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# Serious Injury Determinations for Baleen Whale Stocks along the Gulf of Mexico, United States East Coast and Atlantic Canadian Provinces, 2008-2012

by Tim VN Cole and Allison G Henry

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# INTRODUCTION

The Marine Mammal Protection Act (MMPA) requires the National Marine Fisheries Service (NMFS) to estimate annual levels of human-caused mortality and serious injury to marine mammal stocks (section 117) and to categorize commercial fisheries based on their level of incidental mortality and serious injury of marine mammals (section 118). Serious injury (SI) determinations were addressed at NMFS convened workshops in 1997 and 2007 (Angliss and DeMaster 1998; Andersen et al. 2008), and in January 2012 the agency published national guidelines for distinguishing serious from non-serious injuries of marine mammals<sup>1</sup>. The resulting SI determinations are combined with anthropogenic mortality values for comparison to each stock's Potential Biological Removal (PBR) in annual marine mammal stock assessment reports (SARs). This report summarizes the SI determinations for baleen whale stocks along the Gulf of Mexico, United States east coast, and Atlantic Canadian Provinces for 2008 through 2012. The stocks we cover include the North Atlantic right whale (*Eubalaena glacialis*), Gulf of Maine humpback whale (*Megaptera novaeangliae*), Western North Atlantic fin whale (*Balaenoptera physalus*), Nova Scotian sei whale (*B. borealis*), Western North Atlantic blue whale (*B. musculus*), Canadian East Coast minke whale (*B. acutorostrata*), and the Northern Gulf of Mexico Bryde's whale (*B. edeni*).

## METHODS

Opportunistic baleen whale injury reports were provided by members of the US and Canadian regional stranding networks, whale survey and disentanglement teams, the US and Canadian Coast Guards, and the general public. With the exception of minke whales, the incidental take of baleen whales recorded by fisheries observer programs are also included here because the numbers of observed takes were not sufficient to calculate bycatch rate estimates. These reports were therefore treated as opportunistic.

Reports of significant entanglement injuries were included even if no gear was present. Observations of small entanglement scars were not included but are instead accounted for by population monitoring studies (e.g., Pettis pers comm., Robbins 2010). Contrary to the SI report covering 2007-2011, whales temporarily entrapped by encircling fishing gear such as weirs and seines are listed in this report even if there was no gear attached to a body part.

All available information for each reported injury was collected by the NMFS Greater Atlantic Regional Fisheries Office (GARFO), Southeast Regional Office (SERO), and the Northeast Fisheries Science Center (NEFSC). Confirmed reports were designated "events", and for each event the species involved was verified, duplicate records identified, and relevant information from each source consolidated into a single record. Information from additional sightings of a previously documented event was added to the existing record. If an identified whale was involved in a second interaction, a new event record was created. Demographic and subsequent sighting information for injured whales were obtained, where available, from population monitoring studies.

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see [http://www.nmfs.noaa.gov/pr/pdfs/serious\\_injury\\_procedure.pdf](http://www.nmfs.noaa.gov/pr/pdfs/serious_injury_procedure.pdf)

Two NEFSC staff independently reviewed each injury event and assigned it to the appropriate injury/information category listed in Table 1 by using all available information and scientific judgment, as described in national guidelines for distinguishing serious from non-serious injuries of marine mammals. For a single injury event to which several categories applied, the injury category with the highest level of severity (highest SI value) was assigned. Criteria L10 - L12 (Table 10) accommodated events that lacked details necessary for assignment to a more specific category. Any injury leading to a significant health decline (e.g., skin discoloration, lesions near the nares, fat loss, increased cyamid loads) was classified as a serious injury, and the SI value for the case set to 1.

More detailed information or extended observation on an individual case/whale often justified a determination differing from the guidance of Table 1. A determination differed from the guidance defaults if an injury which the guidance identifies as non-SI (NSI) results in a visible health decline (and therefore SI). Conversely, SI determinations may be changed to a less severe injury category or NSI if a whale is disentangled, sheds all entangling gear, or is resighted healed or healthy sometime after the injury. Injury severity could also be adjusted if a whale is somehow rehabilitated and released back into the open ocean.

If a whale was rescued from entangling gear, the injury category for the initial entanglement configuration was kept, but the associated SI value was changed to zero. If the SI value would have been greater than zero prior to the rescue, the event was identified for the List of Fisheries (LOF) assessment of US commercial fisheries' incidental mortality and serious injury of marine mammals. Fisheries with levels that exceed 10% of a marine mammal stock's PBR are required to follow additional fishing regulations intended to reduce interactions. An event was not identified for LOF consideration if the marine mammal was released alive and completely free of gear during the fishing operation.

We assigned injuries to either US or Canada waters if circumstances indicated which side of the Hague Line the injury likely took place. Such circumstances included identification of entangling gear by NEFSC gear specialists, entanglements that anchored a whale, witnessed vessel strikes, or whether or not a chronology of sightings indicated an individual was well within a country's waters around the time it sustained the injury. If there was a reasonable chance that the event may have occurred in either country's waters or elsewhere, the country assignment was listed as unknown. Events in this category were typically injuries first detected near the US/Canadian border or injuries whose healing or deterioration indicated that the event occurred a substantial time before the first detection, and therefore the whale may have traveled across a border since the injury was sustained.

The 2 NEFSC staff compared their determinations, and differences were discussed to obtain agreement. These SI determinations were also reviewed by SI experts from other regional science centers and differences reconciled. The determinations were also provided to the regional Scientific Review Groups (SRGs) for review prior to final reporting of determinations. Final determinations and the associated SI values were assigned to the date of the first detection of the injury.

## **RESULTS AND DISCUSSION**

Table 2 summarizes the total number of recorded injury events and the number of events assigned a SI value for the baleen whale stocks along the Gulf of Mexico, United States east coast, and Atlantic Canadian Provinces from 2008 through 2012. Table 3 lists the average annual

SI values for each stock. Appendix provides details for each injury event, listed chronologically by stock with location, individual identification (if known), assessment of whether the injury occurred in US or Canadian waters, description of injury and the assigned SI category. The header row for each stock includes the stock's total number of reported injury events over the 5-year period, the total of the resulting SI values for the stock, the number of events whose SI values were changed from those prescribed by the national guidelines, and a count of records to be considered for the LOF.

The average annual SI values by stock presented in Table 3 are a combination confirmed human-caused serious injury and a prorating of poorly documented injury events based on observed ratios of mortality to survival by injury type.

The average annual SI value for right whales increased 4% from the value for 2007-2011 (2.85 to 2.954). There were no SIs in 2007, while in 2012 there were 2 involving entanglement and 1 caused by a vessel collision. Two events (27-Jan-09 and 25-Dec-10) were moved out of the SI tally and into the mortality total for 2008-2012 following discovery of the carcasses. Of the 63 injury events, 32 had their SI value changed from those prescribed by the national guidelines. Eleven of these changes were events assigned to the L2 or L10 injury categories because of evidence of constricting or extensive entanglement, but the whale was seen gear free and healing from the injury. In another 7 events, the whale was disentangled by NOAA partners, and the injuries appeared to be healing when the whales were seen again. One case (24-Sep-08) assigned L10 was given an SI value of 1 instead of 0.75 because of health decline. One event was categorized as L5a (a deep gouge potentially affecting bones or arteries), but the whale was seen again in good condition and the wound appeared to be healing, so the SI value was set to 0. During the period there were ten cases of propeller injuries that were classified as L5b. All 10 of the whales were later seen in good or improving condition and with injuries healing. Knowlton and Costidis (pers comm.) determined 4 of these propeller injuries were inflicted by vessels >65 feet and 5 by vessels ≤65 feet in length. The tenth event was an injury to a fluke tip from the propeller of a 50-foot vessel going 19.7 knots. There were 2 cases of right whales being released from herring weirs in Canadian waters, which we categorized as L10 but gave an SI value of 0.

The average annual humpback SI value was down 2% from the previous report (7.3 to 7.15). Five events with SI values were removed when the 2007 events were dropped from the computation of the annual average, while 6 SI events were added for 2012. Three events previously given an SI value (11-May-08, 18-May-10 and 15-Apr-11) were changed to zero because the individuals were resighted healing and healthy. Two humpback events (05-May-10 and 07-Mar-11) were removed from the SI tally and added to mortalities when the individuals were found dead. Of the 117 injury events, 61 had their SI value changed as a result of post-injury sighting information. Twenty-seven of these were L2 or L10 event values adjusted to 0 when the whales were resighted healing and free of gear. Another 22 SI values were reduced because disentanglement teams improved the whale's prognosis by removing some or all entangling gear. The SI value for 3 deep chop wound events (L5a) was also reduced to 0 because healing of the injuries was apparent. Six whales showed signs of health decline, and the SI value for each of these events was increased to 1. Three of these events were categorized as L10 while 2 were L3 (loose wrap or draped gear). The sixth event was a whale that was disentangled but remained in poor condition. There were 3 events in which humpbacks were released during fishing operations, one by gillnet fishermen and 2 from seine entrapments.

The annual fin whale SI value dropped 27% this cycle (1.3 to 0.95). Two SI events in 2012 replaced 3 from 2007, and 1 event (08-Jun-08) with an SI value of 0.75 (category L10) was

changed to 0 after we reexamined the entanglement and decided the configuration was a loose bridle (L3). Of the 9 injury events, the SI value of 2 was reduced to 0. One was a calf with healing propeller scars (L11). The second was an entangled whale subsequently seen free of gear and healthy.

The annual average minke whale SI value increased 32% (3.25 to 4.3). Two pre-2012 records with SI values were added (27-Jul-10 and 03-Jun-11), along with 8 records from 2012—the highest number of events in a year for the period. Four SI events from 2007 were dropped from the computation of the annual average. Of the 35 reported injuries, the SI value of 7 events were changed to 0 because the whale was disentangled, in another the whale was released during seining operations, and in a ninth event the whale was released from a herring weir. We categorized 2 other weir entrapments as L10 and applied the default SI value of 0.75 to each event since the outcome was not known.

There was only 1 event involving a sei whale reported during the period, a constricting entanglement (L2) serious injury. There were no blue or Bryde's whale events reported. In 11 injury events (5%) we could not verify the species of whale involved; 2012 added 2 entanglement injuries with SI values and 1 non-serious vessel strike injury to this tally.

Most entanglement serious injuries could not be assigned to a country's waters because of the inability to identify the entangling gear. Gear type (not necessarily fishery) was identified in 74 of 197 entanglement cases, 25 of which were monofilament line or hooks. Of the 80 entanglements for which the country of origin could be assigned with confidence, 66 were identified as the US and 14 as Canada. All of the events identified as hook and monofilament line were from US waters. In addition, of the 8 reported entrapments, 3 were in US seines and 5 in Canadian weirs. Of the 39 vessel strikes, 24 either occurred or likely occurred in US waters. Only 1 vessel strike injury was initially detected in Canadian waters.

Although the results of this analysis may improve our understanding of the potential magnitude of human impacts to whale stocks, we treated only detected events and do not provide an estimate of the actual level of anthropogenic serious injury. The number of serious injuries not detected is unknown, and actual levels may be much higher (Kraus et al. 2005, Williams et al. 2011).

## **ACKNOWLEDGEMENTS**

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**Table 1. Large cetacean injury categories and criteria.**

Category	Injury/ Information	Injury Determination	Criteria
L1	Ingested gear <sup>1</sup> or hook(s)	SI <sup>2</sup>	Swallowed, not simply draped through mouth.
L2	Constricting wrap	SI	Tightly wrapped line anywhere on body that indents the skin or does not shift with whale's movement, or line that is likely to become constricting as the whale grows. Indication that a whale that is heavily weighted, anchored, or has a discolored appendage is sufficient evidence of constricting gear.
L3	Loose wrap, bridled or draped gear	NSI <sup>3</sup>	Loosely wrapped gear that moves or shifts freely with whale's movement. Absence of constricting gear must be confirmed.
L4	External hook	NSI	Fishing hook of any size on any part of the body (i.e., not ingested).
L5a	Deep laceration <sup>4</sup>	SI	Laceration with the potential to affect major artery (e.g., laceration or severing at insertion of flipper/fluke), penetrating body cavity, or cutting bone.
L5b	Superficial laceration	NSI	Laceration not deeper than blubber layer, does not affect major artery, or cut bone.
L6a	Vessel $\geq 65'$ and $>10$ knots	SI	Struck by vessel equal or greater than 65' and traveling greater than 10 knots.
L6b	Vessel $<65'$ and $>10$ knots	Prorate: 0.20	Struck by vessel smaller than 65' and traveling greater than 10 knots.
L6c	Vessel any size $\leq 10$ knots	NSI	Struck by vessel of any size traveling at equal or less than 10 knots.
L7a	Vessel $\geq 65'$ and speed unknown	Prorate: 0.56	Struck by vessel equal or greater than 65' and traveling at unknown speed.
L7b	Vessel $<65'$ and speed unknown	Prorate: 0.14	Struck by vessel smaller than 65' and traveling at unknown speed.
L8	Dependent <sup>5</sup>	SI	Dependent calf of a dead or seriously injured mother.
L9	Brought on deck	SI	Whale removed from water and brought on deck.
L10	Evidence of entanglement	Prorate: 0.75	Confirmed entanglement but insufficient information available to place in any of the L1-L4 criteria with a high degree of certainty.
L11	Ship strike laceration	Prorate: 0.52	Whale confirmed with non-entanglement related laceration but lacking details to place in either criteria L5a or L5b with a high degree of certainty. Includes observation of blood in water.
L12	Ship strike observed	Prorate: 0.36	Confirmed ship strike report where there is insufficient detail to assign event to criteria L6a – L7b with a high degree of certainty.

<sup>1</sup> For the purposes of this table, "gear" is defined as any portion of fishing gear excluding the hook, which is considered separately.

<sup>2</sup> SI = Serious Injury.

<sup>3</sup> NSI = Non-Serious Injury.

<sup>4</sup> For the purposes of this table, "laceration" is defined as a ragged incision or a tearing of the skin. Lacerations are caused by trauma that results in stretching, tearing, crushing, shearing, or avulsion of the tissue. Trauma, including blunt and sharp force trauma, includes a wound or bodily harm caused by an extrinsic agent.

<sup>5</sup> "Dependent" for a large cetacean means a non-weaned calf. Weaned calves and juvenile large cetaceans are no longer dependent on their mothers.

**Table 2. Numbers of confirmed baleen whale injury events reported along the Gulf of Mexico Coast, US east coast, and Atlantic Canadian Provinces, 2008-2012. Parentheses contain the numbers for each year during the period.**

Species	Western North Atlantic right whale ( <i>Eubalaena glacialis</i> )	Gulf of Maine humpback whale ( <i>Megaptera novaeangliae</i> )	Western North Atlantic fin whale ( <i>Balaenoptera physalus</i> )	Nova Scotian sei whale ( <i>B. borealis</i> )	Western North Atlantic blue whale ( <i>B. musculus</i> )	Canadian East Coast minke whale ( <i>B. acutorostrata</i> )	Northern Gulf of Mexico Bryde's whale ( <i>B. edeni</i> )	Unidentified whale spp.	Totals
Total confirmed injury events	63	117	9	1	0	35	0	11	236
Confirmed entanglement non-serious injuries	30 (8, 5, 2, 6, 9)	62 (9, 8, 7, 13, 25)	2 (1, 0, 0, 1, 0)	-	-	9 (1, 1, 3, 2, 2)	-	1 (1, 0, 0, 0, 0)	104
Confirmed entanglement serious injuries	13 (1, 3, 1, 6, 2)	42 (10, 9, 8, 9, 6)	6 (0, 3, 0, 1, 2)	1 (1, 0, 0, 0, 0)	-	26 (6, 6, 2, 5, 7)	-	5 (0, 0, 2, 1, 2)	93
Confirmed vessel strike non-serious injuries	17 (0, 4, 3, 5, 5)	13 (4, 4, 1, 4, 0)	1 (0, 0, 1, 0, 0)	-	-	-	-	1 (0, 0, 0, 0, 1)	32
Confirmed vessel strike serious injuries	3 (0, 0, 0, 2, 1)	-	-	-	-	-	-	4 (2, 2, 0, 0, 0)	7

**Table 3. Average annual Serious Injury values by country of origin and cause of injury for baleen whale stocks along the Gulf of Mexico, US east coast, and Atlantic Canadian Provinces, 2008-2012.**

Country of Origin	Cause of Injury	Western North Atlantic right whale ( <i>Eubalaena glacialis</i> )	Gulf of Maine humpback whale ( <i>Megaptera novaeangliae</i> )	Western North Atlantic fin whale ( <i>Balaenoptera physalus</i> )	Nova Scotian sei whale ( <i>B. borealis</i> )	Western North Atlantic blue whale ( <i>B. musculus</i> )	Canadian East Coast minke whale ( <i>B. acutorostrata</i> )	Northern Gulf of Mexico Bryde's whale ( <i>B. edenei</i> )	Unidentified whale spp.
US waters	Entanglement	-	1.9	-	-	-	0.35	-	-
	Vessel Strike	0.504	-	-	-	-	-	-	0.16
Canadian waters	Entanglement	-	0.5	0.2	-	-	1.5	-	-
	Vessel Strike	-	-	-	-	-	-	-	-
Unassigned waters	Entanglement	2.45	4.9	0.75	0.2	-	2.45	-	0.75
	Vessel Strike	-	-	-	-	-	-	-	0.104
Total annual SI values		2.954	7.3	0.95	0.2	0	4.3	0	1.014

**Appendix. Details of reported baleen whale injury events along the Gulf of Mexico, US east coast and Atlantic Canadian Provinces, 2008-2012. Assignment of Serious Injury (SI) criteria, SI values and List of Fisheries (LOF) inclusion follow the guidance established by NMFS Instruction 02-038-01.**

Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
Western North Atlantic right whale ( <i>Eubalaena glacialis</i> )							# events/sums:		63	14.77	32	25
12-Jan-08	2645 Insignia	15.9 nm SW of Provincetown, MA	Entangled	Unknown First seen USA	-	Unknown	Line exiting the right side of the mouth and trailing back approximately one body length behind the animal before sinking out of visibility. Partial disentanglement - grappled trailing gear which parted quickly. Resighted with rope visible as animal fluked up. No response mounted. Confirmed gear free and resights indicate healthy.	L3	L3	0	-	-
29-Jan-08	3333	9 nm ENE of St. John's River Inlet, FL	Entangled	Unknown First seen USA	-	Unknown	Line exiting both sides of the mouth. The line exiting the left side of the mouth trailed back to just forward of the flukes and the line exiting the right side of the mouth trailed approximately 10ft beyond the flukes. Confirmed gear free and resights indicate healthy.	L3	L3	0	-	-
29-Jan-08	3530 Ruffian	~10 mi off Jacksonville Beach, FL	Entangled	Unknown First seen USA	-	Unknown	Raw, wrapping entanglement lesions on head, body and peduncle. No gear present. Resights show healed scars and good health.	L2	L2	0	Healing	1
03-Feb-08	1980	7 nm ESE of Green Island, Outer Banks, NC	Entangled	Unknown First seen USA	-	Unknown	Rope trailing out the right side of the mouth, a short loop of line trailing out of the left side of the mouth, and an embedded wrap around the top of the rostrum. Thin with poor skin condition. Confirmed gear free and resights indicate healthy	L2	L2	0	Gear free, Healing	-

<sup>a</sup> Consider for List of Fisheries inclusion (1=yes)

**Appendix, continued. Details of reported baleen whale injury events along the Gulf of Mexico, US east coast and Atlantic Canadian Provinces, 2008-2012. Assignment of Serious Injury (SI) criteria, SI values and List of Fisheries (LOF) inclusion follow the guidance established by NMFS Instruction 02-038-01.**

Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
Western North Atlantic right whale ( <i>Eubalaena glacialis</i> )												
06-Mar-08	1140 Wart	7 nm S of Provincetown, MA	Entangled	Unknown First seen USA	-	Unknown	Initially line hitched into a few plates of baleen in the left mouthline, not passing through the mouth. No wraps. Entangling line shifted over 2 years to tightly wrap rostrum, but resights in 2009 showed decrease in cyamid load and better skin condition. Disentangled in 2010. Resights indicate healthy. SI was not warranted despite constricting wrap due to healthy sighting history.	L3	L2	0	Rescue, Gear free, Healing	-
07-May-08	1249 Lacrosse	38.8 nm SE of Chatham, MA	Entangled	USA	Fresh injury or known location	Unknown	Line in mouth trails down the left side of the body and seems to end in a fray or ball of line. Confirmed gear free and resights indicate healthy.	L3	L3	0	-	-
24-Sep-08	2110	Jeffreys Ledge off NH	Entangled	Unknown First seen USA	-	Unknown	Whale in poor condition - heavy cyamid load, swath lesions, rake marks. Fresh entanglement scars though no gear present. Scoliosis evident. Experts agreed that blunt trauma unlikely to have caused spinal damage to peduncle & that injury is similar to scoliosis found in other cases following entanglement. Old propeller scars acquired between May 1991 & Sep 1992 (L5b) may have exacerbated injury. No resights.	L10	L10	1	Health decline	1
08-Dec-08	3294 Equator	12.5 nm NE of Jacksonville Beach, FL	Entangled	Unknown First seen USA	-	Unknown	Constricting wrap. Partially disentangled. Shed remaining gear. Confirmed gear free and resights indicate healthy.	L2	L3	0	Rescue, Gear free, Healing	1

**Appendix, continued. Details of reported baleen whale injury events along the Gulf of Mexico, US east coast and Atlantic Canadian Provinces, 2008-2012. Assignment of Serious Injury (SI) criteria, SI values and List of Fisheries (LOF) inclusion follow the guidance established by NMFS Instruction 02-038-01.**

Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
Western North Atlantic right whale ( <i>Eubalaena glacialis</i> )												
26-Dec-08	3701	1.25 nm E of Butler Beach, FL	Entangled	Canada	Gear identified	Pot/trap	Juvenile whale with lines exiting each side of the mouth and coming together in a knot approximately 3/4 of the way back on the animal's back. From the knot, the lines are twisted together and trail behind ~300-400 ft with two buoys at the end. Partially disentangled. Remaining gear shed. Confirmed gear free and resights indicate healthy. SI was not warranted as loops not likely to become constricting.	L3	L3	0	-	-
14-Jan-09	3311 Bridle	15 nm E of Brunswick, GA	Entangled	Unknown First seen USA	-	Pot/trap	Multiple lines at mouthline cutting into rostrum and left lip. Also wrap on left flipper but not known if loose or constricting. Line trailing 300' behind whale. Sedative administered and whale partially disentangled. Line in rostrum and left lip remains but thought this will be shed. Last seen in March 2009 with heavy cyamids and overall grey skin.	L2	L2	1	-	1
31-Jan-09	3420 Platypus	23.8 nm E of St. Marys Inlet, FL	Entangled	Unknown First seen USA	-	Unknown	Line exited left side of mouth & trails over back. Right flipper involvement could not be confirmed. Entanglement did not appear constricting. Responders attached telemetry buoy to trailing line. The telemetry buoy was recovered the following day with gear. Confirmed gear free and resights indicate healthy.	L10	L10	0	Rescue, Gear free, Healing	1

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Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
Western North Atlantic right whale ( <i>Eubalaena glacialis</i> )												
07-Feb-09	3714 Sawtooth	16.4 nm SE of Brunswick, GA	Entangled	Unknown First seen USA	-	Unknown	Tight wrap on rostrum. Wraps on head and flipper likely to become constricting as animal grew. Partially disentangled. Shed remaining gear. Resights indicate healthy.	L2	L3	0	Rescue, Gear free, Healing	1
19-Apr-09	3590 Dog-ear	~7 nm E of Scituate, MA	Vessel strike	USA	Fresh injury or known location	-	Propeller cut 3-10 cm deep into fluke tip. Not life threatening and resights show injuries healing. 50' vessel @ 19.7 kts.	L5b, L6b	L5b, L6b	0	Healing	-
18-Jul-09	1019 Radiator	34 nm S of Nantucket Island, MA	Entangled	Unknown First seen USA	-	Unknown	Whale with 70-100' trailing line with 20" ball buoy with unknown attachment point(s) or configuration. No resights.	L10	L10	0.75	-	1
09-Aug-09	3930	Bay of Fundy, NS	Entangled	Unknown First seen Canada	-	Unknown	Severe tail stock entanglement injury potentially affecting arteries. No gear present. Resights showed deformation of flukes and health declined between 2009 & 2011.	L5a	L5a	1	-	1
04-Sep-09	1151 Mavynne	17 nm ESE of Isles of Shoals, ME	Entangled	USA	Fresh injury or known location	Unknown	Calf rearing mom entangled around head with rope and weighted gear underneath. Disentangled. Confirmed gear free and resights indicate both mom and calf healthy.	L2	L2	0	Rescue, Healing	1
08-Sep-09	3650	Bay of Fundy, NS	Vessel strike	Unknown First seen Canada	-	-	Healed propeller injury across back. Cuts likely < 3 cm deep. Resights indicate healthy. Record added this report.	L5b	L5b	0	-	-
26-Sep-09	3821	Provincetown Harbor, Provincetown, MA	Entangled	USA	Gear identified	Pot/trap	Constricting head wrap. Disentangled. Resights indicate healthy.	L2	L2	0	Rescue, Healing	1



**Appendix, continued. Details of reported baleen whale injury events along the Gulf of Mexico, US east coast and Atlantic Canadian Provinces, 2008-2012. Assignment of Serious Injury (SI) criteria, SI values and List of Fisheries (LOF) inclusion follow the guidance established by NMFS Instruction 02-038-01.**

Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
Western North Atlantic right whale ( <i>Eubalaena glacialis</i> )												
26-Nov-09	3850 Marlin	Off Cape Lookout Shoals, NC	Entangled	Unknown First seen USA	-	Unknown	Reported with line trailing from right side of head. Resighted free of gear. Scars suggest had loop of line lodged in both sides of the mouthline, trailing off to the left side of the body & that flippers were likely not involved. Resights indicate healthy.	L10	L10	0	Gear free, Healing	-
14-Dec-09	-	1.5 nm NW of Cape Henry, VA	Vessel strike	USA	Fresh injury or known location	-	Military vessel reported seeing two whales surface after an escorting vessel (87' @ 8-9 kts) felt an impact. Unclear which whale was struck. No injury was seen, no blood in water, and the whales appeared to behave normally. No resights.	L6c	L6c	0	-	-
15-Dec-09	3745 Junction	26 nm NE of Brunswick, GA	Vessel strike	Unknown First seen USA	-	-	Two sets of healing lacerations 3-10 cm deep. Vessel determined to be 40-65 ft <sup>b</sup> . Resights indicate healthy.	L5b, L7b	L5b, L7b	0	Healing	-
21-Feb-10	3945 Sharkbait	off Georgia	Vessel strike	USA	Fresh injury or known location	-	Minor, healing lacerations across blowholes. Vessel determined to be ≥ 65 ft <sup>b</sup> . Resights indicate healthy. Record added this report.	L5b, L7a	L5b, L7a	0	Healing	-
13-May-10	2470 Killick	49.7 nm ESE of Chatham, MA	Entangled	Unknown First seen USA	-	Unknown	Series of constricting wraps of line around peduncle and base of flukes. Moderate cyamid load. Disentangled. Resights indicate healthy.	L2	L2	0	Rescue, Healing	1
30-Aug-10	3966	Jeffreys Ledge off NH	Vessel strike	Unknown First seen USA	-	-	Small, healed propeller scars on peduncle. Vessel determined to be 16-40 ft <sup>b</sup> . Resights indicate healthy. Record added this report.	L5b, L7b	L5b, L7b	0	Healing	-
10-Sep-10	1503 Trilogy	15.5 nm NE of Gloucester, MA	Entangled	Unknown First seen USA	-	Unknown	Tight rostrum wrap, remaining configuration unknown. Overall poor condition. No resights.	L2	L2	1	-	1

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Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
Western North Atlantic right whale ( <i>Eubalaena glacialis</i> )												
20-Oct-10	3120	22.5 nm ESE of Portsmouth, NH	Entangled	USA	Fresh injury or known location	Unknown	Line, net with float buoys with compromised flipper. Entanglement shifted throughout resights. Confirmed gear free. Left flipper remains pale, but whale robust. Resights indicate healthy.	L2	L2	0	Gear free, Healing	-
18-Dec-10	3140 Lou	Cashes Ledge off ME	Vessel strike	Unknown First seen USA	-	-	Large dorsal gouge anterior of fluke insertion. Resights indicate wound healing and whale healthy.	L5a	L5a	0	Healing	-
16-Jan-11	4023	off Florida	Vessel strike	Unknown First seen USA	-	-	Yearling sighted with three new, healing lacerations across peduncle. Vessel determined to be > 65 ft <sup>b</sup> . Resights indicate wounds healing and whale healthy. Record added this report.	L5b, L7a	L5b, L7a	0	Healing	-
19-Jan-11	3010 Binary	12.8 nm ENE of St. Augustine, FL	Entangled	USA	Fresh injury or known location	Unknown	Calf rearing mom entangled with thin dark line exiting left mouth line. Full configuration of entanglement unknown. Confirmed gear free and resights indicate healthy.	L10	L10	0	Gear free, Healing	-
20-Jan-11	3853	off South Carolina	Vessel strike	USA	Fresh injury or known location	-	16 deep lacerations across back, potentially penetrating body cavity. Vessel determined to be > 65 ft <sup>b</sup> . No resights	L5a, L7a	L5a, L7a	1	-	-
30-Jan-11	3712	10.1 nm E of St. Augustine, FL	Entangled	Unknown First seen USA	-	Gillnet	Gillnet exiting left side of mouth--thin line, netting & small floats. Confirmed gear free and resights indicate healthy.	L3	L3	0	-	-
13-Feb-11	3760	30.2 nm E of Brunswick, GA	Entangled	Unknown First seen USA	-	Gillnet	Monofilament netting exiting right and left sides of mouth and connecting on top of the head near the blowholes making loose loop. Partially disentangled. Whale shed remaining gear. Resights indicate healthy.	L3	L3	0	-	-

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Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
<b>Western North Atlantic right whale (<i>Eubalaena glacialis</i>)</b>												
13-Feb-11	3993	18.4 nm SSE of Tybee Island, GA	Entangled	Unknown First seen USA	-	Unknown	Line originates from front of whale. Attachment point(s) unknown. Right flipper very light in color. Overall body color light and body condition thin. No resights.	L2	L2	1	-	1
17-Mar-11	3893	10.3 nm S of Race Point, Provincetown, MA	Entangled	Unknown First seen USA	-	Gillnet	Netting exiting right mouth and trailing along right flank. No wraps. Unsuccessful disentanglement effort may have affected configuration slightly. Shed gear. Resights indicate healthy.	L3	L3	0	-	-
27-Mar-11	2011 Calf of 1308	Nags Head, NC	Vessel strike	USA	Fresh injury or known location	-	Dependent/newborn calf of 1308. 1308 was found dead on 03/27/11 - COD = ship strike. Calf last seen (with mom) in January 2011.	L8	L8	1	-	-
08-Apr-11	3620	Cape Cod Bay, MA	Vessel strike	Unknown First seen USA	-	-	Single laceration behind blow holes, about 1.5m long by a few cm deep. Possibly from collision with the skeg of an outboard. Wound healing. Resights indicate healthy. Record added this report.	L5b	L5b	0	-	-
22-Apr-11	4040 Chiminea	3.7 nm SE of Long Point, Provincetown, MA	Entangled	USA	Gear identified	Pot/trap	Single line exiting both sides of mouth, trailing down & around body & over right fluke. No constricting wraps. Disentangled. Resights indicate healthy.	L3	L3	0	-	-
22-Apr-11	3302	9.4 nm SW of Martha's Vineyard, MA	Entangled	Unknown First seen USA	-	Unknown	Single, dark line just behind nares, likely entering either side of the mouth. Line appears tight. No trailing line seen. Last sighted Nov 2011 with no change in configuration.	L2	L2	1	-	1
29-Apr-11	3860	Cape Cod Bay, MA	Vessel strike	Unknown First seen USA	-	-	New healing superficial lacerations on left fluke tip. Vessel determined to be 16-40 ft <sup>b</sup> . Resights indicate healthy. Record added this report.	L5b, L7b	L5b, L7b	0	Healing	-

<sup>b</sup> Knowlton and Costidis pers comm

**Appendix, continued. Details of reported baleen whale injury events along the Gulf of Mexico, US east coast and Atlantic Canadian Provinces, 2008-2012. Assignment of Serious Injury (SI) criteria, SI values and List of Fisheries (LOF) inclusion follow the guidance established by NMFS Instruction 02-038-01.**

Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
<b>Western North Atlantic right whale (<i>Eubalaena glacialis</i>)</b>												
29-Apr-11	3123	9.1 nm S of Long Point, Provincetown, MA	Entangled	Unknown First seen USA	-	Unknown	Red material near right mouthline and flipper. Suspect mouth only with no wraps but unable to confirm configuration. Confirmed gear free with healthy resights until new entanglement in 2013.	L10	L10	0	Gear free, Healing	-
19-Jul-11	4160	off Race Point, Provincetown, MA	Entangled	Unknown First seen USA	-	Unknown	Fresh entanglement wounds showing signs of healing. No gear present. Resighted the following day, then no further sightings. Whale about 7 months old at time of sighting. Mother (2660) not present but sighted two months later in Gaspe without calf and with extensive entanglement injuries (see 09/03/11 event).	L8	L8	1	-	1
03-Aug-11	4150	off Provincetown, MA	Vessel strike	Unknown First seen USA	-	-	Nine propeller cuts across back. Healing. Penetration likely not to bone. Vessel determined to be 40-65 ft <sup>b</sup> . Overall condition of animal seemed poor. Resights show injuries continue to heal and apparent health improvement.	L5b, L7b	L5b, L7b	0	Healing	-
03-Sep-11	2660 Gannet	Gaspe Bay, QC	Entangled	Unknown First seen Canada	-	Unknown	No gear present, but evidence of extensive, constricting gear with major entanglement wounds & in poor condition. No longer with calf (see 07/19/11 event). Only blowing out of left blowhole. No resights post September 2011.	L2	L2	1	-	1
18-Sep-11	4090	25.8 nm NE of Gloucester, MA	Entangled	Unknown First seen USA	-	Gillnet	Juvenile whale with gillnet mesh and floatline with floats wrapped around whale's head and tail. Whale thrashing. Full configuration unknown. Not relocated. No resights.	L10	L10	0.75	-	1

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**Appendix, continued. Details of reported baleen whale injury events along the Gulf of Mexico, US east coast and Atlantic Canadian Provinces, 2008-2012. Assignment of Serious Injury (SI) criteria, SI values and List of Fisheries (LOF) inclusion follow the guidance established by NMFS Instruction 02-038-01.**

Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
Western North Atlantic right whale ( <i>Eubalaena glacialis</i> )												
27-Sep-11	3111	8.9 nm E of Grand Manan Island, NB	Entangled	Unknown First seen Canada	-	Unknown	Attachment point at left mouthline and/or flipper with multiple lines draping over peduncle. Indications that earlier configuration involved head and body wraps. Light to moderate cyamid load and sloughing skin. Disentanglement attempt made contact with line along left flank, but unsure if a cut was actually made. Unclear if still entangled in 2012, but apparent health improvement.	L10	L10	0.75	-	1
26-Nov-11	1331	83 nm E of Portland, ME	Vessel strike	Unknown First seen USA	-	-	New healed propeller scars on back. Vessel determined to be > 65 ft <sup>b</sup> . Resights indicate healthy.	L5b, L7a	L5b, L7a	0	Healing	-
07-Jan-12	3821	5.1 nm NW of Sesuit Harbor, MA	Entangled	Unknown First seen USA	-	Gillnet	Line exiting both sides of mouth and forming loose loop 1.5m behind blowhole. No trailing line. Little tension. Partially disentangled--line cut. Expect gear to shed over time. Resights indicate healthy and still carrying gear - exiting right mouthline and trailing with no wraps.	L3	L3	0	-	-
17-Jan-12	4146	off St. Augustine, FL	Vessel strike	Unknown First seen USA	-	-	Two large lacerations along left flank, widely spaced. Vessel determined to be > 65 ft <sup>b</sup> . Whale 1 year old at time of injury. Resights indicate healthy.	L5b, L7a	L5b, L7a	0	Healing	-
19-Jan-12	1719	15.5 nm E of St. Simon's, GA	Entangled	Unknown First seen USA	-	Unknown	Line trailing from either side of mouth. No wraps. Gear eventually shed. Resights indicate healthy.	L3	L3	0	-	-
26-Jan-12	4091	Cape Cod Bay, MA	Vessel strike	Unknown First seen USA	-	-	New, small, healed propeller scars on dorsal surface of left fluke lobe. Vessel determined to be < 16 ft <sup>b</sup> . Resights indicate healthy.	L5b, L7b	L5b, L7b	0	Healing	-

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**Appendix, continued. Details of reported baleen whale injury events along the Gulf of Mexico, US east coast and Atlantic Canadian Provinces, 2008-2012. Assignment of Serious Injury (SI) criteria, SI values and List of Fisheries (LOF) inclusion follow the guidance established by NMFS Instruction 02-038-01.**

Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
<b>Western North Atlantic right whale (<i>Eubalaena glacialis</i>)</b>												
26-Jan-12	3951	Cape Cod Bay, MA	Vessel strike	Unknown First seen USA	-	-	New, superficial, healed propeller scars on back. Resights indicate healthy.	L5b	L5b	0	-	-
15-Feb-12	3996	0.5 nm S of Race Point, Provincetown, MA	Entangled	Unknown First seen USA	-	Unknown	Monofilament webbing, line, and floats trailing out of left mouth. Full entanglement configuration unknown. Line constricting at last sighting in September 2012. Health decline.	L10	L2	1	-	1
04-Mar-12	3701 Eros	Cape Cod Bay, MA	Vessel strike	USA	Fresh injury or known location	-	New, small, healed propeller scars on back. Resights indicate healthy.	L5b	L5b	0	-	-
04-May-12	2460 Monarch	Great South Channel off MA	Entangled	Unknown First seen USA	-	Unknown	Sighted with new, extensive, raw and healing entanglement injuries on head, lip, and peduncle. No gear present. No resights.	L2	L2	0	Healing	1
18-May-12	3980	Great South Channel off MA	Vessel strike	USA	Fresh injury or known location	-	Animal surfaced under aft port sponson of NOAA research rigid hulled inflatable boat (17ft @ <5kts). No contact with propeller. No damage to vessel. Observed for 30 min post event. No visible injury, exhibited normal behavior. Resights indicate healthy.	L6c	L6c	0	-	-
20-Jul-12	3308	Great South Channel off MA	Entangled	Unknown First seen USA	-	Unknown	Raw entanglement wounds on peduncle & fluke. No gear present. Resights showed some health decline but overall condition fair and injuries healing.	L10	L10	0	Healing	1
04-Aug-12	1278	Gulf of St. Lawrence, QC	Entangled	Unknown First seen Canada	-	Unknown	Moderate to severe entanglement wounds, some raw. No gear present. Health compromised pre-entanglement. Resights indicate health remains fair and wounds healing.	L2	L2	0	Healing	1

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Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
<b>Western North Atlantic right whale (<i>Eubalaena glacialis</i>)</b>												
25-Aug-12	1708	Bradford Cove, Grand Manan, NS	Entrapped	Canada	Gear identified	Weir	Caught in fishing weir for at least three days. Poles and twine removed to allow whale to escape. Resights indicate healthy.	L10	L10	0	Released	-
24-Sep-12	3610	Bay of Fundy, NS	Entangled	Unknown First seen Canada	-	Unknown	Raw entanglement wounds around peduncle. No gear present. Body condition was fair when seen prior to injury. Post-injury, cyanid load increased on head and body condition worsened. No resights.	L2	L2	1	-	1
17-Oct-12	3790	Whale Cove, Grand Manan, NB	Entrapped	Canada	Gear identified	Weir	Entrapped in weir. Fisherman dropped top twine and the whale forced its way out the following day. No gear appeared to be attached to the whale. Resights confirm gear free and indicate healthy.	L10	L10	0	Released	-
07-Dec-12	-	off Wassaw Island, GA	Vessel strike	USA	Fresh injury or known location	-	Recreational vessel (46 ft @ 12-13 kts) reported colliding with a whale. The injury was not seen but there was a large pool of blood (65' diameter). A second whale circling the blood-stained water was identified as a right whale based on the captain's description. No resights.	L6b, L11	L6b, L11	0.52	-	-
12-Dec-12	3946	Cape Cod Bay, MA	Entangled	Unknown First seen USA	-	Unknown	New extensive entanglement scars. No gear present. Whale appears thin. Additional slight health decline documented until sighted with new entanglement in 2013. Shed 2013 entanglement gear and resights indicate healthy.	L2	L2	0	Healing	1
17-Dec-12	3942	off Georgia	Entangled	Unknown First seen USA	-	Unknown	New, extensive but resolving injuries. Injuries still raw on peduncle. No gear present. Resights indicate healthy.	L10	L10	0	Healing	1

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Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
Gulf of Maine humpback whale ( <i>Megaptera novaeangliae</i> )							# events/sums:		117	36.5	61	58
06-Jan-08	-	20 nm S of Cape Lookout, NC	Entangled	Unknown First seen USA	-	Unknown	Flipper entanglement trailing net. Some gear removed. Gear cutting through approximately 50% of the flipper. Moderate cyamid load and appears emaciated. No resights.	L2	L2	1	-	1
10-Jan-08	-	19 nm SE of Beaufort, NC	Entangled	USA	Gear identified	Monofilament line	Entangled in researcher's tuna trolling line. Approx 50 yd of trolling line missing. Unclear if gear remained attached to whale. No resights.	L10	L10	0.75	-	1
07-May-08	Brillo	~6.5 nm NNW of Race Point, Provincetown, MA	Entangled	Unknown First seen USA	-	Unknown	2 pieces of rope over back, remainder of entanglement unclear. Previously embedded wrap on body shifted aft. Whale appears thin and has some cyamids but moving around actively during last sighting. No resights post June 2008.	L10	L10	0.75	-	1
May-08	-	offshore of Block Island, RI	Entangled	USA	Gear identified	Gillnet	Flipper entangled in gillnet during tending. Crew released whale. Captain reported not losing any net. No observation of whale following disentanglement effort. Last report listed as 0.75 against PBR but changed to 0 based on determination that all gear recovered. No resights.	L10	L10	0	Released	-
20-May-08	Reaper	14.2 nm SE of Gloucester, MA	Entangled	USA	Fresh injury or known location	Hook/Monofilament	Hook embedded in upper right jaw with monofilament line trailing to at least flank. Confirmed gear free and resights indicate healthy.	L4, L10	L4, L10	0	Gear free, Healing	-
01-Jun-08	2008 Calf of Tongs	14 nm SE of Gloucester, MA	Entangled	Unknown First seen USA	-	Unknown	Calf disentangled from approximately 150 ft of line. Line had been wrapped around animal's peduncle. Resights indicate healthy.	L2	L2	0	Rescue	1
11-Jun-08	Radiator	mid-Stellwagen Bank off MA	Vessel strike	USA	Fresh injury or known location	-	Calf with fresh wounds on the right flank. Resights indicate wounds healing and animal healthy.	L5b	L5b	0	-	-



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Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
<b>Gulf of Maine humpback whale (<i>Megaptera novaeangliae</i>)</b>												
Jun-08	-	off of Gloucester, MA	Entrapped	USA	Gear identified	Seine	Animal did not contact purse seine. All gear recovered with no damage. No resights.	L10	L10	0	Released	-
27-Jun-08	Ebony	8 nm NE of Race Point, Provincetown, MA	Entangled	Unknown First seen USA	-	Unknown	Line from both sides of mouth came together to form a bridle, then extended back to peduncle area. Partial disentanglement - cut bridle loop. Resighted with line exiting left mouthline only. Confirmed gear free and resights indicate healthy.	L3	L3	0	-	-
05-Jul-08	Trident	12.2 nm SE of Gloucester, MA	Entangled	Unknown First seen USA	-	Hook/Monofilament	Monofilament line on left flank and lure in fluke. Shed gear. Resights indicate healthy.	L4, L10	L4, L10	0	Gear free, Healing	-
08-Jul-08	Estuary	2.25 nm E of Wellfleet, MA	Entangled	USA	Fresh injury or known location	Unknown	Heavy line over blowholes and trailing alongside the flank of the animal. Responders cut the line near the blowholes and around the flukes, leaving a short section of line embedded into injuries that will likely shed over time. Whale emaciated, had moderate cyanid coverage and deep wounds in fluke blades from gear. Maintained a hunched over position after cuts were made to the gear. No resights.	L2	L2	1	-	1
Jul-08	-	off Chatham, MA	Entangled	USA	Gear identified	Gillnet	Gear initially pinning left flipper to body. Fisherman partially disentangled. An estimated 25-foot portion of the gear remains on the body in an unknown configuration. No resights.	L2	L10	0.75	-	1
13-Jul-08	-	1 nm E of Monomoy Point, MA	Entangled	Unknown First seen USA	-	Unknown	Line through the mouth with a bullet buoy near the mouth on the right hand side. Line out of the left side of the mouth went under the whale. Full configuration unknown. No resights.	L10	L10	0.75	-	1

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Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
Gulf of Maine humpback whale ( <i>Megaptera novaeangliae</i> )												
23-Jul-08	-	near BE buoy on Stellwagen Bank off MA	Vessel strike	USA	Fresh injury or known location	-	Fishing vessel continually moving slowly back and forth through an aggregation of 15-25 bubble feeding humpbacks. Contact made with 2 of 3 humpbacks. Audible "thunk" heard by witnesses. Contact likely made to head area since animals had just come up through a feeding cloud. Animals moved away from the vessel, then immediately resumed feeding. 2 of 3 of the animals ID'd, both seen multiple times since with no reported injuries. ID of 3rd unknown, so unable to get sighting history. Various whale watch/researchers in the area for several hours, pre and post incident. No injuries reported.	L6c	L6c	0	-	-
23-Jul-08	-	near BE buoy on Stellwagen Bank off MA	Vessel strike	USA	Fresh injury or known location	-	Second whale that came in contact with the fishing vessel in the previous record. No injuries reported.	L6c	L6c	0	-	-
26-Jul-08	Underline	Stellwagen Bank off MA	Vessel strike	USA	Fresh injury or known location	-	Small propeller wounds on back just in front of dorsal fin. Resights indicate wounds have healed and animal is healthy.	L5b	L5b	0	-	-
03-Aug-08	Backgammon	7 nm NW of Race Point, Provincetown, MA	Entangled	USA	Fresh injury or known location	Hook/ Monofilament	Gear appears to be attached by a large hook in the mouthline, most gear just above left eye, no wraps. No disentanglement attempt made due to risk of injury to whale. Gear shed. Resights indicate healthy.	L4, L10	L4, L10	0	Gear free, Healing	-
13-Aug-08	-	86.2 nm S of Montauk, NY	Entangled	Unknown First seen USA	-	Unknown	Line and buoy in unknown configuration. Fisherman removed most gear entangling tail stock. Whale emaciated, lethargic and with heavy cyamid load. No resights.	L10	L10	1	Health decline	1

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Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
Gulf of Maine humpback whale ( <i>Megaptera novaeangliae</i> )												
21-Aug-08	-	12.5 nm E of Chatham, MA	Entangled	Unknown First seen USA	-	Unknown	Line through mouth that trails beyond flukes. No wraps or weighted gear. Resighted twice with no change in configuration. Sloughing skin & extensive scuffing indicate poor health. No further resights.	L3	L3	1	Health decline	1
20-Sep-08	Cranny	4.75 nm WNW Brier Island, NS	Entangled	Unknown First seen Canada	-	Unknown	Extent of entanglement unclear but at least four non-constricting body wraps around midsection and peduncle with some trailing line. No resights.	L10	L10	0.75	-	1
13-Oct-08	Cajun	14.7 nm SE of Gloucester, MA	Entangled	USA	Fresh injury or known location	Monofilament line	Monofilament line over left fluke blade and trailing, attachment point unknown. Confirmed gear free and resights indicate healthy.	L10	L10	0	Gear free, Healing	-
13-Oct-08	Tectonic	15 nm SE of Gloucester, MA	Entangled	USA	Fresh injury or known location	Monofilament line	Monofilament line over left fluke blade. Attachment point unknown. Confirmed gear free and resights indicate healthy.	L10	L10	0	Gear free, Healing	-
08-Nov-08	-	Unknown location, Canada	Entangled	Unknown First seen Canada	-	Unknown	Disentangled by fishermen. Unknown if all gear removed. No photos or description of entanglement. No resights.	L10	L10	0.75	-	1
25-Feb-09	-	9 nm E of Sandy Hook, NJ	Entangled	USA	Fresh injury or known location	Unknown	Juvenile anchored in gear. Disentangled but remained in hunched over/deformed body position post-disentanglement. No resights.	L2	L2	1	Health decline	1
17-Mar-09	-	6.8 nm E of Treasure Cay Airport, Abaco Island, Bahamas	Entangled	Unknown First seen Bahamas	-	Unknown	Constricting wrap, light cyamids & listless behavior. Boat captain cut line on dorsal peduncle and trailing line. Behavior changed from listless to travel after cuts made. Remaining gear will likely be shed. No resights.	L2	L3	0	Rescue	1
09-Apr-09	-	16.5 nm NW of Race Point, Provincetown, MA	Entangled	Unknown First seen USA	-	Unknown	Line exiting mouth and ending in buoy by peduncle. Unclear if right pectoral is involved. No resights.	L10	L10	0.75	-	1

**Appendix, continued. Details of reported baleen whale injury events along the Gulf of Mexico, US east coast and Atlantic Canadian Provinces, 2008-2012. Assignment of Serious Injury (SI) criteria, SI values and List of Fisheries (LOF) inclusion follow the guidance established by NMFS Instruction 02-038-01.**

Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
<b>Gulf of Maine humpback whale (<i>Megaptera novaeangliae</i>)</b>												
11-Apr-09	-	11.6 nm SE of Gloucester, MA	Entangled	Unknown First seen USA	-	Unknown	At least one body wrap and towing at least 2 bullet buoys. Unknown if body wrap is loose or constricting. No resights.	L10	L10	0.75	-	1
20-Apr-09	-	1.1 nm S of Race Point, Provincetown, MA	Entangled	Unknown First seen USA	-	Unknown	Peduncle wrap with trailing buoy. Disentangled. No resights. SI was warranted - wraps constricting or would've become so as animal grew.	L2	L2	0	Rescue	1
04-May-09	Thumbprint	36 nm ESE of Chatham, MA	Entangled	USA	Gear identified	Pot/trap	Constricting line over body, trailing gear, 12-15 constricting wraps around left flipper. Disentangled. Resights indicate healthy.	L2	L2	0	Rescue	1
23-May-09	-	20.4 nm SE of Gloucester, MA	Entangled	Unknown First seen USA	-	Unknown	1 of 3 identifiable whales trailing bullet buoy 75' behind flukes, unclear which animal. All individuals seen subsequently with no gear and healthy.	L10	L10	0	Gear free, Healing	-
23-May-09	-	8.1 nm NW of Race Point, Provincetown, MA	Entangled	Unknown First seen USA	-	Unknown	Line forming bridle behind head then trailing to bullet buoy. Full configuration unknown. No resights.	L10	L10	0.75	-	1
29-May-09	-	100 yds off Point Pleasant, NJ	Vessel strike	USA	Fresh injury or known location	-	Whale came up on transom of 19' stationary private vessel. No apparent injury to whale or damage to boat. No resights.	L6c	L6c	0	-	-
06-Jun-09	Pepper	7 nm NW of Race Point, Provincetown, MA	Entangled	USA	Fresh injury or known location	Unknown	1 wrap around peduncle, 1 around left fluke blade, 3 around right fluke blade (all unconfirmed) with trailing buoy. Resighted on with no wraps and attachment point unknown. Additional resights showed gear-free and indicate healthy.	L10	L10	0	Gear free, Healing	-
09-Jun-09	Inukshuk	4.3 nm NE of Race Point, Provincetown, MA	Entangled	USA	Fresh injury or known location	Unknown	Tight wrap around body forward of flippers, left flipper has tangled wad of line trailing beneath to midbody. No resights.	L2	L2	1	-	1

**Appendix, continued. Details of reported baleen whale injury events along the Gulf of Mexico, US east coast and Atlantic Canadian Provinces, 2008-2012. Assignment of Serious Injury (SI) criteria, SI values and List of Fisheries (LOF) inclusion follow the guidance established by NMFS Instruction 02-038-01.**

Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
<b>Gulf of Maine humpback whale (<i>Megaptera novaeangliae</i>)</b>												
17-Jun-09	2009 Calf of Rapier	SW corner of Stellwagen Bank off MA	Vessel strike	USA	Fresh injury or known location	-	Open fresh wound on tail stock before anterior of fluke insertion. Resights indicate injury healing and whale healthy.	L5a	L5a	0	Healing	-
21-Jul-09	Bayou	NW Stellwagen Bank off MA	Vessel strike	USA	Fresh injury or known location	-	3 large, fresh lacerations to distal end of right fluke. Resights indicate injury has healed and whale healthy.	L5b	L5b	0	-	-
28-Jul-09	-	near BE buoy, Stellwagen Bank off MA	Vessel strike	USA	Fresh injury or known location	-	110' Whale watch catamaran @ 5 kts struck and passed over whale after watching it for a few minutes. No documentation of injury or lack thereof, but slow vessel speed & no blood in water. Several other vessels in the area and no one saw an injured animal that day or afterwards. No resights.	L6c	L6c	0	-	-
14-Aug-09	Anvil	9.5 nm NNW of Race Point, Provincetown, MA	Entangled	USA	Fresh injury or known location	Hook/Monofilament	Monofilament line and lure with hook in tubercle and line trailing aft of flukes, no wraps. Resights indicate gear free and healthy.	L4, L10	L4, L10	0	Gear free, Healing	-
12-Sep-09	2008 Calf of Touchdown	near White Island, NS	Entangled	Canada	Gear identified	Weir	Swam out of entrapment in weir but carrying some net in unknown configuration. No resights.	L10	L10	0.75	-	-
16-Sep-09	-	outside Halifax Harbor, NS	Entangled	Unknown First seen Canada	-	Unknown	Entanglement confirmed but configuration unknown. No resights.	L10	L10	0.75	-	1
20-Sep-09	Dali	10 nm NNE of Race Point, Provincetown, MA	Entangled	USA	Fresh injury or known location	Monofilament line	Monofilament line trailing beyond fluke, attachment point unknown. Balloon(s) visible. Confirmed gear free and resights indicate healthy.	L10	L10	0	Gear free, Healing	-
20-Oct-09	-	E of Halifax, NS	Entangled	Canada	Gear identified	Gillnet	Multiple lines exiting mouthline, full configuration unknown. Disentangled off Bahamas, but in poor condition - emaciated, heavy cyamid coverage, lethargic. No resights.	L10	L10	1	Health decline	-

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Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
<b>Gulf of Maine humpback whale (<i>Megaptera novaeangliae</i>)</b>												
21-Oct-09	Ti	9.3 nm NE of Race Point, Provincetown, MA	Entangled	USA	Gear identified	Pot/trap	Open bridle through mouth and towing bullet buoy, no wraps of gear. Disentangled. No resights.	L3	L3	0	-	-
20-Nov-09	-	13 nm S of Goat Island, Outer Banks, NC	Entangled	Unknown First seen USA	-	Unknown	Thin line trailing from right side of body. Attachment point(s) and full configuration unknown. No resights.	L10	L10	0.75	-	1
07-Mar-10	-	16.2 nm E of Ponte Vedra Beach, FL	Entangled	Unknown First seen USA	-	Unknown	Two tight lines across back, multiple trailing lines, entanglement hinges on an anchor beneath the whale's chest. Resights indicate possibly shed gear, but pronounced health decline--emaciated and with heavy cyamid load. No resights post March 2010.	L2	L2	1	-	1
05-May-10	-	1.5 nm W of Northampton, VA	Entangled	Unknown First seen USA	-	Unknown	Young whale towing twisted line with bullet buoy and high flier; wraps on flukes. Gear likely to become constricting as whale grows. No resights.	L2	L2	1	-	1
18-May-10	Pinch	10.7 nm NE of Truro, MA	Entangled	Unknown First seen USA	-	Unknown	Tight collar of webbing around base of head with no trailing gear. Resighted and configuration shifted to insertion of flippers, still tight. Confirmed gear free and resights indicate healthy. Last report listed as 1.0 against PBR but changed to 0 because whale shed gear and is healing.	L2	L2	0	Gear free, Healing	-
19-Jun-10	-	3.5 nm E of Orleans, MA	Entangled	USA	Gear identified	Pot/trap	Multiple embedded lines in tailstock and leading edge of flukes, trailing large polyball & small acorn buoy just beyond fluke. Cut made to tailstock wrap and aft loop, polyball removed. Responders felt remaining gear would slowly shed.	L2	L3	0	Rescue	1

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Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
Gulf of Maine humpback whale ( <i>Megaptera novaeangliae</i> )												
05-Jul-10	Swallowtail	2.1 nm E of Orleans, MA	Entangled	Unknown First seen USA	-	Unknown	Mom of year entangled with bullet buoy and tangle of line in mouth, embedded wrap on peduncle. Shed gear and resights indicate healthy.	L2	L2	0	Gear free, Healing	-
23-Jul-10	Vault	7.7 nm E of Eastham, MA	Entangled	USA	Fresh injury or known location	Unknown	Loose loop around fluke cutting leading edge. Towing 2 bullet buoys with a high flier. Remaining configuration unknown. Shed gear--confirmed gear free with slight health decline but additional resights indicate healthy.	L10	L10	0	Gear free, Healing	-
26-Jul-10	-	12.8 nm E of Chatham, MA	Entangled	Unknown First seen USA	-	Unknown	Towing bullet buoy, attachment point(s) and full configuration unknown. No resights.	L10	L10	0.75	-	1
27-Jul-10	Sodapop	16.8 nm NNW of Race Point, Provincetown, MA	Entangled	Unknown First seen USA	-	Unknown	Line exiting left mouth and gear trailing sometimes crossing the back or fouling the flukes, but constantly shifting. Trailing acorn buoys and pick up stick. Shed gear and resights indicate healthy.	L10	L10	0	Gear free, Healing	-
27-Jul-10	Bearclaw	6.5 nm NE of Chatham, MA	Entangled	Unknown First seen USA	-	Unknown	Constricting body wrap. Responders partially severed line. Confirmed gear free from this entanglement. See 08/31/10 record of new entanglement.	L2	L3	0	Rescue, Gear free, Healing	1
06-Aug-10	Aphid	southern Stellwagen Bank off MA	Vessel strike	USA	Fresh injury or known location	-	Fresh, superficial propeller lacerations near head. Resighted with injuries healing.	L5b	L5b	0	-	-
13-Aug-10	-	2.7 nm E of Orleans, MA	Entangled	USA	Gear identified	Pot/trap	Small whale with line overhead and gear trailing. Responders removed trailing gear but not head wrap, which may become constricting as the whale grows. No resights.	L2	L2	1	-	1

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Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
<b>Gulf of Maine humpback whale (<i>Megaptera novaeangliae</i>)</b>												
20-Aug-10	Chili	10.3 nm NE of Race Point, Provincetown, MA	Entangled	Unknown First seen USA	-	Unknown	Towing buoy w/high flier. Wraps embedded in peduncle. Health decline evident - thin, skin sloughing, moderate cyamid patches, fluke discoloration. No resights post Oct 2010.	L2	L2	1	-	1
31-Aug-10	Bearclaw	6.2 nm E of Chatham, MA	Entangled	USA	Gear identified	Pot/trap	Second entanglement event for this whale. Loop on right pectoral with trailing, twisting line and buoy. Entanglement was likely to become constricting as whale grew. Disentangled. Resights indicate healthy.	L2	L2	0	Rescue, Healing	1
10-Sep-10	-	4 mi off White Head Island, Grand Manan, NB	Entangled	Unknown First seen Canada	-	Unknown	Line around peduncle, fluke with unknown attachment point(s) forward on body. Full configuration unknown. No resights.	L10	L10	0.75	-	1
02-Oct-10	-	4.0 nm NE of Race Point, Provincetown, MA	Entangled	Unknown First seen USA	-	Unknown	Brief sighting of animal w/ line on the head but unable to relocate to assess full configuration . Description sounds like resight of Chili (08/20/10), but no photos so unable to verify. No resights.	L10	L10	0.75	-	1
23-Dec-10	-	S of Port Everglades Inlet, FL	Entangled	Unknown First seen USA	-	Unknown	No gear present, but evidence of extensive, constricting entanglement. Lacerations near fluke insertion potentially affecting arteries. Leading edges of flukes deteriorating. Gouge on trailing edge of right pectoral potentially affecting bone. Heavy cyamid coverage and bad pallor. No resights.	L5a	L5a	1	-	1



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Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
<b>Gulf of Maine humpback whale (<i>Megaptera novaeangliae</i>)</b>												
07-Jan-11	-	6.8 nm SE of Oregon Inlet, NC	Entangled	USA	Fresh injury or known location	Gillnet	Extensive entanglement with net all around the body, head, and flukes. Rope overhead and flukes as well. Reported to be drifting 1 knot. No resights.	L2	L2	1	-	1
01-Feb-11	EKG	20.8 nm S of Bar Harbor, ME	Entangled	USA	Fresh injury or known location	Unknown	Anchored. Partially disentangled but still anchored. Not relocated. No resights.	L2	L2	1	-	1
11-Apr-11	-	off Halibut Point, Rockport, MA	Entangled	Unknown First seen USA	-	Unknown	Buoy with unknown forward attachment point(s). Full configuration unknown. No resights.	L10	L10	0.75	-	1
15-Apr-11	-	0.4 nm NE of Little Island Park Pier, VA	Entangled	USA	Gear identified	Gillnet	Anchored. Released itself ~24 hours after initial sighting. Gear hauled and had hole in mesh and parted float line but all gear recovered. No resights. Last report listed as 0.75 against PBR but changed to 0 based on determination that all gear recovered.	L2	L2	0	Gear free	-
30-May-11	-	0.1 nm E of Nauset Beach, Orleans, MA	Entangled	Unknown First seen USA	-	Unknown	Whale witnessed trailing buoy. Attachment point(s) and configuration unknown. No resights.	L10	L10	0.75	-	1
03-Jun-11	Flyball	18.4 nm SE of Portsmouth, NH	Entangled	USA	Fresh injury or known location	Unknown	Weighted gear through mouth with constricting peduncle wrap caused animal to remain in hunched position. Emaciated. Disentangled. Resights indicate healthy.	L2	L2	0	Rescue, Healing	1
02-Jul-11	-	off Race Point, Provincetown, MA	Vessel strike	Unknown First seen USA	-	-	Minor, healing propeller lacerations. See 07/02/11 entanglement event for this individual. No resights post July 2011. Record added this report.	L5b	L5b	0	-	-

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Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
<b>Gulf of Maine humpback whale (<i>Megaptera novaeangliae</i>)</b>												
02-Jul-11	-	off Race Point, Provincetown, MA	Entangled	Unknown First seen USA	-	Unknown	Missing flukes attributed to chronic entanglement. Swimming using flippers only. No gear present. Active & mobile, but also young so likely to succumb to injuries. Last seen 100 miles offshore. No resights post July 2011.	L2	L2	1	-	1
05-Jul-11	Chalkline	Jeffreys Ledge off NH	Vessel strike	USA	Fresh injury or known location	-	Fresh, minor propeller wound across dorsal. No resights.	L5b	L5b	0	-	-
09-Jul-11	-	3.4 nm SSE of Monomoy Island, MA	Entangled	Unknown First seen USA	-	Unknown	Entangled with bullet buoy w/ buoy stick. Full configuration unknown. No resights.	L10	L10	0.75	-	1
10-Jul-11	-	6.1 nm E of Monomoy Island, MA	Entangled	Unknown First seen USA	-	Unknown	Report of possibly two whales entangled together with netting around them, small buoy may be trailing. Could not confirm that both whales entangled. No resights.	L10	L10	0.75	-	1
18-Jul-11	Reflection	1.9 nm N of North Truro, MA	Entangled	USA	Gear identified	Pot/trap	Anchored in gear. Disentangled. Resights indicate healthy.	L2	L2	0	Rescue, Healing	1
21-Jul-11	-	3.0 nm SE of Oregon Inlet, Rodanthe, NC	Entangled	Unknown First seen USA	-	Unknown	Reported with netting around animal. Full configuration unknown. Not relocated. No resights.	L10	L10	0.75	-	1
25-Jul-11	Ganesh	8.8 nm N of Race Point, Provincetown, MA	Entangled	USA	Fresh injury or known location	Unknown	Mother of year trailing buoy with PVC stick & flag. Shed gear. Resights indicate healthy.	L10	L10	0	Gear free, Healing	-
30-Jul-11	Reflection	8.3 nm N of Race Point, Provincetown, MA	Entangled	USA	Fresh injury or known location	Monofilament line	Monofilament around tailstock and aft of flukes. Full configuration unknown. Confirmed gear free and resights indicate healthy.	L10	L10	0	Gear free, Healing	-
30-Jul-11	2009 Calf of Rapier	8.0 nm NNE of Race Point, Provincetown, MA	Entangled	USA	Fresh injury or known location	Monofilament line	Monofilament at head & trailing along flank & aft of flukes. Full configuration unknown. Confirmed gear free and resights indicate healthy.	L10	L10	0	Gear free, Healing	-

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<b>Gulf of Maine humpback whale (<i>Megaptera novaeangliae</i>)</b>												
31-Jul-11	2011 Calf of Canopy	6.4 nm N of Race Point, Provincetown, MA	Entangled	USA	Fresh injury or known location	Monofilament line	Monofilament on right flipper. Full configuration unknown. Confirmed gear free and resights indicate healthy.	L10	L10	0	Gear free, Healing	-
02-Aug-11	Artillery	7.0 nm NNE of Race Point, Provincetown, MA	Entangled	USA	Fresh injury or known location	Monofilament line	Monofilament streaming aft of flukes, attachment point unknown. Shed gear. Resights indicate healthy.	L10	L10	0	Gear free, Healing	-
04-Aug-11	2011 Calf of Ganesh	Stellwagen Bank off MA	Vessel strike	USA	Fresh injury or known location	-	Seen with entangled mother (07/25/11 event). Calf had deep (>10cm) fresh prop cuts forward of dorsal fin. Resights show injuries healing.	L5a	L5a	0	Healing	-
14-Aug-11	Echo	6.8 nm NE of Race Point, Provincetown, MA	Entangled	USA	Fresh injury or known location	Monofilament line	Monofilament entanglement around base of left flipper, unclear if loose or constricting. Shed gear. Resights indicate healthy.	L10	L10	0	Gear free, Healing	-
24-Aug-11	Piano	5 nm E of Chatham, MA	Vessel strike	USA	Fresh injury or known location	-	New, healing lacerations along left flank. Lacerations deep (>10cm) with potential to affect muscle layer. Resighted (07/08/12 entanglement event) w/ injuries healing.	L5a	L5a	0	Healing	-
15-Sep-11	Checkmark	9.0 nm NE of Plymouth, MA	Entangled	USA	Fresh injury or known location	Unknown	Line caught on leading edge of right fluke & trailing 60ft to twist of line or perhaps buoy; line cut into leading edge a few inches. SI not warranted - only distal portion of right fluke affected by constriction. Partially disentangled and working line & marker buoy attached. Shed gear. Resights indicate healthy.	L2	L3	0	Rescue, Gear free, Healing	-

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Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
Gulf of Maine humpback whale ( <i>Megaptera novaeangliae</i> )												
Sep-11	Hippocampus	off Chatham, MA	Entangled	USA	Gear identified	Gillnet	Free-swimming but significant portion of gillnet panel & line wrapping around peduncle and fluke. Gear shifted throughout event. Whale lay motionless, thrashed, and did not dive. Disentangled. Resights indicate healthy. SI was warranted due to extensive gear that was unlikely to be shed.	L2	L2	0	Rescue	1
10-Oct-11	Clutter	5.3 nm NE of Grand Manan Island, NB	Entangled	Unknown First seen Canada	-	Unknown	Line wrapped around the base of the tail stock, just rostral of the tail fluke, cutting deeply into the flesh. A knot with several lines, one trailing well behind the whale, extended from the loop around the tail stock. Not relocated. No resights.	L2	L2	1	-	1
08-Nov-11	Dyad	34.2 nm E of Nantucket, MA	Entangled	Unknown First seen USA	-	Monofilament line	Monofilament line seen trailing over the right fluke with an unknown attachment point. Confirmed gear free and resights indicate healthy.	L10	L10	0	Gear free, Healing	-
13-Nov-11	-	10.3 nm E of Lubec, ME	Entangled	Canada	Gear identified	Pot/trap	Appeared to be anchored in groundline. There were approximately 12 body wraps. The whale was disentangled the following day. Left flipper possibly injured, but unable to confirm. No resights.	L2	L2	0	Rescue	-
26-Jan-12	7621	2.0 nm NE of Virginia Beach, VA	Entangled	USA	Fresh injury or known location	Hook/ Monofilament	Hook in back with monofilament trailing. Not a Gulf of Maine whale, but know became entangled in US waters (seen gear free 5 days prior). Resights indicate gear free and healthy.	L4, L10	L4, L10	0	Gear free, Healing	-

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Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
<b>Gulf of Maine humpback whale (<i>Megaptera novaeangliae</i>)</b>												
Mar-12	-	off Hatteras, NC	Entangled	USA	Gear identified	Gillnet	Anchored. Broke free as fisherman began to haul in net. 98-99% of gear retrieved but small amount of netting draped on fluke likely to be shed. No resights. SI was warranted due to anchoring gear.	L2	L3	0	Rescue	-
07-Apr-12	-	10.1 nm SE of Southwest Harbor, ME	Entangled	USA	Gear identified	Pot/trap	Anchored in multiple gear sets. Whale appeared thin but may have recently returned from wintering grounds. Disentangled. Became entangled again (see 04/13/12 event).	L2	L2	0	Rescue	1
13-Apr-12	-	18.7 nm SE of Southwest Harbor, ME	Entangled	USA	Gear identified	Pot/trap	Second entanglement for this individual (see 04/07/12 event) Anchored in multiple gear sets. Marine Patrol attached telemetry gear. Partial disentanglement. Likely to shed remaining gear. No resights. SI was warranted due to anchoring gear.	L2	L3	0	Rescue	1
29-Apr-12	-	10 nm ESE of Chatham, MA	Entangled	USA	Fresh injury or known location	Unknown	Appeared to be anchored. Not relocated. No resights.	L2	L2	1	-	1
18-May-12	Basmati	6.4 nm NW of Race Point, Provincetown, MA	Entangled	USA	Fresh injury or known location	Pot/trap	Mom of the year. Loose wrap on left fluke blade caught in old EN gouge. Partially disentangled--high flier and some line removed. Shed remaining gear. Resights indicate healthy.	L3	L3	0	-	-

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Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
Gulf of Maine humpback whale ( <i>Megaptera novaeangliae</i> )												
27-May-12	-	SE of Louisberg, Cape Breton, NS	Entangled	Canada	Gear identified	Pot/trap	Entangled towards the tail section with a buoy attached. Slight laceration where the tail meets the mid body, likely caused by the friction from the ropes. The fishermen were able to remove all the major ropes, only leaving a small amount of rope still attached. Remaining ropes were very loose and it was thought the attached buoy would most likely pull them off, but actual final configuration unknown. No resights.	L10	L10	0.75	-	-
09-Jun-12	Etch-a-sketch	6.2 nm NW of Race Point, Provincetown, MA	Entangled	USA	Fresh injury or known location	Monofilament line	Monofilament line. Point of attachment unknown. Resights indicate gear free.	L10	L10	0	Gear free, Healing	-
10-Jun-12	Apex	14.8 nm ESE of Chatham, MA	Entangled	USA	Gear identified	Monofilament line	Monofilament over flukes, attachment point unknown. Shed gear. Resights indicate healthy.	L10	L10	0	Gear free, Healing	-
18-Jun-12	Sabot	7.2 nm NW of Race Point, Provincetown, MA	Entangled	USA	Gear identified	Pot/trap	Line through mouth. Line exiting right mouth ended at mid-body. Line exiting left mouth trailing a buoy and ending just aft of flukes. No wraps. Partly disentangled - left with short trailing line on either side of mouth. Resighted gear free & healthy.	L3	L3	0	-	-
22-Jun-12	Dome	8.5 nm E of Chatham, MA	Entangled	USA	Fresh injury or known location	Monofilament line	Mom of the year. Heavy monofilament line through mouth. Line exiting right side ending mid-body with a Norwegian float. Line exiting left mouth ending just aft of flipper. No wraps. Resighted gear free & healthy.	L3	L3	0	-	-
05-Jul-12	Hiatus	5.0 nm NE of Chatham, MA	Entangled	USA	Gear identified	Pot/trap	Anchored with multiple body wraps. Disentangled. Same whale in a new entanglement on 08/18/12.	L2	L2	0	Rescue	1

**Appendix, continued. Details of reported baleen whale injury events along the Gulf of Mexico, US east coast and Atlantic Canadian Provinces, 2008-2012. Assignment of Serious Injury (SI) criteria, SI values and List of Fisheries (LOF) inclusion follow the guidance established by NMFS Instruction 02-038-01.**

Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
<b>Gulf of Maine humpback whale (<i>Megaptera novaeangliae</i>)</b>												
06-Jul-12	Serengeti	5.0 nm NE of Chatham, MA	Entangled	USA	Gear identified	Pot/trap	Anchored with line wrapped on head. Disentangled. Resights indicate healthy.	L2	L2	0	Rescue	1
08-Jul-12	Piano	6.2 nm N of Chatham, MA	Entangled	Unknown First seen USA	-	Unknown	Constricting wraps at peduncle. Unsuccessful disentanglement attempt. Resights indicate gear free and healthy.	L2	L2	0	Gear free, Healing	-
Jul-12	-	off Portland, ME	Entrapped	USA	Gear identified	Seine	Three whales in a purse seine. Swam in as setting net. Seine set completely, but then rings were dropped and whales & catch were released. No contact with gear. No resights.	L10	L10	0	Released	-
29-Jul-12	-	15.2 nm SE of Gloucester, MA	Entangled	Unknown First seen USA	-	Unknown	Tight wrap over tailstock, with unknown forward attachment point(s). Extensive fresh lacerations to peduncle. Not relocated. No resights.	L2	L2	1	-	1
04-Aug-12	Aphid	7.7 nm NE of Race Point, Provincetown, MA	Entangled	Unknown First seen USA	-	Unknown	Free-swimming with bridle and trailing line, no wraps. Appeared thin, and skin paler than pre-entanglement sighting suggesting health decline. No resights.	L3	L3	1	Health decline	1
16-Aug-12	Doric	10 nm SE of Gloucester, MA	Entangled	Unknown First seen USA	-	Monofilament line	Monofilament over right fluke. Attachment point unknown. Shed gear. Resights indicate healthy.	L10	L10	0	Gear free, Healing	-
18-Aug-12	Hiatus	4.7 nm NE of Chatham, MA	Entangled	USA	Gear identified	Pot/trap	Anchored with multiple body and head wraps. Disentangled. Resights indicate healthy.	L2	L2	0	Rescue	1
21-Aug-12	2011 Calf of Wizard	3.6 nm NE of Race Point, Provincetown, MA	Entangled	Unknown First seen USA	-	Monofilament line	Calf with monofilament trailing over left fluke. Point of attachment unknown. No resights.	L10	L10	0.75	-	1

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Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
<b>Gulf of Maine humpback whale (<i>Megaptera novaeangliae</i>)</b>												
24-Aug-12	Forceps	6.0 nm NW of Race Point, Provincetown, MA	Entangled	USA	Fresh injury or known location	Unknown	Small whale with bridle of line coming together in large tangle. Whale listing to the left and rolling upside down, and would dive from this position. Appeared to have difficulty spending time at surface. Unable to determine if there was weighted gear. Disentanglement unsuccessful. No resights.	L10	L10	1	Health decline	1
27-Aug-12	Cardhu	8.6 nm NW of Race Point, Provincetown, MA	Entangled	USA	Fresh injury or known location	Monofilament line	Mom of year with loose monofilament wrap over left fluke tip. Shed gear. Resights indicate healthy.	L3	L3	0	-	-
03-Sep-12	Reflection	2.6 nm NE of Race Point, Provincetown, MA	Entangled	USA	Gear identified	Monofilament line	Witnessed becoming entangled. Monofilament line draped across peduncle and flukes, but no wraps; unknown attachment point. Shed gear. Resights indicate healthy.	L10	L10	0	Gear free, Healing	-
16-Sep-12	TBA	20.1 nm NE of Gloucester, MA	Entangled	USA	Gear identified	Gillnet	Anchored in net by tail wraps. Disentangled. No resights.	L2	L2	0	Rescue	1
17-Sep-12	Goalpost	2.2 nm NE of Race Point, Provincetown, MA	Entangled	USA	Gear identified	Pot/trap	Free-swimming with line through mouth, overhead, and trailing. Line cutting into rostrum just in front of blowholes. Mostly disentangled, only small amount of line left in mouth and was expect to be shed. Resights confirm gear free and indicate healthy.	L2	L3	0	Rescue, Gear free, Healing	1
23-Sep-12	Zelle	12.5 nm SE of Portsmouth, NH	Entangled	USA	Fresh injury or known location	Monofilament line	Monofilament attached at left fluke tip barnacles. No hooks, wraps, or additional attachment points. Gear shed. Resights indicate healthy.	L3	L3	0	-	-
23-Sep-12	2009 Calf of Thumper	12.9 nm SE of Portsmouth, NH	Entangled	USA	Fresh injury or known location	Monofilament line	Monofilament attached to barnacles on left fluke tip. No line forward of that point. No resights.	L3	L3	0	-	-



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Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>		
Gulf of Maine humpback whale ( <i>Megaptera novaeangliae</i> )														
23-Oct-12	2012 Calf of Tornado	12.0 nm NE of Gloucester, MA	Entangled	USA	Gear identified	Pot/trap	Calf towing at least 200 feet of line with two buoys about 100 feet back. Attachment point unknown. Disentangled. No resights post October 2012	L10	L10	0	Rescue	1		
27-Nov-12	TBA	11.8 nm NE of Plymouth, MA	Entangled	USA	Gear identified	Pot/trap	Free-swimming with constricting wraps on peduncle & fluke blade, trailing line w/ buoys. Disentangled. No resights.	L2	L2	0	Rescue	1		
Western North Atlantic fin whale ( <i>Balaenoptera physalus</i> )									# events/sums:		9	4.75	2	5
08-Jun-08	-	25.5 nm SE of Bar Harbor, ME	Entangled	Unknown First seen USA	-	Unknown	Line out of both sides of the mouth meeting ~5-10 ft behind blowholes and forming a bridle with line trailing down body. No trailing line visible. Last report listed as 0.75 against PBR but changed to 0 because line appears to be a loose bridle.	L3	L3	0	-	-		
27-Apr-09	-	30 nm ENE of Portsmouth, NH	Entangled	Unknown First seen USA	-	Unknown	Trailing single bullet style buoy. Attachment point(s) and configuration unknown.	L10	L10	0.75	-	1		
09-Sep-09	-	between Campobello and Wolves Islands, NB	Entangled	Unknown First seen Canada	-	Unknown	Light line and buoys trailing from right flipper area along right flank. Partial disentanglement - cut some line, the rest may shed. Removed 300-400' of polysteel rope with 2 buoys.	L10	L10	0.75	-	1		
09-Oct-09	-	N of Long Island, NS	Entangled	Unknown First seen Canada	-	Unknown	Disentangled from 700' of 1/2" lead line w/ balloon buoy + 100' of 1/2" line & small 7" buoy. Whale looked thin and was having trouble getting to the surface. Believe all gear removed but could not confirm.-	L10	L10	0.75	-	1		
17-Jul-10	-	Montauk, Long Island, NY	Vessel strike	Unknown First seen USA	-	-	A set of two healed propeller scars on fin whale calf. Uncertain of original depth of injury.	L11	L11	0	Healing	-		

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Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
<b>Western North Atlantic fin whale (<i>Balaenoptera physalus</i>)</b>												
02-Jul-11	F100	between Anticosti Island and the North Shore, Gulf of St. Lawrence, QC	Entangled	Canada	Gear identified	Pot/trap	Towing 2 buoys. Buoys broke free & were recovered with no gear attached. Whale observed for another 1.5 hours but uncertain if completely gear free. Deep cuts in peduncle.	L5a, L10	L5a, L10	1	-	-
09-Jul-11	1028	18.2 nm SE of Portsmouth, NH	Entangled	Unknown First seen USA	-	Unknown	Line at tailstock. Gear shed. Resights indicate healthy.	L10	L10	0	Gear free, Healing	-
16-Jul-12	-	16.5 nm SE of Portland, ME	Entangled	Unknown First seen USA	-	Unknown	Trailing line and buoy. Attachment point(s) and configuration unknown.	L10	L10	0.75	-	1
30-Jul-12	0631	16.5 nm ESE of Portsmouth, NH	Entangled	Unknown First seen USA	-	Unknown	Trailing 2 buoys ~60ft behind flukes. Attachment point(s) and configuration unknown. Some discoloration on forward body.	L10	L10	0.75	-	1
<b>Nova Scotian sei whale (<i>Balaenoptera borealis</i>)</b>												
# events/sums:									1	1	0	1
09-Apr-08	-	51 nm E of Chatham, MA	Entangled	Unknown First seen USA	-	Unknown	Line over each fluke blade and constricting around peduncle with gear trailing ~1 body length. Constricting wrap at fluke insertion. Scuffing around body & rostrum suggests previously more extensive.	L2	L2	1	-	1
<b>Canadian East Coast minke whale (<i>Balaenoptera acutorostrata</i>)</b>												
# events/sums:									35	21.5	9	21
11-Mar-08	-	off Yarmouth, NS	Entangled	Unknown First seen Canada	-	Unknown	Free swimming with a buoy. Fishermen tried to remove the gear. No photos or description to determine extent of entanglement.	L10	L10	0.75	-	1
16-Jun-08	-	Plum Point, NL	Entangled	Canada	Gear identified	Pot/trap	Constricting wraps on left flipper with bridle. Disentangled and reported gear free.	L2	L2	0	Rescue	-
19-Jun-08	-	Grand Manan Island, NB	Entangled	Unknown First seen Canada	-	Unknown	Reported that tail wrapped in gear. No photos or description to determine extent of entanglement.	L10	L10	0.75	-	1

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Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
<b>Canadian East Coast minke whale (<i>Balaenoptera acutorostrata</i>)</b>												
28-Jul-08	-	Hopeall Point, Trinity Bay, NL	Entangled	Canada	Gear identified	Gillnet	Line and netting wrapped around peduncle. Partially disentangled. No resights. Unclear if animal gear free and/or in good condition.	L10	L10	0.75	-	-
20-Aug-08	-	off Outer Heron Island, Boothbay Harbor, ME	Entangled	Unknown First seen USA	-	Unknown	Line and buoy leading toward the head. Whale disappeared shortly after being sighted. No photos and description insufficient to determine extent of entanglement or if animal freed itself, drowned or swam off with gear.	L10	L10	0.75	-	1
21-Sep-08	-	3 nm N of Monhegan Island, ME	Entangled	Unknown First seen USA	-	Unknown	Buoy associated with whale and tail appeared to be held down, but could not confirm if anchored. No photos. Not relocated.	L10	L10	0.75	-	1
09-Oct-08	-	0.2 nm S of Appledore Island, Isles of Shoals, ME	Entangled	Unknown First seen USA	-	Unknown	Free-swimming with line and buoy. Unknown attachment point(s) or configuration. Not relocated.	L10	L10	0.75	-	1
19-Apr-09	-	Grand Le Pierre, Fortune Bay, NL (Labrador)	Entangled	Canada	Gear identified	Pot/trap	Partially disentangled from unknown original configuration by fisherman, left towing 5-6 pots. Not relocated.	L10	L10	0.75	-	-
03-Jun-09	-	Tadoussac, Northern Gulf of St. Lawrence, QC	Entangled	Canada	Fresh injury or known location	Unknown	Free-swimming with tight rostrum wrap.	L2	L2	1	-	-
17-Jun-09	-	Quirpon, Northern Peninsula, NL	Entangled	Canada	Gear identified	Gillnet	Entangled through mouth and around tail, anchored. Disentangled.	L2	L2	0	Rescue	-
16-Jul-09	-	Grand Manan Island, NB	Entrapped	Canada	Gear identified	Weir	Live in weir. Was not there the next day. Unclear if whale swam out or drowned.	L10	L10	0.75	-	-
11-Aug-09	-	6.25 nm NE of Plymouth, MA	Entangled	Unknown First seen USA	-	Unknown	Heavy netting cutting into rostrum and trailing down right side. Poor skin condition.	L2	L2	1	-	1
02-Sep-09	-	4.5 nm S of Pumpkin Island, ME	Entangled	Unknown First seen USA	-	Unknown	Entangled in rope and buoys. Attachment point(s) and configuration unknown.	L10	L10	0.75	-	1

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Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
Canadian East Coast minke whale ( <i>Balaenoptera acutorostrata</i> )												
11-Oct-09	-	7.6 nm NE of Truro, MA	Entangled	USA	Gear identified	Mid-water trawl	Caught by NOAA research vessel in midwater trawl. Believe whale caught on surface as net was hauled in. No wraps or apparent injury. Whale released after 5 minutes on deck. Swam off.	L9	L9	1	-	1
27-Jul-10	-	off Bliss Island, NB	Entrapped	Canada	Gear identified	Weir	Reported in weir. Gone within a day. Unclear if whale swam out or drowned.	L10	L10	0.75	-	-
14-Aug-10	-	2.6 nm ESE of Schoodic Island, ME	Entangled	USA	Gear identified	Pot/trap	Anchored in gear. Disentangled.	L2	L2	0	Rescue	1
19-Aug-10	-	1.7 nm NE of Ragged Island, ME	Entangled	USA	Gear identified	Pot/trap	Anchored in gear. Disentangled.	L2	L2	0	Rescue	1
21-Aug-10	-	3.5 nm ENE of Plymouth Harbor, MA	Entangled	Unknown First seen USA	-	Unknown	Free swimming with line wrap embedded around rostrum. No trailing lines. Resighted once with no change in configuration.	L2	L2	1	-	1
end-Oct-10	-	La Poile Bay, NL	Entangled	Canada	Gear identified	Seine	Rolled out of mackerel seine. Released alive. Few details.	L10	L10	0	Released	-
03-Jun-11	-	off Tadoussac, QC	Entangled	Canada	Fresh injury or known location	Unknown	Free-swimming with tight line over rostrum. Little documentation and no photos. Record added this report.	L2	L2	1	-	-
06-Jul-11	-	Ochre Pit Cove, Conception Bay, NL	Entangled	Canada	Gear identified	Gillnet	Mouth & peduncle entangled in net in unknown configuration. Disentangled.	L10	L10	0	Rescue	-
17-Jul-11	-	2.4 nm E of Nahant, MA	Entangled	Unknown First seen USA	-	Unknown	Free-swimming with heavy line on body forward of dorsal fin. Full configuration unknown. No photos or resights.	L10	L10	0.75	-	1
24-Jul-11	-	1.9 nm NNE of North Truro, MA	Entangled	Unknown First seen USA	-	Unknown	Reported with bullet buoy in tow. Attachment point(s) and configuration unknown. No photos or resights.	L10	L10	0.75	-	1
07-Sep-11	-	Greenspond, NL	Entangled	Canada	Gear identified	Gillnet	Initially anchored. Fisherman partially disentangled. Whale swam away towing 2 cod gillnets, haul-ups, & floats.	L2	L10	0.75	-	-

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Canadian East Coast minke whale ( <i>Balaenoptera acutorostrata</i> )												
19-Sep-11	-	Northumberland Strait, Pointe-Sapin, PEI	Entangled	Canada	Fresh injury or known location	Unknown	Line around tail stock. Having a hard time surfacing, seemed to be well anchored. Fisherman believed he was able to remove entangling gear. No further reports. Unknown if all gear removed.	L2	L10	0.75	-	-
05-Oct-11	-	0.7 nm SE of Pumpkin Island, ME	Entangled	USA	Gear identified	Pot/trap	Anchored in gear with line around rostrum. Full configuration of entanglement unknown. Response team cut line around head & whale quickly swam off likely gear free.	L2	L2	0	Rescue	1
04-Feb-12	-	6.5 nm NNW of Virginia Beach, VA	Entangled	Unknown First seen USA	-	Hook/Monofilament	Reported with hook/monofilament gear. Attachment point unknown.	L4, L10	L4, L10	0.75	-	1
15-May-12	-	Sable Island Bank off NS	Entangled	Canada	Gear identified	Pot/trap	Caught by tail in both crab and whelk pot gear. Tailstock cut to the bone by gear. Fisherman disentangled.	L2, L5a	L2, L5a	1	-	-
21-Jun-12	-	4.6 nm E of Frenchboro, ME	Entangled	Unknown First seen USA	-	Unknown	Heavy line constricting body, embedded in mouthline, and pinning flipper. Emaciated.	L2	L2	1	-	1
01-Jul-12	-	23.2 nm SE of Portsmouth, NH	Entangled	Unknown First seen USA	-	Unknown	Report of Norwegian float attached to whale. Little documentation and no photos.	L10	L10	0.75	-	1
13-Jul-12	-	10.5 nm SW of Jonesport, ME	Entangled	USA	Fresh injury or known location	Unknown	Anchored. Boater partially disentangled. At minimum line was left in the mouth. Final configuration unknown.	L2	L10	0.75	-	1
17-Jul-12	-	1.7 nm NNE of Chatham, MA	Entangled	Unknown First seen USA	-	Unknown	Free-swimming. Line exiting mouth and wrapping tightly across back. Netting also reported, but not visible in video. Emaciated. Not relocated.	L2	L2	1	-	1
02-Aug-12	-	6.7 nm E of Race Point, Provincetown, MA	Entangled	Unknown First seen USA	-	Unknown	Free-swimming trailing buoys. Attachment point(s) and configuration unknown. Not relocated.	L10	L10	0.75	-	1

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Date	Individual	Location	Cause of Injury	Country of Origin	Country ID method	Gear Type	Description	Initial SI criteria	Final SI criteria	SI value	SI value changes	LOF <sup>a</sup>
Canadian East Coast minke whale ( <i>Balaenoptera acutorostrata</i> )												
22-Aug-12	-	7.8 nm SE of Portsmouth, NH	Entangled	USA	Fresh injury or known location	Unknown	Anchored with several body wraps and two buoys at the surface. Fisherman disentangled and reported recovering almost all gear. Boater reported it breached and appeared gear free.	L2	L2	0	Rescue	1
17-Sep-12	-	Herring Cove, Campobello Island, NB	Entrapped	Canada	Gear identified	Weir	Entrapped in a herring weir. Fisherman pulled a few stakes and netting. Swam out without incident.	L10	L10	0	Released	-
Unidentified Whale								# events/sums:	11	5.07	1	5
Jun-08	-	off Gloucester, MA	Entrapped	USA	Gear identified	Seine	Entrapped in purse seine. Did not contact the gear. Release by fishermen.	L10	L10	0	Released	-
25-May-08	-	5 mi S of Friendship, ME	Vessel strike	Unknown First seen USA	-	-	Lacerations on the rear 1/3 of the animal with tail bent at an unusual angle.-No blood mentioned in description. No clear indication if this injury is fresh or not. Not relocated. Record added this report.	L11	L11	0.52	-	-
03-Sep-08	-	Stellwagen Bank off MA	Vessel strike	USA	Fresh injury or known location	-	UCGC small boat (17') was en route as an unknown species of whale surfaced in the trough between waves. The small boat landed on the animal as the wave flattened. Traveling at 12 kts, but slowed to "clutch ahead" immediately before contact. The prop did not appear to hit the animal. No injuries were seen, and the animal submerged. Crew saw a fin on the whale.	L7b	L7b	0.14	-	-
31-Mar-09	-	~3.5 mi off of Hilton Head Island, SC	Vessel strike	USA	Fresh injury or known location	-	30' pleasure craft @ 22-23 kts reported striking a whale and seeing copious amounts of blood coming from top of the head (actual wounds not described), animal "tail slapping". Boat began to sink and USCG rescued passengers. No injured whale was located after intensive aerial surveys.	L6b, L11	L6b, L11	0.52	-	-

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Unidentified Whale												
20-Jun-09	-	off Race Point, Provincetown, MA	Vessel strike	USA	Fresh injury or known location	-	22' private vessel @ ~15-20 knots when whale surfaced ~20' dead center in front of bow, slowed engines but struck whale, no blood in water or injury seen, stayed with whale for ~20 min while surfaced several times then swam away	L7b	L7b	0.14	-	-
26-Oct-10	-	Smokey Bank off NS?	Entangled	Unknown First seen Canada	-	Unknown	Seen trailing a 20" rubber buoy. Fisherman approached twice but could not get a good look at entangling gear. It appeared that there was some weight on the buoy. Record added this report.	L10	L10	0.75	-	1
15-Nov-10	-	east of East Wolf Island, NB	Entangled	Unknown First seen Canada	-	Unknown	Seen trailing buoys. Attachment point(s) and configuration unknown. Not relocated.	L10	L10	0.75	-	1
21-Sep-11	-	Northumberland Strait, Pointe-Sapin, PEI	Entangled	Unknown First seen Canada	-	Unknown	Reported entangled but no description of entanglement. Not relocated.	L10	L10	0.75	-	1
02-Feb-12	-	Norfolk, VA	Vessel strike	USA	Fresh injury or known location	-	Submarine traveling on surface (362 ft @ 10 kts) struck what they identified as a whale based on its size. The animal rolled over the bow then swam off of the port side. No blood seen in the water.	L6c	L6c	0	-	-
15-Jun-12	-	120 km E of Cape Cod, MA	Entangled	Unknown First seen USA	-	Unknown	Reported dragging 40-50 feet of line with buoy. Attachment point(s) and configuration unknown.	L10	L10	0.75	-	1
31-Jul-12	-	off Digby, NS	Entangled	Unknown First seen Canada	-	Unknown	Free-swimming with net wrapped around head and hanging half way down body. Described as a trawl or gill net. Net had about 3 inch square mesh. Thought it may have been a cast away as it was frayed around edges. Conflicting species identification - unable to confirm.	L10	L10	0.75	-	1

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## **Style**

The CRD series is obligated to conform with the style contained in the current edition of the United States Government Printing Office Style Manual. That style manual is silent on many aspects of scientific manuscripts. The CRD series relies more on the CSE Style Manual. Manuscripts should be prepared to conform with these style manuals.

The CRD series uses the American Fisheries Society's guides to names of fishes, mollusks, and decapod

crustaceans, the Society for Marine Mammalogy's guide to names of marine mammals, the Biosciences Information Service's guide to serial title abbreviations, and the ISO's (International Standardization Organization) guide to statistical terms.

For in-text citation, use the name-date system. A special effort should be made to ensure that all necessary bibliographic information is included in the list of cited works. Personal communications must include date, full name, and full mailing address of the contact.

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## **Publications and Reports of the Northeast Fisheries Science Center**

The mission of NOAA's National Marine Fisheries Service (NMFS) is "stewardship of living marine resources for the benefit of the nation through their science-based conservation and management and promotion of the health of their environment." As the research arm of the NMFS's Northeast Region, the Northeast Fisheries Science Center (NEFSC) supports the NMFS mission by "conducting ecosystem-based research and assessments of living marine resources, with a focus on the Northeast Shelf, to promote the recovery and long-term sustainability of these resources and to generate social and economic opportunities and benefits from their use." Results of NEFSC research are largely reported in primary scientific media (*e.g.*, anonymously-peer-reviewed scientific journals). However, to assist itself in providing data, information, and advice to its constituents, the NEFSC occasionally releases its results in its own media. Currently, there are three such media:

*NOAA Technical Memorandum NMFS-NE* -- This series is issued irregularly. The series typically includes: data reports of long-term field or lab studies of important species or habitats; synthesis reports for important species or habitats; annual reports of overall assessment or monitoring programs; manuals describing program-wide surveying or experimental techniques; literature surveys of important species or habitat topics; proceedings and collected papers of scientific meetings; and indexed and/or annotated bibliographies. All issues receive internal scientific review and most issues receive technical and copy editing.

*Northeast Fisheries Science Center Reference Document* -- This series is issued irregularly. The series typically includes: data reports on field and lab studies; progress reports on experiments, monitoring, and assessments; background papers for, collected abstracts of, and/or summary reports of scientific meetings; and simple bibliographies. Issues receive internal scientific review and most issues receive copy editing.

*Resource Survey Report* (formerly *Fishermen's Report*) -- This information report is a regularly-issued, quick-turnaround report on the distribution and relative abundance of selected living marine resources as derived from each of the NEFSC's periodic research vessel surveys of the Northeast's continental shelf. This report undergoes internal review, but receives no technical or copy editing.

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