 51,640 animals (CV=0.38) as estimated from the July to August 1999 line transect survey because this survey is the most recent and provided the most complete coverage of the habitat of the species.

Table 1. Summary of recent abundance estimates for western North Atlantic white-sided dolphins. Month, year, and area covered during each abundance survey, and resulting abundance estimate (N_{best}) and coefficient of variation (CV).			
Month/Year	Area	N_{best}	CV
Jul-Aug 1999	Georges Bank to mouth of Gulf of St. Lawrence	51,640	0.38

Minimum Population Estimate

The minimum population estimate is the lower limit of the two-tailed 60% confidence interval of the log-normally distributed best abundance estimate. This is equivalent to the 20th percentile of the log-normal distribution as specified by Wade and Angliss (1997). The best estimate of abundance for the Western North Atlantic stock of white-sided dolphins is 51,640 (CV=0.38). The minimum population estimate for these white-sided dolphins is 37,904.

Current Population Trend

There are insufficient data to determine population trends for this species.

CURRENT AND MAXIMUM NET PRODUCTIVITY RATES

Current and maximum net productivity rates are unknown for this stock. Life history parameters that could be used to estimate net productivity include: calving interval is 2-3 years; lactation period is 18 months; gestation period is 10-12 months and births occur from May to early August, mainly in June and July; length at birth is 110cm; length at sexual maturity is 230-240 cm for males, and 201-222 cm for females; age at sexual maturity is 8-9 years for males and 6-8 years for females; mean adult length is 250 cm for males and 224 cm for females (Evans 1987); and maximum reported age for males is 22 years and for females, 27 years (Sergeant *et al.* 1980).

For purposes of this assessment, the maximum net productivity rate was assumed to be 0.04. This value is based on theoretical modeling showing that cetacean populations may not grow at rates much greater than 4% given the constraints of their reproductive life history (Barlow *et al.* 1995).

POTENTIAL BIOLOGICAL REMOVAL

Potential Biological Removal (PBR) is the product of minimum population size, one-half the maximum productivity rate, and a “recovery” factor (MMPA Sec. 3. 16 U.S.C. 1362; Wade and Angliss 1997). The minimum population size is 37,904. The maximum productivity rate is 0.04, the default value for cetaceans. The “recovery” factor, which accounts for endangered, depleted, threatened, or stocks of unknown status relative to optimum sustainable population (OSP) is assumed to be 0.5 because this stock is of unknown status. PBR for the western North Atlantic stock of white-sided dolphin is 379.

ANNUAL HUMAN-CAUSED MORTALITY AND SERIOUS INJURY

Fishery Information

Detailed fishery information is reported in Appendix III. Recently, within U.S. waters, white-sided dolphins have been observed caught in the Northeast sink gillnet, Northeast bottom trawl, Northeast mid-water trawl, mid-Atlantic bottom trawl, mid-Atlantic mid-water trawl, and the Gulf of Maine/Georges Bank herring trawl TALFF fisheries (Table 2).

Earlier Interactions

In the past, incidental takes of white-sided dolphins have been recorded in the Atlantic foreign mackerel and pelagic drift gillnet, and mid-Atlantic gillnet fisheries. Fisheries information is reported in Appendix III.

NMFS observers in the Atlantic foreign mackerel fishery reported 44 takes of Atlantic white-sided dolphins incidental to fishing activities in the continental shelf and continental slope waters between March 1977 and December 1991 (Waring *et al.* 1990; NMFS unpublished data). Of these animals, 96% were taken in the Atlantic mackerel fishery. This total includes 9 documented takes by U.S. vessels involved in joint-venture fishing operations in which U.S. captains transfer their catches to foreign processing vessels.

During 1991 to 1998, two white-sided dolphins were observed taken in the Atlantic pelagic drift gillnet fishery, both in 1993. Estimated annual fishery-related mortality and serious injury (CV in parentheses) was 4.4 (.71) in 1989, 6.8 (.71) in 1990, 0.9 (.71) in 1991, 0.8 (.71) in 1992, 2.7 (0.17) in 1993 and 0 in 1994 to 1998. There was no fishery during 1997.

One white-sided dolphin was observed taken in the mid-Atlantic gillnet fishery during 1997. None were observed taken in other years. The estimated annual mortality (CV in parentheses) attributed to this fishery was 0 for 1993 to 1996, 45 (0.82) for 1997, 0 for 1998 to 2001, unknown in 2002 and 0 in 2003. During 2002, the overall observer coverage was lower than usual, 1% over the entire coast, where 65% of those trips were off of Virginia and most of the rest of the area was not sampled at all. Thus, the low coverage was mostly concentrated in one time and area. In conclusion, a bycatch estimate from the unsurveyed areas cannot be confidently estimated.

No incidental takes of white-sided dolphin were observed in the Atlantic mackerel JV fishery when it was observed in 1998.

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Northeast Sink Gillnet

This fishery occurs year round from in the Gulf of Maine, Georges Bank and in southern New England waters. Between 1990 and 2004 there were 49 white-sided dolphin mortalities observed in the Northeast sink gillnet fishery. Most were taken in waters south of Cape Ann during April to December. In recent years, the majority of the takes have been east and south of Cape Cod. During 2002, one of the takes was off Maine in the fall Mid-coast Closure Area in a pingered net. Estimated annual fishery-related mortalities (CV in parentheses) were 49 (0.46) in 1991, 154

(0.35) in 1992, 205 (0.31) in 1993, 240 (0.51) in 1994, 80 (1.16) in 1995, 114 (0.61) in 1996 (Bisack 1997a), 140 (0.61) in 1997, 34 (0.92) in 1998, 69 (0.70) in 1999, 26 (1.00) in 2000, 26 (1.00) in 2001, 30 (0.74) in 2002, 31 (0.93) in 2003, and 7 (0.98) in 2004. Average annual estimated fishery-related mortality during 2000-2004 was 24 white-sided dolphins per year (0.43) (Table 2).

Northeast Bottom Trawl

The fishery is active in New England waters in all seasons. One moderately decomposed dolphin was brought up during a monkfish trawl in April 2001 east of Cape Cod. This moderately decomposed animal could not have been killed during this haul because the haul duration was only 4.6 hours. Thirty-two mortalities were documented between 1991 and 2004 in the Northeast bottom trawl fishery; 1 during 1992, 2 during 1994, 1 in 2002, 12 in 2003, and 16 in 2004. The 1 white-sided dolphin taken in 1992 was in a haul composed of cod, silver hake and pollock. One of the 1994 takes was in a haul composed of white hake, pollock and monkfish. The other 1994 take was in a haul which captured seven species none of which were dominant. In 2002, there was one take reported in a Northeast bottom trawl haul.

Northeast Atlantic (Gulf of Maine/Georges Bank) JV and TALFF Herring Fishery

A U.S. joint venture (JV) mid-water (pelagic) trawl fishery was conducted during 2001 on Georges Bank during August to December. No white-sided dolphins were incidentally captured. Two white-sided dolphins were incidentally captured in a single mid-water trawl during foreign fishing operations (TALFF) (Table 2). During TALFF fishing operations all nets fished by the foreign vessel are observed. Hence, the total mortality attributed to the Atlantic herring JV and TALFF mid-water trawl fisheries in 2001 was 2 animals (Table 2).

Northeast Mid-water Trawl Fishery (Including Pair Trawl)

The two most commonly targeted fish in this fishery are herring (94% of VTR records) and mackerel (0.4%). The observer coverage in this fishery was highest during 2003 and 2004, although a few trips in earlier years were observed (Table 2). A white-sided dolphin was observed taken in the single trawl fishery on the northern edge of Georges Bank during July 2003 in a haul targeting herring. A bycatch rate model fit to all observed mid-water trawl data (including paired and single, and Northeast and mid-Atlantic mid-water trawls, that targeted either herring or mackerel and were observed between 1999 and 2004 (NMFS unpublished data)) provided the following annual fishery-related mortality (CV in parentheses) estimates: 4.3 (0.74) in 1999, 4.5 (0.74) in 2000, 8.9 (0.74) in 2001, 14 (0.44) in 2002, 2.0 (0.74) in 2003, and 0.5 (0.5) in 2004 (Table 2; NMFS unpublished data). The average annual estimated fishery-related mortality during 2002-2004 was 6.0 (0.33).

Mid-Atlantic Mid-water Trawl Fishery (Including Pair Trawl)

The two most commonly targeted fish in this fishery are herring (54% of VTR records) and mackerel (26%). The observer coverage in this fishery was highest during 2000, 2003 and 2004, although a few trips in other years were observed (Table 2). A white-sided dolphin was observed taken in the pair trawl fishery near Hudson Canyon (off New Jersey) during February 2004 in a haul targeting mackerel (but landing nothing). A bycatch rate model fit to all observed mid-water trawl data (including paired and single, and Northeast and mid-Atlantic mid-water trawls, which targeted either herring or mackerel and were observed between 1999 and 2004 (NMFS unpublished data)) provided the following annual fishery-related mortality (CV in parentheses) estimates: 0 (0.55) in 1999, 0 (0.55) in 2000, 0 (0.55) in 2001, 9.4 (0.55) in 2002, 73 (0.55) in 2003, and 31 (0.55) in 2004 (Table 2; Palka in prep.). The average annual estimated fishery-related mortality during 2000-2004 was 23 (0.39).

Mid-Atlantic Bottom Trawl Fishery

One white-sided dolphin incidental take was observed in 1997. Recently observer coverage for this fishery has been about 1%, except for 2004 when it was 3% (Table 2).

Table 2. Summary of the incidental mortality of white-sided dolphins (*Lagenorhynchus acutus*) by commercial fishery including the years sampled (Years), the number of vessels active within the fishery (Vessels), the type of data used (Data Type), the annual observer coverage (Observer Coverage), the mortalities recorded by on-board observers (Observed Mortality), the estimated annual mortality (Estimated Mortality), the estimated CV of the annual mortality (Estimated CVs) and the mean annual mortality (CV in parentheses).

Fishery	Years	Vessels	Data Type ^a	Observer Coverage ^b	Observed Mortality	Estimated Mortality	Estimated CVs	Mean Annual Mortality
Northeast Sink Gillnet	00-04	1993=349 1998=301	Obs. Data Weighout Trip Logbook	.06, .04, .02, .03, .06	1 ^d , 1 ^d , 1 ^d , 1 ^d , 1 ^d	26 ^d , 26 ^d , 30 ^d , 31 ^d , 7 ^d	1.00, 1.00, .74, .93, .98	24 (0.43)
Northeast Bottom Trawl ^c	00-04	unk	Obs. Data Weighout	.01, .01, .03, .04, .05	0, 0, 1, 12, 16	unk	unk	unk
GOM/GB Herring Trawl-TALFF	2001	2 ^e	Obs. Data	1.00 ^e	2	2	0	2 (0)
Northeast Mid-water Trawl - Including Pair Trawl (Herring and Mackerel only) ^c	00-04	unk	Obs. Data Weighout Trip Logbook	.005, .001, 0, .03, .14	0,0,0,1,0	4.5, 8.9, 14, 2.0, 0.5	.74, .74, .44, .74, .50	6.0 (0.33)
Mid-Atlantic Mid-water Trawl - Including Pair Trawl (Herring and Mackerel only) ^c	00-04	unk	Obs. Data Weighout Trip Logbook	.08, 0, .008, .04, .12	0,0,0,0,1	0, 0, 9.4, 73, 31	.55, .55, .55, .55, .55	23 (0.39)
Mid-Atlantic Bottom Trawl ^c	00-04		Obs. Data Weighout Trip Logbook	.01, .01, .01, .01, .03	0, 0, 0, 0, 0	unk	unk	unk
Total								unk

a Observer data (Obs. Data), used to measure bycatch rates, are collected within the Northeast Fisheries Observer Program. NEFSC collects landings data (Weighout) that are used as a measure of total effort in the Northeast gillnet fishery. Mandatory Vessel Trip Report (VTR) (Trip Logbook) data are used to determine the spatial distribution of fishing effort in the sink gillnet fishery and in the two mid-water trawl fisheries. In addition, the Trip Logbooks are the primary source of the measure of total effort (soak duration) in the two mid-water trawl fisheries.

b Observer coverage for the Northeast sink gillnet is measured in metric tons of fish landed. Observer coverage of the trawl fisheries are measured in trips.

c A new method was used to develop preliminary estimates of mortality for the mid-Atlantic and Northeast bottom trawl fisheries during 2000-2004. They are a product of bycatch rates predicted by covariates in a model framework and effort reported by commercial fishermen on mandatory vessel logbooks. This method differs from the previous method used to estimate mortality in these fisheries prior to 2000. Therefore, the estimates reported prior to 2000 can not be compared to estimates during 2000-2004. In addition, the fisheries listed in Table 2 reflect new definitions defined by the proposed List of Fisheries for 2005 (FR Vol. 69, No. 231, 2004). The 'North Atlantic bottom trawl' fishery is now referred to as the 'Northeast bottom trawl. The Illex, Loligo and Mackerel fisheries are now part of the mid-Atlantic and Northeast bottom trawl fisheries.

d After 1998, a weighted bycatch rate was applied to effort from both pingered and non-pingered hauls within the stratum where white-sided dolphins were observed taken. During the years 1997, 1999, 2001, 2002, and 2004, respectively, there were 2, 1, 1, 1, and 1 observed white-sided dolphins taken on pingered trips. No takes were observed on pinger trips during 1995, 1996, 1998 and 2000.

e There were two foreign vessels that harvested Atlantic herring in the U.S. fishery under a TALFF quota. During TALFF fishing operations all nets fished by the foreign vessel are observed.

CANADA

There is little information available that quantifies fishery interactions involving white-sided dolphins in Canadian waters. Two white-sided dolphins were reported caught in groundfish gillnet sets in the Bay of Fundy during 1985 to 1989, and 9 were reported taken in West Greenland between 1964 and 1966 in the now non-operational salmon drift nets (Gaskin 1992). Several (number not specified) were also taken during the 1960s in the now non-operational Newfoundland and Labrador groundfish gillnets. A few (number not specified) were taken in an experimental drift gillnet fishery for salmon off West Greenland which took place from 1965 to 1982 (Read 1994).

Hooker *et al.* (1997) summarized bycatch data from a Canadian fisheries observer program that placed observers on all foreign fishing vessels operating in Canadian waters, on between 25-40% of large Canadian fishing vessels (greater than 100 feet long), and on approximately 5% of smaller Canadian fishing vessels. Bycaught marine mammals were noted as weight in kilos rather than by the numbers of animals caught. Thus the number of individuals was estimated by dividing the total weight per species per trip by the maximum recorded weight of each species. During 1991 through 1996, an estimated 6 white-sided dolphins were observed taken. One animal was from a longline trip south of the Grand Banks (43° 10'N 53° 08'W) in November 1996 and the other 5 were taken in the bottom trawl fishery off Nova Scotia in the Atlantic Ocean; 1 in July 1991, 1 in April 1992, 1 in May 1992, 1 in April 1993, 1 in June 1993 and 0 in 1994 to 1996.

Estimation of small cetacean bycatch is currently underway for Newfoundland fisheries using data collected during 2001 to 2003 (pers. comm. J. Lawson, DFO). White-sided dolphins were reported to have been caught in the Newfoundland nearshore gillnet fishery and offshore monkfish/skate gillnet fisheries.

Herring Weirs

During the last several years, one white-sided dolphin was released alive and unharmed from a herring weir in the Bay of Fundy (A. Westgate, pers. comm.). Due to the formation of a cooperative program between Canadian fishermen and biologists, it is expected that most dolphins and whales will be released alive. Fishery information is available in Appendix III.

OTHER MORTALITY

U.S.

Mass strandings involving up to a hundred or more animals at one time are common for this species. From 1968 to 1995, 349 Atlantic white-sided dolphins were known to have stranded on the New England coast (Hain and Waring 1994; Smithsonian stranding records 1996). The causes of these strandings are not known. Because such strandings have been known since antiquity, it could be presumed that recent strandings are a normal condition (Gaskin 1992). It is unknown whether human causes, such as fishery interactions and pollution, have increased the number of strandings. Stranding data probably underestimate the extent of fishery-related mortality and serious injury because all of the marine mammals that die or are seriously injured may not wash ashore, nor will all of those that do wash ashore necessarily show signs of entanglement or other fishery-interaction. Finally, the level of technical expertise among stranding network personnel varies widely as does the ability to recognize signs of fishery interaction.

White-sided dolphin stranding records from 1997 onwards that are part of the NMFS/NE Regional Office strandings and entanglement database have been reviewed and updated. The most recent five years to date are reported in Table 3. Cause of death was investigated and it was determined that the documented human interactions were as follows: 1 animal possibly killed by a boat collision off Maine during 2001; 2 animals with indications of fishery interactions found in March 2002 in Massachusetts; and 1 animal with indications of fishery interactions found in May 2002 in Virginia, 1 animal with indications of fishery interactions was found in Massachusetts during 2004, and one animal during 2004 was found with twine blocking its esophagus (thus, this is a human interaction, but not necessarily a fishery interaction) (Table 3).

Mass strandings in Massachusetts occur frequently (Table 3). There were 80 animals in a mass stranding near Wellfleet, Massachusetts, during the week of 29 January to 3 February 1998. Of these, 2 were released alive. Of the 4 found in Massachusetts during the November 1998 mass stranding, 1 was released alive. Fifty-three animals stranded in Wellfleet, Massachusetts during 19-24 March 1999. During 1999, of the 70 strandings, 38 were found alive, and 3 of these animals were released alive. During 2000, 5 were found alive (3 in April and 2 in August), and the 2 in August were released alive. During 2002, there were mass strandings in March and August, of which a few were released alive. During 2003 in Massachusetts 36 white-sided dolphins were involved in mass strandings in January, April and November, of which 25 were found alive. There were no mass strandings in 2004.

CANADA

Small numbers of white-sided dolphins have been taken off southwestern Greenland (Reeves *et al.* 1999). The Nova Scotia Stranding Network documented whales and dolphins stranded on the coast of Nova Scotia during 1991 to 1996 (Hooker *et al.* 1997). Researchers with Canadian Dept. of Fisheries and Oceans (DFO), documented strandings on the beaches of Sable Island during 1970 to 1998 (Lucas and Hooker 2000). Sable Island is approximately 170 km southeast of mainland Nova Scotia. White-sided dolphins strand at nearly all times of the year on the mainland and on Sable Island. On the mainland of Nova Scotia, a total of 34 stranded white-sided

dolphins was recorded between 1991 and 1996: 2 in 1991 (August and October), 26 in July 1992, 1 in Nov 1993, 2 in 1994 (February and November), 2 in 1995 (April and August) and 2 in 1996 (October and December). During July 1992, 26 white-sided dolphins stranded on the Atlantic side of Cape Breton. Of these, 11 were released alive and the rest were found dead. Among the rest of the Nova Scotia strandings, 1 was found in Minas Basin, 2 near Yarmouth, and the rest near Halifax. On Sable Island, 10 stranded white-sided dolphins were documented between 1991 and 1998; all were males, 7 were young males (< 200cm), 1 in January 1993, 5 in March 1993, 1 in August 1995, 1 in December 1996, 1 in April 1997 and 1 in February 1998.

Whales and dolphins stranded between 1997 and 2004 on the coast of Nova Scotia as recorded by the Marine Animal Response Society (MARS) and the Nova Scotia Stranding Network are as follows (Table 3): 0 white-sided dolphins stranded in 1997 to 2000, 3 in September 2001 (released alive), 5 in November 2002 (4 were released alive), 0 in 2003, and 19-24 in 2004 (15-20 in October (some (unspecified) were released alive) and 4 in November were released alive).

Area	Year					Total
	2000	2001	2002	2003	2004	
Maine ^b		2	4	2	10	18
New Hampshire						
Massachusetts ^{a,b}	24	16	53	59	34	186
Rhode Island			2			2
Connecticut				1		1
New York			1	2	1	4
New Jersey			1	1	1	3
Delaware						
Maryland						
Virginia ^b			1		4	5
North Carolina				1	2	3
TOTAL US	24	18	62	66	52	222
Nova Scotia	0	3	6	0	2	11
TOTAL	24	21	68	66	54	233
^a	Records of mass strandings in Massachusetts are: March 1999 - 53 animals; April 2000 - 5 animals; August 2000 - 11 animals; April 2001 - 6 animals; March 2002 - 31 animals, of which 7 were released alive; August 2002 - 3 animals, of which 1 was released alive; January 2003 - 4 animals; April 2003 - 28 animals; November 2003 - 4 animals.					
^b	Strandings that appear to involve a human interaction are: 1 animal from Maine in 2001 that was a possible boat collision; 1 animal from Virginia in May 2002 had signs of fishery interaction; 2 animals from Massachusetts in March 2002 had signs of fishery interactions; 1 animal from Massachusetts in 2004 was a fishery interaction; and 1 other animal from Massachusetts in 2004 was found with twine obstructing its esophagus					

STATUS OF STOCK

The status of white-sided dolphins, relative to OSP, in the U.S. Atlantic EEZ is unknown. The species is not listed as threatened or endangered under the Endangered Species Act. There are insufficient data to determine population trends for this species. The U.S. fishery-related mortality and serious injury for this stock is not less than 10% of the calculated PBR and, therefore, cannot be considered to be insignificant and approaching zero mortality and serious injury rate. The status of the western North Atlantic stock is unknown.

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