FINAL REPORT TO
GEORGIA DEPARTMENT OF NATURAL RESOURCES

NORTHERN EARLY WARNING SYSTEM
NORTH ATLANTIC RIGHT WHALE (*Eubalaena glacialis)*
AERIAL SURVEYS, 2008-2009 SEASON

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TABLE OF CONTENTS

List of Figures

List of Tables

List of Appendices

Abstract

The endangered North Atlantic right whale (*Eubalaena glacialis*) experiences a high level of anthropogenic mortality, including collisions with vessels and entanglement in fishing gear. In the Southeast United States, the only known calving ground for the species, an Early Warning System of aerial surveys was developed in 1993 to mitigate vessel collisions and document habitat use and reproductive status. The 2008-2009 Northern Early Warning System (NEWS) surveys were conducted by Wildlife Trust from 1 December 2008 to 31 March 2009. The NEWS survey area extended from the northern end of Sapelo Island (31º 32.0N) to mid-Cumberland Island, Georgia (30º 53.0N), eastward approximately 32 nautical miles (nmi). A total of 42 NEWS surveys were conducted, logging 252.5 hours of flight time and averaging 6.0 hours per survey. Overall, 15,233.5 nmi of trackline were flown, with 12,115.7 nmi (80%) flown in a Beaufort wind force scale (sea state) of three or less. The complete survey area (442.8 nmi of trackline) was flown during 52% of flights (n = 22). An additional three flights were conducted (n = 22.3 h) exclusively in support of whale disentanglement efforts.

A total of 197 right whale sightings were documented by the NEWS survey team, averaging 2.4 whales per sighting (range: 1-10 whales). Of the 197 sighting events that were photo-documented, 66 sightings involved mother/calf pairs, 38 were single animals (including pregnant females), and 83 sightings were of groups of two to ten right whales. Preliminary photo analysis identified 190 individual whales, including 28 mother/calf pairs. Of these, 144 whales were preliminarily matched to the North Atlantic Right Whale Catalog. Eighteen individual whales were not identified and were assigned intermatch or season codes. The remaining 28 unmatched whales were calves born in the 2008-2009 season. From December 2008 to March 2009, a total of 39 mother/calf pairs were identified in the Southeast US. Thirty-four of these females were observed within the NEWS survey area, six prior to calving and 28 post-calving. One mother/calf pair (EGNO 3139) was only sighted in the NEWS area.

The amount of aerial survey effort varied among months, with the least trackline distance flown in January (n = 2488.6 nmi) and the most flown in March (n = 5072.6 nmi). However, the number of whales sighted each month did not directly correspond to survey effort. The greatest number of right whales were sighted in February (n = 212); the fewest were sighted in December (n = 64). Many right whales observed in the NEWS survey area were re-sighted on multiple occasions, including 68% of mother/calf pairs (average = 2.7, range: 1-9). Preliminary data indicate that 24 right whales were sighted solely within the NEWS survey area during the 2008-2009 calving season. Additionally, four entangled right whales (EGNO's 3294, 3311, 3346 and the 2007 Calf of 2614) and two whale/vessel interactions were documented within the NEWS survey zone.

Introduction

The North Atlantic right whale (*Eubalaena glacialis*) is protected in U.S and territorial waters pursuant to the Marine Mammal Protection Act of 1972, and is classified as an endangered species under the Endangered Species Act of 1973. The only known calving ground for the North Atlantic right whale consists of Atlantic coastal waters in the southeastern United States (SEUS). A portion of the region was designated as Critical Habitat for northern right whales by the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS) in 1994 and encompasses the waters from Altamaha Sound, Georgia, to Sebastian Inlet, Florida, out to 5-15 nmi from the shoreline (50 CFR 226.203). Minimizing sources of anthropogenic mortality and serious injury is a primary objective of the North Atlantic Right Whale (*Eubalaena glacialis*) Recovery Plan (NMFS, 2005). Vessel collisions are a leading anthropogenic cause of right whale mortality. The SEUS critical habitat includes entrances to four commercial shipping ports (Brunswick, Georgia; Fernandina, Jacksonville, and Port Canaveral, Florida), resulting in frequent usage of these waters by large commercial and military vessels. The Early Warning System (EWS) was created in 1994 to alert military and commercial vessels to the presence of right whales, potentially reducing the probability of right whale/vessel collisions. The first EWS survey area encompassed waters from Brunswick, Georgia, to St. Augustine, Florida, out to approximately 20 nmi. Data collected subsequently indicated that right whales regularly utilize waters outside of this area. In 2002, NMFS redesigned the EWS system to include three survey areas (northern, central and southern) encompassing waters from Sapelo Island, Georgia (31º 32.0N), to Crescent Beach, Florida (29º 47.0N), out to approximately 30 nmi. The survey effort described in this report covers the Northern Early Warning System (NEWS) survey zone, from the northern end of Sapelo Island to mid-Cumberland Island, Georgia (30º 53.0N).

The objectives of the 2008-2009 NEWS surveys were to implement actions of the North Atlantic Right Whale Recovery Plan, including: 1) reduce vessel collisions with right whales, 2) document and provide support for right whale disentanglement, 3) document dead and stranded right whales, 4) monitor the status and trends of abundance and distribution of the western North Atlantic right whale and 5) characterize and monitor right whale habitat. This report examines the results of the Wildlife Trust (WT) NEWS aerial survey season from 1 December 2008 through 1 March 2009.

Methods

Study Area

NEWS surveys included waters from the northern end of Sapelo Island (31º 32.0N) to mid-Cumberland Island, Georgia (30º 53.0N), eastward approximately 32 nmi. Fourteen east/west tracklines of various lengths (28.8-32.4 nmi) were flown at 3 nmi intervals (Fig. 1). A complete survey consisted of 442.8 nmi of trackline (Table 1), not including miles flown in transit to, from, and between transect lines. On days when the NEWS survey aircraft was unavailable due to scheduled maintenance or pilot down-time, a two-plane or one-plane contingency plan was often implemented, during which survey aircraft from the Central Early Warning System (CEWS) and/or the Southern Early Warning System (SEWS) shifted their survey coverage north to include much of the NEWS survey area. On days when the CEWS or SEWS survey aircraft were unavailable, the NEWS survey team flew a two-plane contingency plan and shifted their coverage south into the northern section of the CEWS survey area.

Aerial Surveys

Surveys were flown daily, weather permitting, from 1 December 2008 through 31 March 2009. Survey aircraft departed from Malcolm McKinnon airport on St. Simons Island, Georgia, and returned

to the same airfield after each flight. All NEWS surveys were conducted in a NOAA DeHaviland Twin Otter aircraft. The survey aircraft was equipped with Global Positioning System (GPS) navigation aids, radar, aviation VHF radio, marine VHF radio, a life raft, PFDs, survival suits, flares, EPIRB, an aircraft ELT, and a satellite telephone. Each observer was equipped with an individually registered GPIRB, FAA approved survival vest, NOMEX flight suit, knife, rescue streamer, and strobe light.

Surveys were flown at an altitude of 1000 ft (303 m) and an average air speed of 100 mph (160 km/hr). Surveys typically began at the western waypoint of the northernmost trackline, however the start point and direction of flight was determined daily based on weather conditions in the survey area and other survey factors. Attempts were made to fly the area surrounding the Brunswick shipping channel during each survey due to increased vessel traffic, including dredge activity. Environmental conditions required for a survey included: ceiling $\geq$ 455m, visibility > 2 nmi, wind speed < 10 knots, and Beaufort sea state $\leq$ 4.

The survey crew consisted of a pilot (PIC) and co-pilot (SIC), two observers, and a data recorder. Observers were positioned on either side of the aircraft at forward bubble windows, and rotated positions every four tracklines to minimize observer fatigue. The data recorder logged all sightings into Logger 2000, a software program designed by the International Fund for Animal Welfare (IFAW) for marine survey data entry. The time, location, number, and species of all large whales, leatherback turtles, and manatees were recorded. Logger 2000 also recorded time, position (lat/long), altitude, heading, and aircraft speed at 30 s intervals. In addition, all vessels observed in the survey area were recorded. Sighting angles, type, and heading were recorded for all large vessels ($\geq$100 ft).

When a right whale was observed, a GPS position was recorded along the trackline at the point of observation, another GPS location was obtained directly over the whale(s), and photographs were obtained and behavioral observations noted while circling the whale(s). Circling for photographic documentation was generally limited to 15 min per sighting.

Data Collection

Sighting distance from the trackline for observed right whales was calculated whenever possible, using the lat/long position on the trackline perpendicular to the position of the whale sighting (lat_1, $long_1$), and the lat/long exact overhead position of the right whale (lat_2, $long_2$). The whale's distance in nmi from the trackline was determined by subtracting the distance between the two latitude positions, as 1 min of latitude = 1 nmi in the study area (Fig. 2).

Following completion of data collection for each right whale sighting event, sighting information was relayed to a designated ground contact via satellite phone. The ground contact then distributed the sighting information to various maritime, military, management, and scientific interests in the SEUS via an email distribution list, as part of a system for near real-time dissemination of right whale sightings developed to minimize the probability of right whale death or injury due to collisions with vessels (Taylor and Brooks 2002). The email included distance and direction of the sighting from the closest channel sea buoy, source of the sighting, date, time, lat/long, direction of movement, age class, and number of right whales sighted. Right whale sighting data was distributed to right whale aerial survey teams, harbor pilots, U.S. Coast Guard (USCG) NAVTEX, state agencies, and the Fleet Area Control and Surveillance Facility (FACSFACJAX) at Naval Air Station Jacksonville, among others. FACSFACJAX disseminated right whale sighting information to military ships and aircraft operating throughout the SEUS, and the USCG used NAVTEX to notify large commercial vessels throughout the SEUS. Reports also allowed aerial survey teams to investigate and verify sightings obtained from other sources such as the USCG, other military ships, recreational vessels, dredges, and aircraft. If a right whale sighting was within 5 nmi of the Brunswick channel, the Brunswick harbor pilots were contacted

directly with the sighting information. Sightings were also entered into the Mandatory Ship Reporting (MSR) system.

The NEWS survey team documented any interactions/co-occurrences of vessels and rights whales. The survey team documented the location, number, heading, and behavior of the whales involved in the episode. The location, name, type, length, speed, and heading of each of the vessels involved were also recorded throughout the event. Monitoring of the situation continued until the vessels were no longer in the same vicinity as the right whales. Photographic and video documentation were obtained whenever possible. Attempts were also made to contact the vessels over VHF to alert them to the presence and location of the right whales. All the information collected for each interaction/co-occurrence was entered into an Access database and submitted to NMFS, the Georgia Department of Natural Resources (GDNR) and Florida Fish and Wildlife Research Institute (FWRI).

Right whales are individually identified by the patterns of cornified skin primarily located on the top of the head between the tip of the rostrum and the blowhole (Payne *et al.* 1983, Kraus *et al.* 1986). Photographs of right whale callosity patterns and other features, including scars, are used for identification and the cataloging of individual right whales. Right whales observed during the NEWS aerial surveys were photographed and sketched in order to identify individual animals. Photographs were taken with a Canon 20D or 50D digital camera with a Canon 100-400 mm image stabilized lens at an altitude of 1000 ft (303m). All photographs obtained during the 2008-2009 NEWS survey season were compared against each other, right whale images from other SEUS aerial survey teams and the New England Aquarium's (NEA) catalog of North Atlantic right whales to determine the probable identity and re-sights of each individual whale encountered. Preliminary photo analysis by the NEWS team and initial verification by NEA has been completed. However, all right whale identifications listed within this report should be considered preliminary and unverified until NEA has analyzed all photographs from the 2008-2009 SEUS calving season. Final comparison and confirmation by NEA is now underway and may be completed in 2010-2011.

Results

Aerial Surveys

A total of 42 NEWS surveys were conducted from 3 December 2008 to 31 March 2009 (Table 2), totaling 252.5 hours of survey effort. Overall, 15,233.5 nmi of trackline were flown, with 80% flown in a sea state of three or less. The complete survey area (442.8 nmi of trackline) was covered during 52% of flights (n = 22). Incomplete surveys (n = 20) occurred because of inclement weather, two-plane contingencies or special circumstances (e.g. documenting entangled whales). Non-survey days primarily resulted from poor weather conditions; other reasons included required rest for survey pilots after six days of duty, aircraft maintenance and flights dedicated solely to disentanglement aerial support (Table 3). Five two-plane contingency flights were conducted in the NEWS survey zone by NEA on 21-23 January and 5-6 March 2009.

Survey effort varied within and among surveys (Fig. 3, 4) due to changes in weather (e.g. sea state, fog, low ceiling) and survey logistics (e.g. 2-plane contingency plans, shipping channel surveys, entangled whale response). Spatially, total survey effort was greatest in the vicinity of the Brunswick shipping channel, some portions of which were covered during 93% of surveys (n = 39; Fig. 3, 4). Survey effort varied among months (Fig. 5, 6; Table 4), with the lowest effort in January (n = 7 surveys, 29% complete) due to weather conditions and aircraft maintenance. Survey effort was greatest and least variable in February (n = 11 surveys, 63% complete) and March (n = 13 surveys, 69% complete).

A total of 197 right whale sightings, averaging 2.4 whales per sighting (range: 1-10), were documented by the NEWS survey team during the 2008-2009 calving season (Appendix 1). The first

sighting was on 3 December 2008 and the last sighting was on 30 March 2009. Seven of the 197 sightings (n = 19 whales) were documented in the CEWS survey area while the NEWS team was flying two-plane contingency flights. Seven sightings (n = 15 whales) were documented outside the NEWS survey area during special circumstance flights. Overall, 76 of the 197 sightings involved mother/calf pairs, 38 were of single animals, and 83 sightings were of groups of two to ten right whales (Fig. 7).

Thirteen right whales were not photographically documented due to elusive behavior or because the whales were sighted during a disentanglement effort. Preliminary photo analysis of all other sightings by WT and preliminary verification by NEA has resulted in the identification of 28 mother/calf pairs and an additional 134 individual adult/juvenile whales, for a total of 190 individual right whales (Appendix 1). Of these 190 individual whales, 186 were sighted in the NEWS survey area. This represents a 27% increase over the next closest season (2007-08, n = 146) and a 96% increase over average numbers of individual right whales in the NEWS area for the previous five survey seasons (n = 95, Fig. 8). Of the 39 mother/calf pairs documented in the SEUS during the 2008-2009 calving season, 28 were documented within the NEWS survey area (Appendix 2). Of these, 11 mothers were first documented with their 2009 calves in the NEWS survey area, and six pregnant females were documented in the area only prior to calving.

Basic demographic data and sighting information for the 144 identified whales are provided in Appendix 2. Preliminary comparisons of whales sighted in the different SEUS survey areas (South Carolina/northern Georgia, NEWS, CEWS and SEWS) indicated that a total of 24 whales may have been sighted only in the NEWS survey area during the 2008-2009 season. EGNO 3139 and her calf were sighted three times in the NEWS survey area, but nowhere else in the SEUS. Results may change as further photo analysis is completed.

Seventeen percent of NEWS right whale sightings occurred in December, 20% in January, 44% in February and 19% in March (Fig. 9). Overall, 45% of the 197 right whale sightings documented during the 2008-2009 NEWS season were located outside of the currently designated right whale critical habitat and 40% of these sightings included mother/calf pairs (Fig. 9). Thirty-three percent of sightings were documented along the seven northern tracklines, while 67% of sightings were documented along the seven southern tracklines, which includes the Brunswick shipping channel (Fig. 9). Approximately 9% (n = 18) of right whale sightings were located within the Brunswick channel recommended shipping routes.

Re-sights of whales observed in the NEWS area were common (Appendix 1). Calving females were sighted within the NEWS survey area an average of 2.7 times per whale (range: 1-9). EGNO 1281 and her 2009 calf were sighted most frequently (n = 9). EGNO 3317, a 2009 mother, was seen 110 days apart (5 December 2008 to 30 March 2009), the longest "residency" documented by the NEWS team. Re-sight frequency for non-calving females and males in the NEWS survey area was 2.0 and 1.9 sightings per whale, respectively (Appendix 2). Presumed sexually mature males (10 years or older, Kraus *et al.* 2007) were sighted 1.3 times on average.

Average right whale sighting distance during the 2008-2009 season was 0.65 nmi (SD = 0.52). Sighting distances ranged from 0.0 nmi to 2.90 nmi, with 99% of the sightings occurring between 0.0 nmi and 1.8 nmi (Fig. 10).

Whale/Vessel Interactions

The Wildlife Trust survey team observed two interactions/co-occurrences of right whales and vessels and investigated one possible vessel strike during the 2008-2009 NEWS surveys (Appendix 3). Immediately following the two observed events, the required whale/vessel interaction forms were completed and forwarded to the proper authorities within GDNR and NMFS. The first incident occurred on 4 January 2009 when the NEWS survey team was dispatched to the area of the Brunswick sea buoy

to help locate multiple right whales within close proximity to a car carrier attempting to enter the Brunswick Channel. A Brunswick pilot boat and GDNR Law Enforcement (GDNR LE) vessel were in the area attempting to assist the car carrier in avoiding the right whales. The NEWS survey team located 14 whales in seven groups near the sea buoy and relayed location information to the vessels. Once the car carrier was clear of any known whales in the area, the survey team photographed all whales and resumed the survey.

On 19 January 2009, the right whale observer on board the dredge, *Dodge Island*, sighted a right whale mother/calf pair near the Brunswick channel. The sighting information was relayed to the NEWS survey team, who located the whales swimming south into the Brunswick channel. The team monitored the whales until they left the channel and provided location information to the dredge and its support boat, the *Catina Renea*. Once the whales were clear of the channel the vessels continued transiting the channel, passing approximately 300 yards to the south of the right whales. The NEWS survey team remained with the mother/calf pair until they were well clear of any vessel traffic.

On 31 March 2009, the NEWS survey team was contacted by NMFS with a request to fly north to document a possible vessel strike off Hilton Head, South Carolina. The team transited to Hilton Head and located the recreational vessel, *Glory Days*, which had reported striking a whale and seeing blood in the water. After searching for 1.5 hours, the NEWS team did not find any evidence of a whale in the area. The South Carolina/Northern Georgia (SCGA) aerial survey team took over the search after the NEWS aircraft left to refuel, but did not sight any whales in the area.

Events

Right Whale Sightings from Outside Sources

There were additional right whale sightings in the NEWS survey zone reported from other sources, including the USCG, recreational vessels, the Brunswick harbor pilots, GDNR LE, dredges, and the NEA survey team flying two-plane contingency flights in the NEWS area (Table 5). When the NEWS survey team received an unverified report from an outside source, the team made every effort to verify and document the whale sighting. However, there were occasions in which right whales were sighted by other sources after the survey team had finished flying for the day or on no-fly days, in which case the right whale sightings could not be verified by the survey team.

Entangled Right Whales

Four entangled right whales (EGNO's 3294, 3311, 3346 and the 2007 Calf of 2614) were observed during 2008-2009 NEWS surveys. Digital images of the entangled right whales were sent to NEA and the Provincetown Center for Coastal Studies (PCCS) for assessment of each whale's condition. Sighting data were also relayed to GDNR and NMFS. In total, 37.6 hours were spent tracking, documenting and providing aerial support for disentanglement efforts during the 2008-2009 calving season (Table 6).

Entangled whale EGNO 3294 was first sighted in the SEUS off Florida by the NEA survey team on 8 December 2008. The NEWS survey team re-sighted the entangled whale on 18 December 2008 off Cumberland Island, Georgia (Fig. 7, Appendix 1). The NEWS survey team provided aerial support to the GDNR first response team for 3.8 hours. On 1 February 2009, EGNO 3294 was sighted by NEA northeast of Fernandina Beach, Florida. The NEWS survey team was dispatched to the location to assist with tracking and documenting the whale for approximately 1.0 hour. The images of EGNO 3294 obtained on 1 February indicated that the whale was gear free (S. Landry, pers. comm.).

EGNO 3311 was first sighted entangled on 14 January 2009 off of Brunswick, Georgia, by the NEWS survey team (Fig. 7, Appendix 1). The team spent a total of 21.0 hours from 14 January to 6

March 2009 tracking and providing aerial support to disentanglement teams working with EGNO 3311 (Table 6). The final disentanglement effort on 5-6 March 2009 successfully employed sedation techniques and resulted in the removal of almost all entangling line.

On 7 February 2009, during post-flight photo analysis, the NEWS team discovered that the 2007 Calf of 2614 was entangled with black line. This whale had been sighted on 5 January 2009 off of Florida free of gear (J. Hain, Marineland Right Whale Project, pers. comm.). On 9 February 2009 the whale was re-sighted off of Cumberland Island, Georgia (Fig. 7, Appendix 1). The NEWS team provided aerial support while the GDNR first response team attached a telemetry buoy, and the following day re-located the entangled whale to assess the status of the telemetry buoy attachment. On 12 February 2009 the NEWS survey team located the whale off of St. Catherine's Island, Georgia, and provided aerial support during a disentanglement effort. It is believed the whale will eventually shed the small amount of remaining line (S. Landry, pers. comm.).

Entangled whale EGNO 3346 was located by the NEWS survey team off of Jekyll Island, Georgia, on 13 February 2009 (Fig. 7, Appendix 1). The male juvenile right whale, known as "Kingfisher", was first seen entangled off of Florida on 17 March 2004. No disentanglement attempt was made during the 2008-2009 season.

Dead Right Whales

No dead right whales or other large whales were sighted during the 2008-2009 NEWS survey season.

Marine Animal Sightings

All sightings of large whales, leatherback turtles and manatees were recorded while conducting the NEWS surveys. During the 2008-2009 NEWS surveys, 64 leatherback turtles (Table 7) and zero manatees were sighted. One humpback whale was sighted on 1 February 2009 at 30º 52.8N, 81º 03.2W.

Discussion and Recommendations

A total of 186 individual right whales, based on preliminary analysis, were documented in the NEWS survey zone during the 2008-2009 season. This is a 96% increase over average sighting numbers for the five previous survey seasons. The number of calves documented within the NEWS survey zone (n = 28) is a 93% increase over average numbers for the five previous survey seasons. This increase in numbers may be part of a natural cycle of fluctuating use of the calving ground based on the number of calving females and the number of juvenile whales present in the population, or may indicate a general increase in use of the region by multiple segments of the population. Right whale calves and juveniles account for 50% of all vessel strike deaths (Knowlton and Kraus 2001), and with the high levels of calving since 2001 the number of juveniles in the population has increased substantially. Regardless of the cause of increased use, the higher density of right whales within the region emphasizes the importance of continued management and research efforts in the SEUS to document habitat use and mitigate potential effects of human activities. The best methods for providing adequate coverage of the region should be analyzed and updated frequently.

The 2008-2009 survey season reflects an increase in the number of individual mother/calf pairs sighted in the NEWS area (n=28) and the entire SEUS (n=39). Thirty-four mothers were observed within the NEWS survey area, a 79% increase over the 19 mothers sighted during the 2007-2008 survey season. At least 151 other right whales, including no less than 25 adult males, were also observed in the NEWS survey zone. Our understanding of whale use of the calving ground by demographic groups

other than pregnant females is not well understood at this time, but this general increase in numbers should be an important consideration for scientists and managers working in the region.

Many right whales observed in the NEWS survey area were sighted more than once, including 68% of mother/calf pairs (average = 2.7, range: 1-9). EGNO 1281 and her 2009 calf were sighted nine times in the NEWS area during January-March 2009. Based on re-sighting events only in the NEWS survey area, we can speculate on minimum "residency" time of individual whales on the SEUS calving grounds. EGNO 3317, a 2009 mother, was seen 110 days apart (5 December 2008 to 30 March 2009), the longest "residency" documented by the NEWS team. The average minimum residency time of all calving females noted by the NEWS team was 30.5 days. These data would be much more informative if combined with and compared to data from other survey teams within the SEUS to obtain a more complete picture of right whale use and behavior. Comparison of individual animal locations and distribution between all EWS teams, as well as survey teams in the mid-Atlantic region, will provide a more complete and constructive representation of right whale movements and residency patterns throughout the region. One comprehensive analysis providing results from each season would be a practical tool for managers and researchers alike.

Despite the apparent increase in the number of right whales inhabiting the NEWS region and the long residency times observed for some whales, only two whale/vessel interactions were observed by the NEWS survey team during the 2008-2009 season. Both whale/vessel co-occurrences were observed in close proximity to the Brunswick channel and involved various vessel types and sizes. On one occasion, a mother/calf pair was sighted swimming directly into the Brunswick channel. This incident, along with right whale sightings in proximity to or within the boundaries of the recommended Brunswick channel shipping routes, suggest a need for continued monitoring of high-risk areas within the SEUS calving grounds. It remains to be seen whether recent management actions by NMFS, including a slow speed seasonal management area along the eastern seaboard, are being complied with and are effectively minimizing risk for right whales in the region. Determining the value and effectiveness of the new regulations will require long-term monitoring of right whale habitat.

An increase in documented right whale entanglements in the SEUS during the 2008-2009 season highlighted the importance of aerial surveys in locating entangled whales and providing valuable aerial support for disentanglement crews. In the NEWS survey area, one and two entangled whales were sighted during the 2006-2007 and 2007-2008 survey seasons, respectively. However, four entangled whales were documented during the 2008-2009 NEWS surveys and a total of five entangled whales were sighted in the SEUS. This increase in entangled whale sightings may be an anomaly, or it could be an indication of an overall increase in the number of right whales facing fishing gear entanglements.

Aerial surveys appear to be a reasonably effective method for locating right whales and mitigating vessel collisions throughout the SEUS during daylight hours and optimal weather conditions. Currently the documentation of right whales via aerial surveys is one of the few methods available for determining right whale survivability. However, it is important to regularly review and assess the limitations and objectives of aerial survey efforts to ensure proper focus and effectiveness. The NEWS team conducted surveys for 252.5 hours over four months, representing only 12% of the available 2,904 hours during the calving season. Limitations of aerial surveys include inclement weather, available daylight, observer fatigue, and high operational costs. Wildlife Trust is grateful for the increased aerial safety requirements implemented by NMFS during 2003, but safety considerations must continue to be in the forefront when weighing the costs and benefits of many hours of survey effort. We recognize that the existing survey program, or some iteration of the current survey design, is the most effective method available for monitoring right whales in the SEUS. However, it is important to continue investigations into other management techniques and emerging technologies to enhance right whale monitoring and mitigation efforts.

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References

Knowlton, A.R., and S.D. Kraus. 2001. Mortality and serious injury of the northern right whales (*Eubalaena glacialis*) in the western North Atlantic Ocean. The Journal of Cetacean Research and Management Special Issue 2:193-208.

Kraus, S.D., K.E. Moore, C.A. Price, M.J. Crone, W.A. Watkins, H.E. Winn and J.H. Prescott. 1986. The use of photographs to identify individual North Atlantic right whales (*Eubalaena glacialis*). Pp. 145-151. *In:* R.L. Brownell, P.B. Best and J.H. Prescott (Eds.) Right Whales: Past and Present Status, Special Issue 10. International Whaling Commission, Cambridge, England. 289pp.

Kraus, S.D., R.M. Pace III, T.R. Frasier. 2007. High Investment, Low Return: The Strange Case of Reproduction in *Eubalaena glacialis*. Pp. 172-199. *In*: Kraus, S. D., R.M. Rolland (Eds.). *The Urban Whale. North Atlantic Right Whales at the Crossroads*. Harvard University Press, Cambridge, MA. 543 pp.

National Marine Fisheries Service. 2005. Recovery Plan for the North Atlantic Right Whale (*Eubalaena glacialis*). National Marine Fisheries Service, Silver Spring, MD. 137pp.

Payne, R., O. Brazier, E.M. Dorsey, J.S. Perkins, V.J. Roundtree and A. Titus. 1983. External features in southern right whales (*Eubalaena australis*) and their use in identifying individuals, pp. 371-445. *In:* R. Payne (Ed) Communication and Behavior of Whales. Westview Press, Boulder, CO.

Taylor, C.R. and W.B. Brooks Jr. 2002. Dissemination of northern right whale (*Eubalaena glacialis*) sighting information to the Southeast U.S. maritime community. Marine Technology Society Journal 36(2).

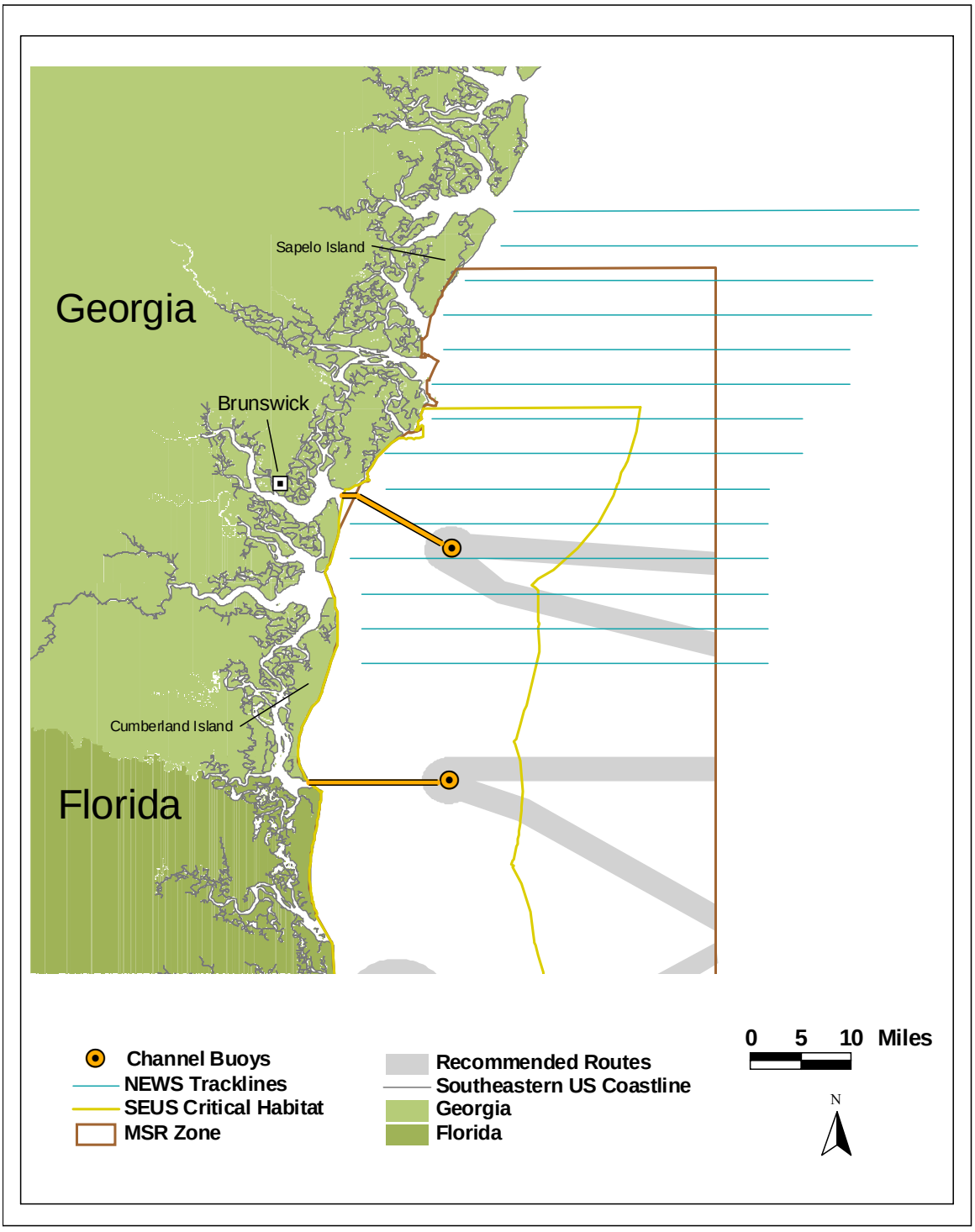

Figure 1. NEWS 2008-2009 survey tracklines.

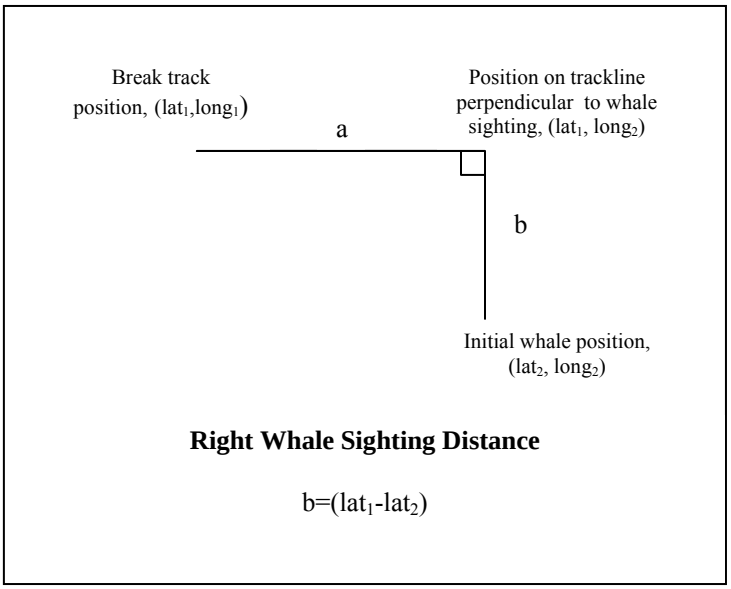

Figure 2. Diagram of method for determining sighting distances for right whales.

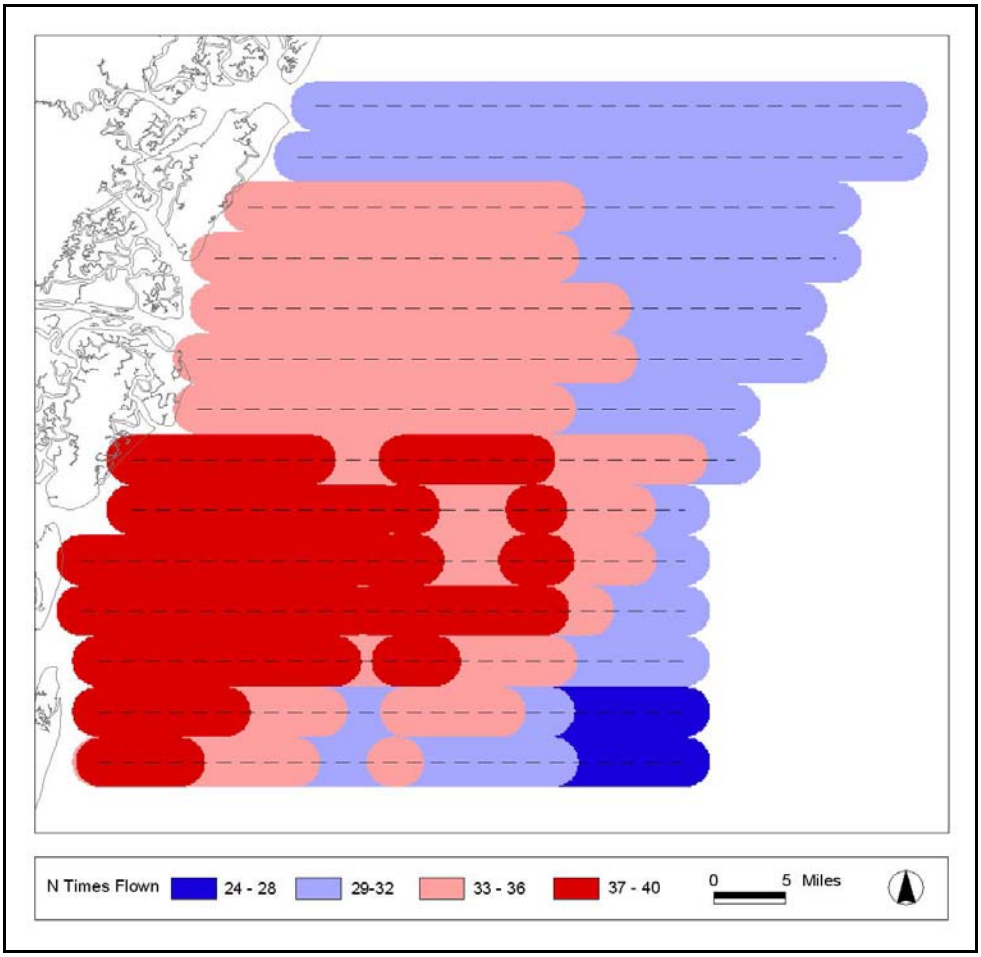

Figure 3. Survey frequency by area, 1 December 2008 to 31 March 2009.

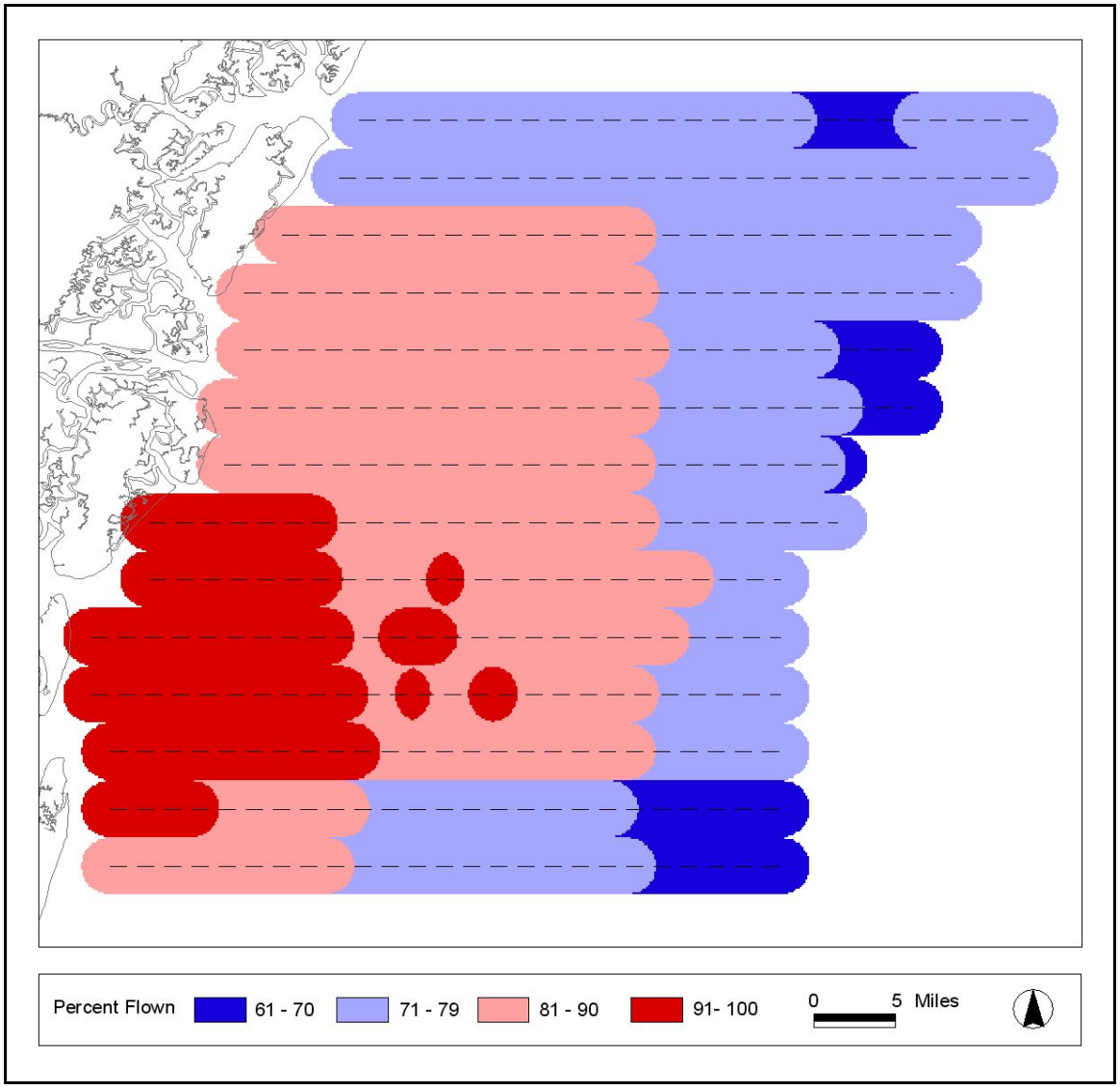

Figure 4. Proportion of survey area flown, 1 December 2008 to 31 March 2009.

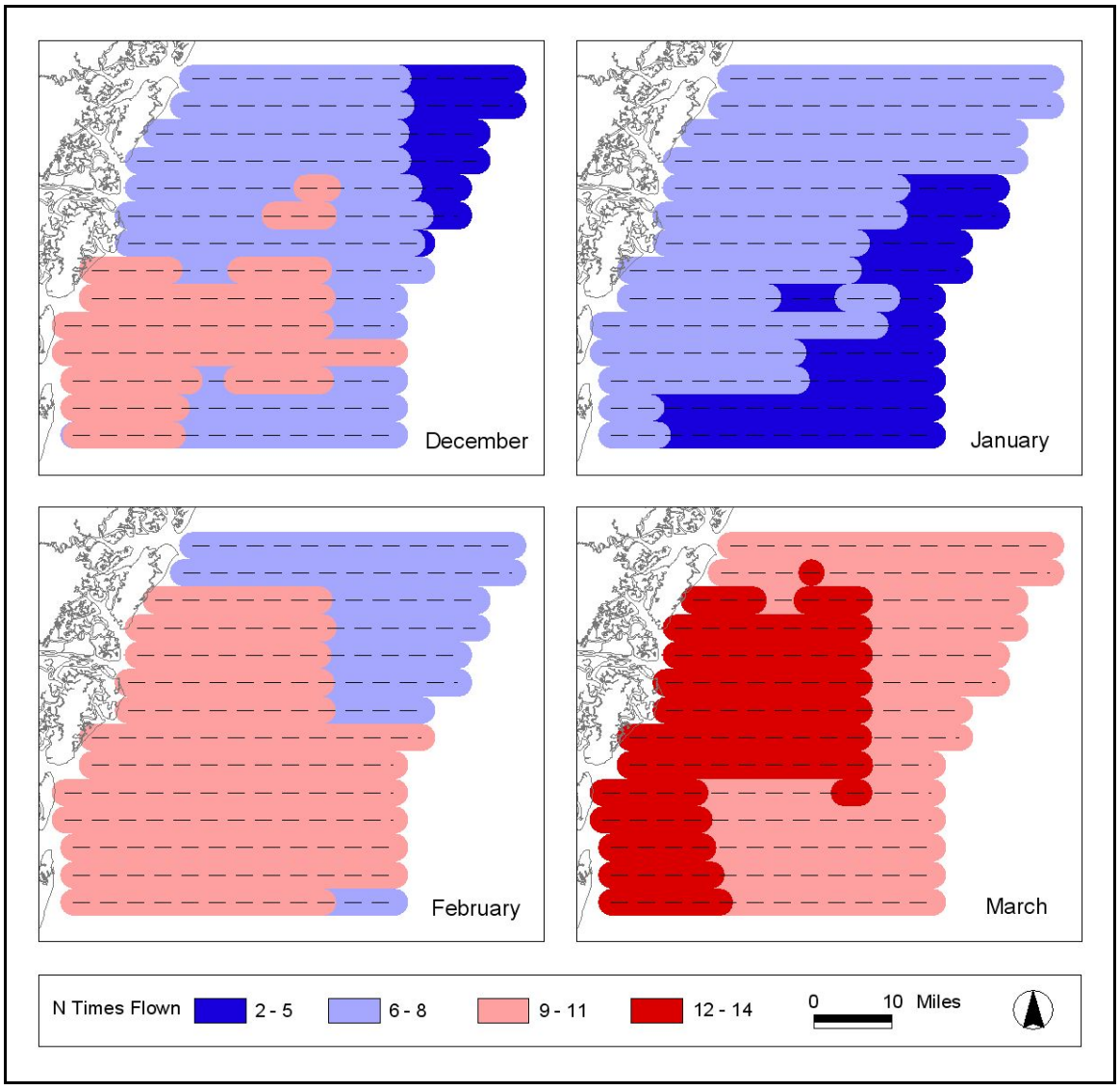

Figure 5. Survey frequency by area and month, December 2008 to March 2009.

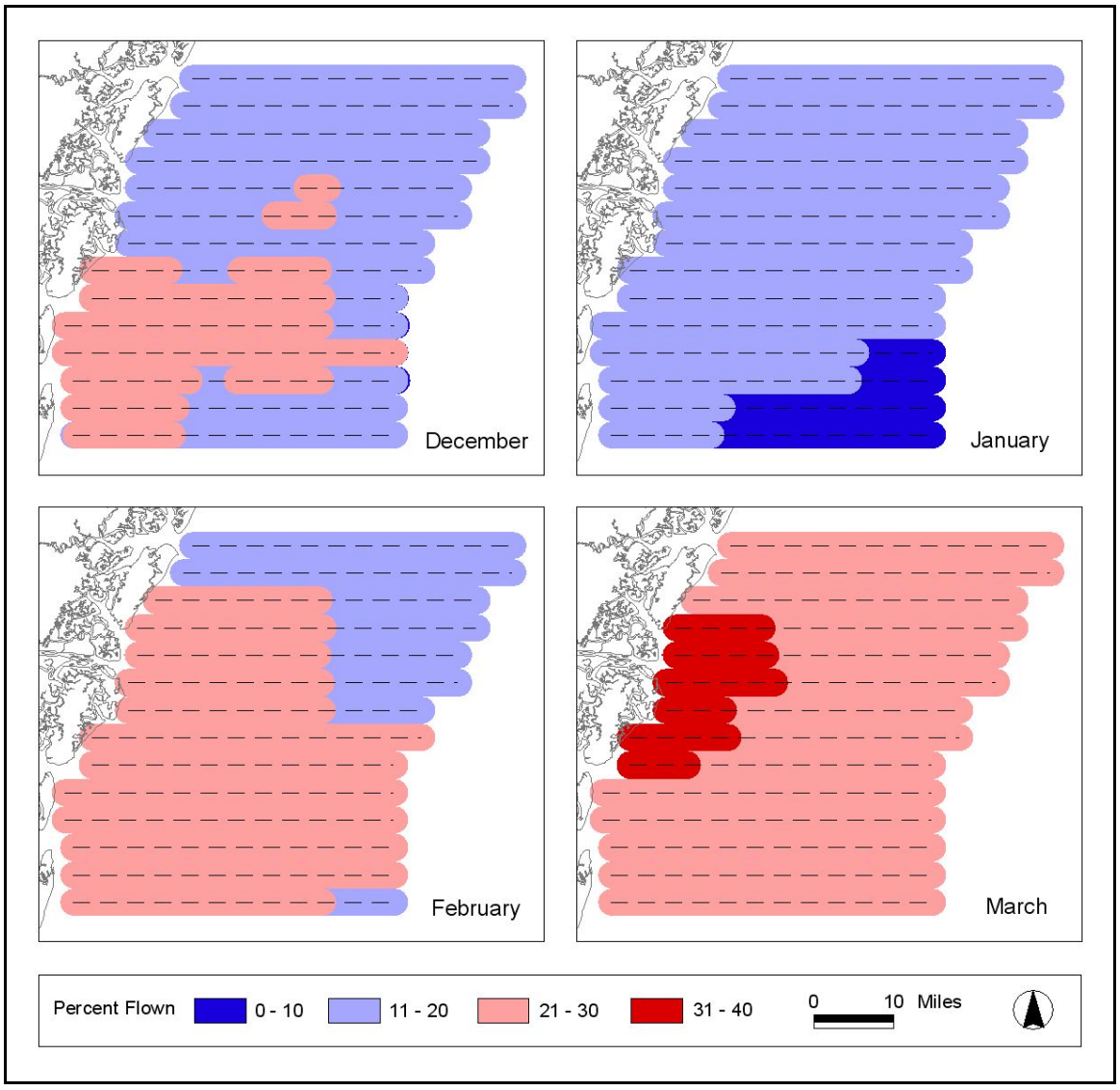

Figure 6. Proportion of survey area flown per month, as a function of total survey effort, December 2008 to March 2009.

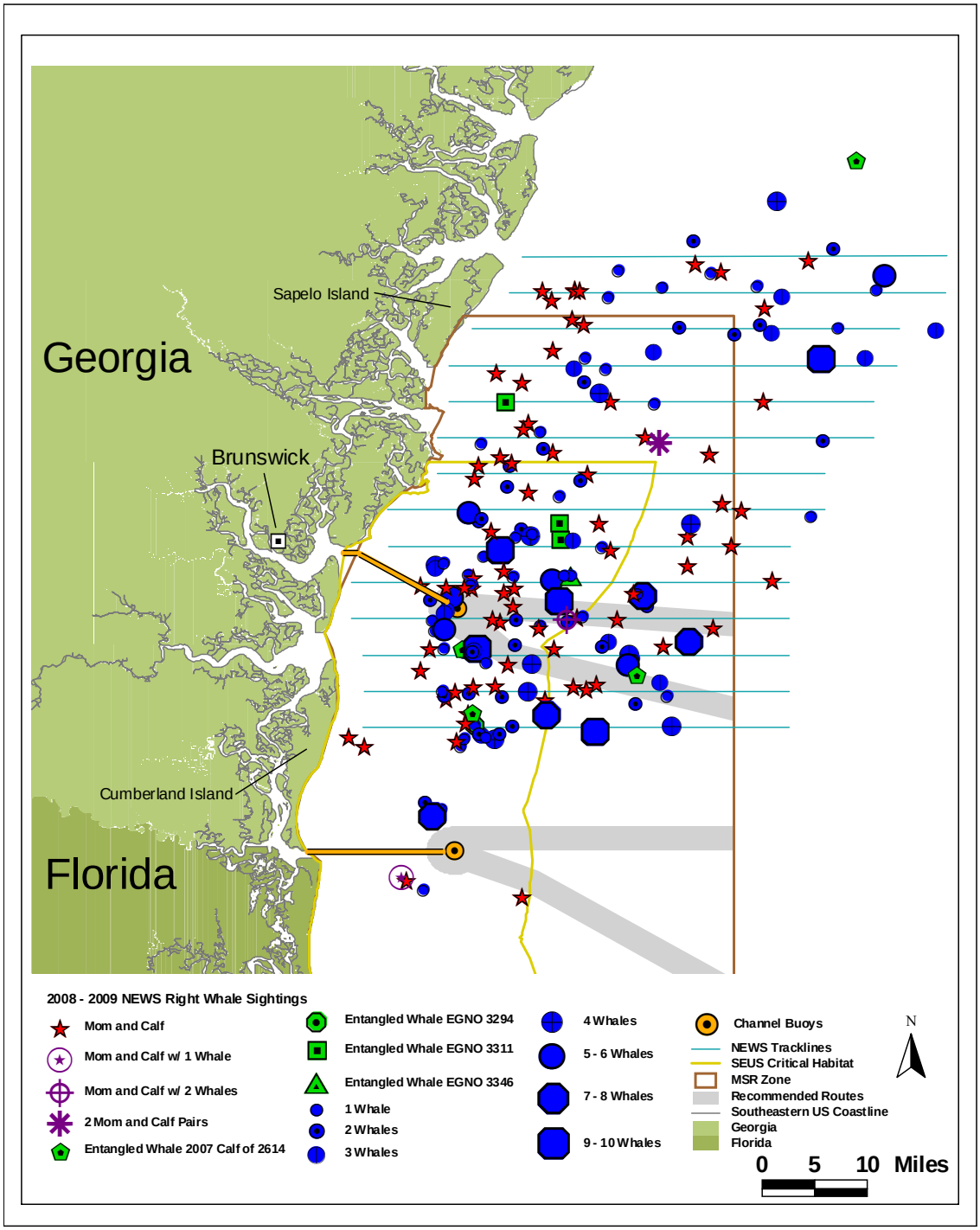

Figure 7. NEWS 2008-2009 right whale sightings.

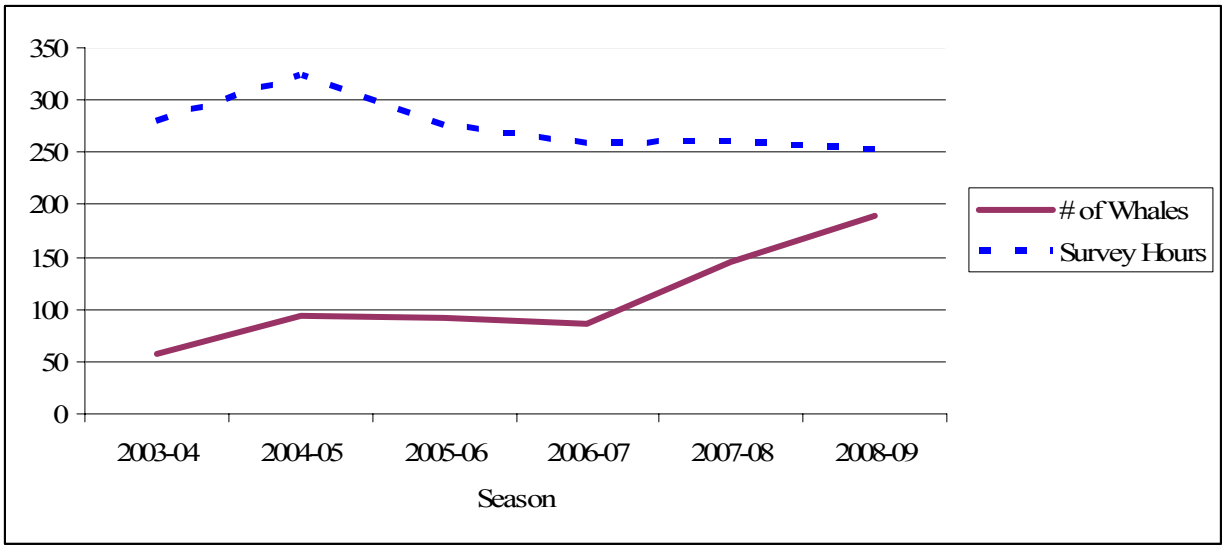

Figure 8. Individual whales and survey hours in the NEWS survey area per season, 2003-2009.

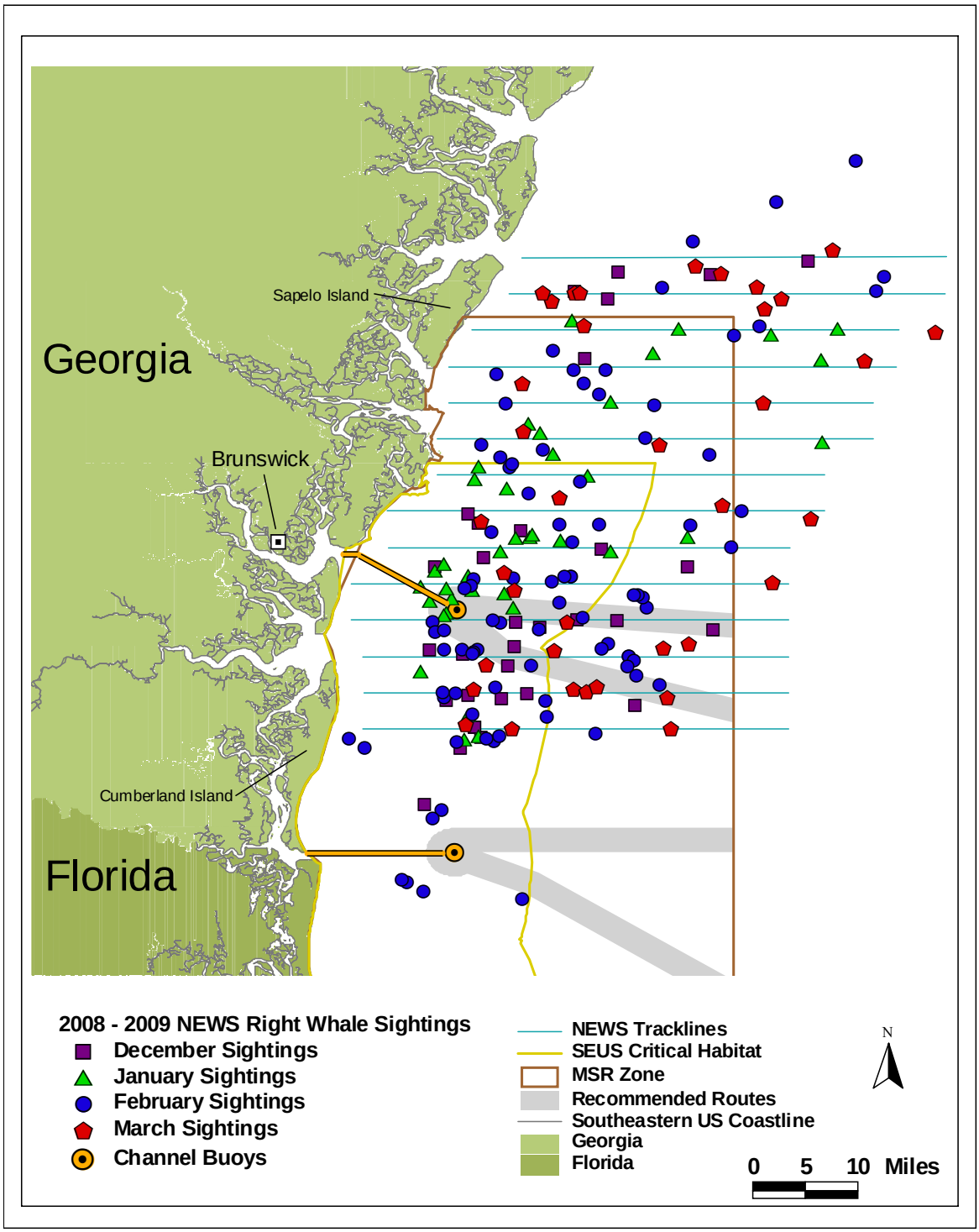

Figure 9. NEWS 2008-2009 right whale sightings classified by month.

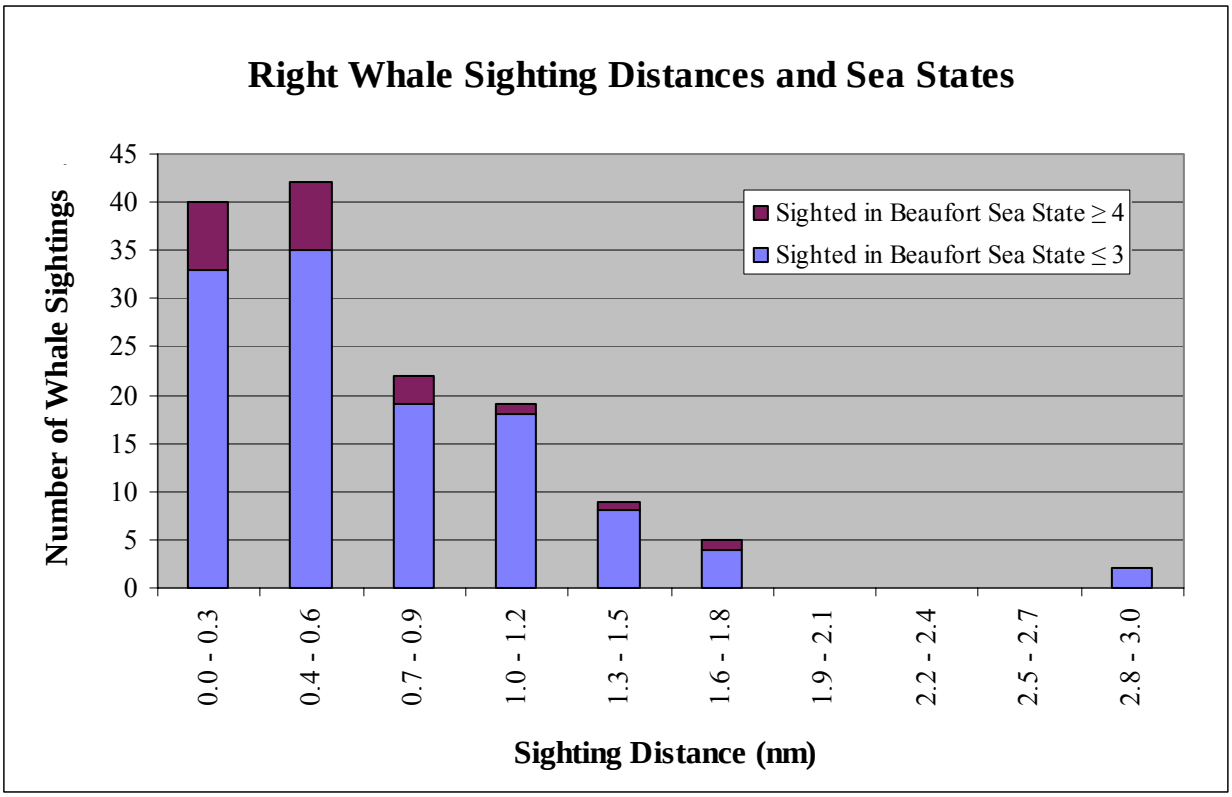

Figure 10. NEWS 2008-2009 right whale sighting distances and sea states.

Table 1. NEWS trackline waypoints.

Transect Number	Length (nmi)	Western Waypoint		Eastern Waypoint	
1	31.5	30° 53 N	81° 22 W	30° 53 N	80° 47 W
2	31.5	30° 56 N	81° 22 W	30° 56 N	80° 47 W
3	31.5	30° 59 N	81° 22 W	30° 59 N	80° 47 W
4	32.4	31° 02 N	81° 23 W	31° 02 N	80° 47 W
5	32.4	31° 05 N	81° 23 W	31° 05 N	80° 47 W
6	29.7	31° 08 N	81° 20 W	31° 08 N	80° 47 W
7	32.4	31° 11 N	81° 20 W	31° 11 N	80° 44 W
8	28.8	31° 14 N	81° 16 W	31° 14 N	80° 44 W
9	32.4	31° 17 N	81° 16 W	31° 17 N	80° 40 W
10	31.5	31° 20 N	81° 15 W	31° 20 N	80° 40 W
11	33.3	31° 23 N	81° 15 W	31° 23 N	80° 38 W
12	31.5	31° 26 N	81° 13 W	31° 26 N	80° 38 W
13	32.4	31° 29 N	81° 10 W	31° 29 N	80° 34 W
14	31.5	31° 32 N	81° 09 W	31° 32 N	80° 34 W

Total nmi 442.8

Table 2. NEWS right whale surveys, 1 December 2008 through 31 March 2009.

Date	Survey Name	Complete Surveys	Partial Surveys	Survey Hobbs Time	Total trackline nmi flown	Trackline nmi flown in Beaufort SS ≤ 3	Number of Whales Seen	Contingency Plan
03-Dec-08	NEWS20081203		1	7.1	392.1	392.1	9	
04-Dec-08	NEWS20081204	1		6.0	442.8	442.8	7	
05-Dec-08	NEWS20081205		1	4.2	205.7	13.2	10	
16-Dec-08	NEWS20081216		1	2.7	148.5	148.5	0	
18-Dec-08	NEWS20081218		1	6.7	136.9	136.9	6	
19-Dec-08	NEWS20081219		1	5.9	409.3	306.2	7	2 Plane
20-Dec-08	NEWS20081220		1	4.3	283.0	144.9	4	2 Plane
24-Dec-08	NEWS20081224	1		5.3	442.8	424.5	0	
28-Dec-08	NEWS20081228	1		5.7	442.8	239.6	2	
29-Dec-08	NEWS20081229		1	3.6	165.4	58.7	8	
30-Dec-08	NEWS20081230	1		6.9	442.8	267.6	11	
02-Jan-09	NEWS20090102		1	5.8	360.7	229.9	4	
04-Jan-09	NEWS20090104		1	8.2	381.3	381.3	30	
05-Jan-09	NEWS20090105	1		6.7	442.8	313.0	21	
10-Jan-09	NEWS20090110	1		5.7	442.8	437.2	7	
14-Jan-09	NEWS20090114		1	5.3	173.3	137.2	8	
19-Jan-09	NEWS20090119		1	6.3	290.5	161.5	20	
24-Jan-09	NEWS20090124		1	5.6	397.2	199.5	3	
01-Feb-09	NEWS20090201		1	7.4	204.7	174.0	7	

Date	Survey Name	Complete Surveys	Partial Surveys	Survey Hobbs Time	Total trackline nmi flown	Trackline nmi flown in Beaufort SS ≤ 3	Number of Whales Seen	Contingency Plan
02-Feb-09	NEWS20090202	1		6.8	442.8	383.7	22	
06-Feb-09	NEWS20090206	1		5.5	442.8	424.7	3	
07-Feb-09	NEWS20090207	1		6.9	442.8	442.8	15	
08-Feb-09	NEWS20090208	1		6.7	442.8	173.6	14	
09-Feb-09	NEWS20090209		1	7.0	107.8	107.8	20	
10-Feb-09	NEWS20090210	1		7.6	442.8	442.8	43	
13-Feb-09	NEWS20090213		1	7.6	386.7	386.7	49	
21-Feb-09	NEWS20090221		1	7.0	361.4	361.4	29	2 Plane
26-Feb-09	NEWS20090226	1		6.5	442.8	442.8	8	
27-Feb-09	NEWS20090227	1		6.2	442.8	411.1	2	
04-Mar-09	NEWS20090304		1	2.6	117.7	0.0	2	
07-Mar-09	NEWS20090307	1		5.9	442.8	379.4	6	
09-Mar-09	NEWS20090309	1		6.2	442.8	193.1	9	
10-Mar-09	NEWS20090310	1		6.4	442.8	442.8	15	
11-Mar-09	NEWS20090311	1		6.1	442.8	442.8	10	
12-Mar-09	NEWS20090312		1	5.0	310.6	299.1	12	2 Plane
16-Mar-09	NEWS20090316		1	5.5	366.9	138.9	9	
19-Mar-09	NEWS20090319	1		6.9	442.8	408.2	6	
23-Mar-09	NEWS20090323	1		5.7	442.8	391.5	3	
24-Mar-09	NEWS20090324	1		5.9	442.8	415.3	4	
25-Mar-09	NEWS20090325	1		5.4	442.8	407.0	2	
30-Mar-09	NEWS20090330	1		6.6	442.8	271.7	6	
31-Mar-09	NEWS20090331		1	7.1	292.2	139.9	0	
Total	**44 Surveys**	**22**	**20**	**252.5**	**15233.5**	**12115.7**	**453**	

Table 3. NEWS 2008-2009 non-weather-related causes for no-fly days.

Date	Fly-able Day	Survey Attempted by WT	Non-weather Related Reasons for Partial or No Survey by Wildlife Trust Survey Team	NEWS Area Covered by One or Two Plane Contingency
20-Jan-09	N	N	100 hr. Maintenance on NOAA57	N
21-Jan-09	N	N	100 hr. Maintenance on NOAA57	Y
22-Jan-09	Y	N	100 hr. Maintenance on NOAA57	Y
23-Jan-09	Y	N	100 hr. Maintenance on NOAA57	Y
11-Feb-09	Y	N	Required Pilot Rest Period	N
12-Feb-09	Y	N	Disentanglement Support	N
05-Mar-09	Y	N	Disentanglement Support	Y
06-Mar-09	Y	N	Disentanglement Support	Y
08-Mar-09	Y	N	Required Pilot Rest Period	N

Table 4. NEWS 2008-2009 survey effort per month.

Survey Month	Number of NEWS Surveys	NEWS Survey Hobbs Time	Total trackline nmi flown	Trackline nmi flown in Beaufort SS ≤ 3	Number of Whales Seen
December 2008	11	58.4	3512.1	2575.0	64
January 2009	7	43.6	2488.6	1859.6	93
February 2009	11	75.2	4160.2	3751.4	212
March 2009	13	75.3	5072.6	3929.7	84
Total	**42**	**252.5**	**15233.5**	**12115.7**	**453**

Table 5. 2008-2009 right whale sightings in the NEWS survey area from sources other than the NEWS survey team.

Sighting Event	Month	Day	Year	Time (Local)	Latitude	Longitude	Number of Whales Sighted	Time of Report	NRW Number	Sighting Source
1	12	03	2008	1000	31.28833	-81.11667	2 (Mom/Calf)	1044	OTHER008	USCG
2	12	09	2008	0815	31.09167	-81.30000	2	0844	OTHER014	Brunswick Pilot Boat
3	01	04	2009	1652	31.49667	-80.98500	3 (2 Adults and 1 Calf)	1726	OTHER032	GDNR LE
4	01	06	2009	1238	31.02833	-81.28000	3	1629	OTHER040	Private Boater
5	01	07	2009	1213	31.37537	-81.13313	2	N/A	N/A	USCG
6	01	21	2009	1348	31.25000	-80.92333	1	1400	CEWS085	NEA
7	01	21	2009	1413	31.12000	-81.18167	2 (Mom/Calf)	1443	CEWS086	NEA
8	01	21	2009	1431	31.15333	-81.13500	2	1450	CEWS087	NEA
9	01	21	2009	1443	31.12500	-81.11667	2	1452	CEWS088	NEA
10	01	21	2009	1547	30.87500	-81.19000	2 (Mom/Calf)	1603	CEWS089	NEA
11	01	22	2009	0932	31.23500	-81.16833	1	1040	CEWS097	NEA
12	01	22	2009	1119	31.05000	-81.26333	2 (Mom/Calf)	1129	CEWS096	NEA
13	01	22	2009	1735	31.06833	-81.27833	1	1824	OTHER063	Dredge
14	01	24	2009	0900	30.93000	-81.27000	1	N/A	OTHER067	Private Boater
15	01	29	2009	1541	31.37167	-80.88500	2	1557	OTHER080	USCG
16	02	15	2009	0813	30.93333	-81.28000	5	0829	OTHER140	Private Boater
17	03	05	2009	1211	31.13167	-81.13000	1	1219	CEWS321	NEA
18	03	06	2009	1241	31.07667	-81.16167	1	1247	CEWS326	NEA
19	03	06	2009	1524	31.37333	-80.96000	1	1532	CEWS327	NEA
20	03	31	2009	0954	31.50167	-80.53833	2 (Mom/Calf)	1146	OTHER203	Private Boater

Table 6. NEWS 2008-2009 entanglement related flights.

Date	Flight Name	Flight Hrs Disentanglement Support	Description of Flight
18-Dec-08	NEWS20081218	3.8	Entangled Whale (EGNO 3294) Telemetry Attachment and Disentanglement Aerial Support off Georgia
14-Jan-09	NEWS20090114	2.3	Entangled Whale (EGNO 3311) Telemetry Attachment and Disentanglement Aerial Support off Georgia
01-Feb-09	NEWS20090201	4.4 (3.4 hrs – 3311, 1.0 hrs – 3294)	Entangled Whale (EGNO 3311) Disentanglement Aerial Support off Georgia and Entangled Whale (EGNO 3294) Assessment Aerial Support off Florida
09-Feb-09	NEWS20090209	4.3	Entangled Whale (2007 Calf of 2614) Telemetry Attachment and Disentanglement Aerial Support off Georgia
10-Feb-09	NEWS20090210	0.5	Locate Entangled Whale (2007 Calf of 2614) and Assess Telemetry Attachment off Georgia
12-Feb-09	NEWS20090212	7.0	Locate Entangled Whale (2007 Calf of 2614) and Disentanglement Aerial Support off Georgia
05-Mar-09	NEWS20090305	7.7	Locate Entangled Whale (EGNO 3311) and Disentanglement Aerial Support off Florida
06-Mar-09	NEWS20090306	7.6	Locate Entangled Whale (EGNO 3311) and Disentanglement Aerial Support off Florida
	Total	**37.6 hrs**	

Table 7. NEWS 2008-2009 leatherback turtle sightings.

Survey Date	Time (GMT)	Latitude	Longitude	Number of Leatherback Turtles Sighted
3-Dec-08	200830	31.13293	-80.88987	1
4-Dec-08	162547	31.28320	-80.99906	1
16-Dec-08	190000	30.88428	-81.02597	1
30-Dec-08	200517	31.43378	-80.70358	1
10-Mar-09	145055	30.91402	-80.75837	2
11-Mar-09	182808	30.88357	-80.83071	1
12-Mar-09	141658	30.79897	-80.89903	1
16-Mar-09	215711	31.49642	-80.55183	1
19-Mar-09	153036	31.49768	-80.55427	1
23-Mar-09	204742	31.48363	-80.72704	1
24-Mar-09	132742	30.88360	-80.89502	1
24-Mar-09	170148	31.43250	-80.64160	1
25-Mar-09	155153	31.10453	-80.76873	1
25-Mar-09	183954	31.48360	-80.68376	1
25-Mar-09	184455	31.51887	-80.55795	1
25-Mar-09	184501	31.52188	-80.55803	1
25-Mar-09	185025	31.53348	-80.72907	1
25-Mar-09	185105	31.53360	-80.75140	1
25-Mar-09	185257	31.53375	-80.81382	1

Survey Date	Time (GMT)	Latitude	Longitude	Number of Leatherback Turtles Sighted
30-Mar-09	145554	31.53330	-80.56938	1
30-Mar-09	145820	31.48210	-80.56689	1
30-Mar-09	155853	31.43408	-80.62985	1
30-Mar-09	160019	31.40060	-80.62003	1
30-Mar-09	162120	31.36113	-81.26344	1
30-Mar-09	165650	31.33615	-80.72735	1
30-Mar-09	170519	31.28337	-80.79698	1
31-Mar-09	135337	31.52493	-80.55223	1
31-Mar-09	135427	31.50100	-80.55218	1
31-Mar-09	135437	31.49617	-80.55227	2
31-Mar-09	135549	31.48325	-80.58382	1
31-Mar-09	135611	31.48335	-80.59641	1
31-Mar-09	135721	31.48368	-80.63535	1
31-Mar-09	144208	31.49792	-80.54407	2
31-Mar-09	144238	31.50705	-80.53024	1
31-Mar-09	144336	31.53085	-80.52738	1
31-Mar-09	144406	31.52637	-80.54505	1
31-Mar-09	144420	31.52012	-80.54961	1
31-Mar-09	144436	31.51221	-80.55193	1
31-Mar-09	144528	31.50335	-80.53111	1
31-Mar-09	145907	31.45658	-80.54763	1
31-Mar-09	150143	31.49702	-80.47812	2
31-Mar-09	150157	31.50438	-80.47607	1
31-Mar-09	150209	31.51105	-80.47613	3
31-Mar-09	150229	31.52178	-80.48071	1
31-Mar-09	150237	31.5257	-80.48365	1
31-Mar-09	150407	31.55807	-80.52956	1
31-Mar-09	150409	31.55803	-80.53093	1
31-Mar-09	150421	31.55695	-80.53895	1
31-Mar-09	150439	31.55287	-80.54984	2
31-Mar-09	150457	31.54822	-80.56037	1
31-Mar-09	150607	31.52288	-80.59033	1
31-Mar-09	150637	31.50815	-80.58981	1
31-Mar-09	150643	31.50527	-80.58923	1
31-Mar-09	151738	31.43515	-80.56644	1
31-Mar-09	151800	31.42663	-80.57557	1
31-Mar-09	160045	31.28362	-80.66605	1
31-Mar-09	171739	31.09208	-80.76953	1

Appendix 1. NEWS 2008-2009 right whale sightings.

Whale Number	Month	Day	Year	Time (Local)	Survey Name	Latitude	Longitude	RIWH Letter	EGNO	Time of Report (Local)	NRW Number	Comments	Sighting Distance (nmi)
1	12	03	2008	0936	NEWS20081203	31.51358	-81.01873	A	3290	0957	NEWS001		1.20
2	12	03	2008	1052	NEWS20081203	31.39340	-81.06395	B	1817	1114	NEWS002		0.58
3	12	03	2008	1340	NEWS20081203	31.11980	-81.20437	C	1968	1405	NEWS003		0.79
4	12	03	2008	1404	NEWS20081203	31.10802	-80.92354	D	1608	1453	NEWS004	w/ Calf, Prev. Entgled	1.49
5	12	03	2008	1404	NEWS20081203	31.10802	-80.92354	E	2009 Calf of 1608	1453	NEWS004	Calf	1.49
6	12	03	2008	1622	NEWS20081203	30.93358	-81.14343	F	3550	1647	NEWS005		0.00
7	12	03	2008	1622	NEWS20081203	30.93358	-81.14343	G	3510	1647	NEWS005		0.00
8	12	03	2008	1622	NEWS20081203	30.93358	-81.14343	H	3611	1647	NEWS005		0.00
9	12	03	2008	1622	NEWS20081203	30.93358	-81.14343	I	No Photos	1647	NEWS005	No Photos	0.00
10	12	04	2008	0932	NEWS20081204	31.51010	-80.89240	A	3290	0959	NEWS006		1.45
11	12	04	2008	1212	NEWS20081204	31.16678	-81.21120	B	1817	1305	NEWS007		0.98
12	12	04	2008	1212	NEWS20081204	31.16678	-81.21120	C	1240	1305	NEWS007		0.98
13	12	04	2008	1243	NEWS20081204	31.10703	-81.27139	D	3611	1308	NEWS008		1.75
14	12	04	2008	1243	NEWS20081204	31.10703	-81.27139	E	2007 Calf of 2430	1308	NEWS008		1.75
15	12	04	2008	1243	NEWS20081204	31.10703	-81.27139	F	3333	1308	NEWS008	Prev. Entgled	1.75
16	12	04	2008	1243	NEWS20081204	31.10703	-81.27139	G	3550	1308	NEWS008		1.75
17	12	05	2008	0935	NEWS20081205	30.85830	-81.23517	A	3317	1025	NEWS009		1.34
18	12	05	2008	0946	NEWS20081205	30.92600	-81.17823	B	2145	1031	NEWS010		N/A
19	12	05	2008	0946	NEWS20081205	30.92600	-81.17823	C	1151	1031	NEWS010		N/A
20	12	05	2008	1042	NEWS20081205	31.18000	-81.22472	D	3308	1128	NEWS011		0.17
21	12	05	2008	1042	NEWS20081205	31.18000	-81.22472	E		1128	NEWS011		0.17
22	12	05	2008	1042	NEWS20081205	31.18000	-81.22472	F	3510	1128	NEWS011		0.17
23	12	05	2008	1042	NEWS20081205	31.18000	-81.22472	G	3333	1128	NEWS011	Prev. Entgled	0.17
24	12	05	2008	1042	NEWS20081205	31.18000	-81.22472	#1	3611	1128	NEWS011		0.17
25	12	05	2008	1215	NEWS20081205	31.48600	-81.07802	H	1946	1246	NEWS012	w/ Calf	0.00
26	12	05	2008	1215	NEWS20081205	31.48600	-81.07802	I	2009 Calf of 1946	1246	NEWS012	Calf	0.00
27	12	18	2008	1030	NEWS20081218	30.87342	-81.20718	A	1611	1118	NEWS013		N/A
28	12	18	2008	1030	NEWS20081218	30.87342	-81.20718	B	3503	1118	NEWS013		N/A
29	12	18	2008	1030	NEWS20081218	30.87342	-81.20718	#1	1158	1118	NEWS013		N/A
30	12	18	2008	1057	NEWS20081218	30.88730	-81.21652	C	3294	1125	NEWS014	Entangled	N/A
31	12	18	2008	1057	NEWS20081218	30.88730	-81.21652	D	No Photos	1125	NEWS014	No Photos	N/A
32	12	18	2008	1507	NEWS20081218	31.02538	-81.12680	E	2611	1525	NEWS015		0.52
33	12	19	2008	1042	NEWS20081219	30.78147	-81.28392	A	1968	1114	NEWS016		0.17
34	12	19	2008	1042	NEWS20081219	30.78147	-81.28392	B	2413	1114	NEWS016		0.17
35	12	19	2008	1206	NEWS20081219	30.93172	-81.22404	C	1158	1242	NEWS017		0.10
36	12	19	2008	1206	NEWS20081219	30.93172	-81.22404	D	3503	1242	NEWS017		0.10
37	12	19	2008	1341	NEWS20081219	31.13272	-81.04224	E	3308	1422	NEWS018		0.00
38	12	19	2008	1354	NEWS20081219	31.15602	-81.15199	F	2660	1423	NEWS019		1.34
39	12	19	2008	1354	NEWS20081219	31.15602	-81.15199	G	3440	1423	NEWS019		1.34
40	12	20	2008	1242	NEWS20081220	30.98788	-81.23161	A	3130	1311	NEWS020	w/ Yearling	0.24

Whale Number	Month	Day	Year	Time (Local)	Survey Name	Latitude	Longitude	RIWH Letter	EGNO	Time of Report (Local)	NRW Number	Comments	Sighting Distance (nmi)
41	12	20	2008	1242	NEWS20081220	30.98788	-81.23161	B	2008 Calf of 3130	1311	NEWS020	Yearling	0.24
42	12	20	2008	1320	NEWS20081220	31.03138	-81.15903	C	3503	1336	NEWS021		0.15
43	12	20	2008	1320	NEWS20081220	31.03138	-81.15903	D	1158	1336	NEWS021		0.15
44	12	28	2008	1254	NEWS20081228	31.18328	-81.13695	A	1946	1254	NEWS022	w/ Calf	0.70
45	12	28	2008	1254	NEWS20081228	31.18328	-81.13695	B	2009 Calf of 1946	1254	NEWS022	Calf	0.70
46	12	29	2008	1017	NEWS20081229	30.92487	-81.25458	A	2320	1158	NEWS023	w/ Calf, Prev. Entgled	0.67
47	12	29	2008	1017	NEWS20081229	30.92487	-81.25458	B	2009 Calf of 2320	1158	NEWS023	Calf	0.67
48	12	29	2008	1043	NEWS20081229	30.99278	-81.27852	C	1012	1203	NEWS024	w/ Calf	0.20
49	12	29	2008	1043	NEWS20081229	30.99278	-81.27852	D	2009 Calf of 1012	1203	NEWS024	Calf	0.20
50	12	29	2008	1059	NEWS20081229	30.97212	-81.16982	E	2123	1203	NEWS025	w/ Calf	0.81
51	12	29	2008	1059	NEWS20081229	30.97212	-81.16982	F	2009 Calf of 2123	1203	NEWS025	Calf	0.81
52	12	29	2008	1138	NEWS20081229	31.03395	-81.02120	G	1515	1224	NEWS026	w/ Calf	0.00
53	12	29	2008	1138	NEWS20081229	31.03395	-81.02120	H	2009 Calf of 1515	1224	NEWS026	Calf	0.00
54	12	30	2008	1046	NEWS20081230	30.91715	-80.99548	A	3293	1143	NEWS027	w/ Yearling	0.99
55	12	30	2008	1046	NEWS20081230	30.91715	-80.99548	B	2008 Calf of 3293	1143	NEWS027	Yearling	0.99
56	12	30	2008	1120	NEWS20081230	30.99763	-81.16217	C	3691 (S003)	1146	NEWS028		0.82
57	12	30	2008	1120	NEWS20081230	30.99763	-81.16217	D	3503	1146	NEWS028		0.82
58	12	30	2008	1153	NEWS20081230	31.02175	-80.88798	E	1946	1210	NEWS029	w/ Calf	0.56
59	12	30	2008	1153	NEWS20081230	31.02175	-80.88798	F	2009 Calf of 1946	1210	NEWS029	Calf	0.56
60	12	30	2008	1214	NEWS20081230	31.03545	-81.07415	G	1012	1234	NEWS030	w/ Calf	0.12
61	12	30	2008	1214	NEWS20081230	31.03545	-81.07415	H	2009 Calf of 1012	1234	NEWS030	Calf	0.12
62	12	30	2008	1529	NEWS20081230	31.47627	-81.03267	I	2008 Calf of 2753	1545	NEWS031	Yearling	0.44
63	12	30	2008	1603	NEWS20081230	31.52695	-80.75847	J	1503	1615	NEWS032	w/ Calf	0.42
64	12	30	2008	1603	NEWS20081230	31.52695	-80.75847	K	2009 Calf of 1503	1615	NEWS032	Calf	0.42
65	01	02	2009	1104	NEWS20090102	31.43395	-80.93522	A	2007 Calf of 3360	1155	NEWS033		0.00
66	01	02	2009	1104	NEWS20090102	31.43395	-80.93522	B	3314	1155	NEWS033	Prev. Entgled (Yellowfin)	0.00
67	01	02	2009	1454	NEWS20090102	31.30347	-81.14185	C	1711	1523	NEWS034	w/ Calf	N/A
68	01	02	2009	1454	NEWS20090102	31.30347	-81.14185	D	2009 Calf of 1711	1523	NEWS034	Calf	N/A
69	01	04	2009	1038	NEWS20090104	31.39920	-80.97090	A	3308	1123	NEWS035		0.92
70	01	04	2009	1038	NEWS20090104	31.39920	-80.97090	B	3329	1123	NEWS035		0.92
71	01	04	2009	1038	NEWS20090104	31.39920	-80.97090	C	S012	1123	NEWS035		0.92
72	01	04	2009	1154	NEWS20090104	31.06410	-81.24712	D	2006 Calf of 1946	1330	NEWS036		N/A
73	01	04	2009	1154	NEWS20090104	31.06410	-81.24712	E	3611	1330	NEWS036		N/A
74	01	04	2009	1154	NEWS20090104	31.06410	-81.24712	F	3651	1330	NEWS036		N/A
75	01	04	2009	1154	NEWS20090104	31.06410	-81.24712	G	3310	1330	NEWS036		N/A
76	01	04	2009	1154	NEWS20090104	31.06410	-81.24712	#1	3617 (S020)	1330	NEWS036		N/A
77	01	04	2009	1154	NEWS20090104	31.06410	-81.24712	#2	2007 Calf of 1710	1330	NEWS036		N/A
78	01	04	2009	1209	NEWS20090104	31.04465	-81.25410	H	BK03BOF07	1333	NEWS037		N/A
79	01	04	2009	1209	NEWS20090104	31.04465	-81.25410	I	3503	1333	NEWS037		N/A
80	01	04	2009	1209	NEWS20090104	31.04465	-81.25410	J	3343	1333	NEWS037		N/A
81	01	04	2009	1221	NEWS20090104	31.04023	-81.25827	K	3681	1333	NEWS037		N/A

Whale Number	Month	Day	Year	Time (Local)	Survey Name	Latitude	Longitude	RIWH Letter	EGNO	Time of Report (Local)	NRW Number	Comments	Sighting Distance (nm)
82	01	04	2009	1221	NEWS20090104	31.04023	-81.25827	L	3540	1333	NEWS037		N/A
83	01	04	2009	1221	NEWS20090104	31.04023	-81.25827	#3	3430	1333	NEWS037		N/A
84	01	04	2009	1230	NEWS20090104	31.05918	-81.27695	M	2007 Calf of 2645	1336	NEWS038		N/A
85	01	04	2009	1230	NEWS20090104	31.05918	-81.27695	N	2008 Calf of 2753	1336	NEWS038	Yearling	N/A
86	01	04	2009	1239	NEWS20090104	31.10245	-81.26983	O	2007 Calf of 1701	1339	NEWS039	Prev. Entgled (1st Time Sighted Gear Free)	N/A
87	01	04	2009	1239	NEWS20090104	31.10245	-81.26983	P	CT05SEUS08	1339	NEWS039		N/A
88	01	04	2009	1239	NEWS20090104	31.10245	-81.26983	Q	2007 Calf of 2430	1339	NEWS039		N/A
89	01	04	2009	1244	NEWS20090104	31.11139	-81.25858	R	3691 (S003)	1339	NEWS039		N/A
90	01	04	2009	1306	NEWS20090104	31.33274	-81.02859	S	1503	1344	NEWS040	w/ Calf	0.07
91	01	04	2009	1306	NEWS20090104	31.33274	-81.02859	T	2009 Calf of 1503	1344	NEWS040	Calf	0.07
92	01	04	2009	1345	NEWS20090104	31.21465	-81.17133	U	3405	1413	NEWS041		1.11
93	01	04	2009	1345	NEWS20090104	31.21465	-81.17133	V	1158	1413	NEWS041		1.11
94	01	04	2009	1353	NEWS20090104	31.23242	-81.06112	W	1711	1416	NEWS042	w/ Calf	0.06
95	01	04	2009	1353	NEWS20090104	31.23242	-81.06112	X	2009 Calf of 1711	1416	NEWS042	Calf	0.06
96	01	04	2009	1433	NEWS20090104	31.14687	-81.15932	Y	2660	1527	NEWS043		0.55
97	01	04	2009	1643	NEWS20090104	31.05132	-81.16261	Z	2611	1658	NEWS044	w/ Calf	1.03
98	01	04	2009	1643	NEWS20090104	31.05132	-81.16261	AA	2009 Calf of 2611	1658	NEWS044	Calf	1.03
99	01	05	2009	1236	NEWS20090105	31.07785	-81.25420	A	3320	1302	NEWS045	w/ Calf	0.58
100	01	05	2009	1236	NEWS20090105	31.07785	-81.25420	B	2009 Calf of 3320	1302	NEWS045	Calf	0.58
101	01	05	2009	1241	NEWS20090105	31.09433	-81.22528	C	S007	1305	NEWS046		0.12
102	01	05	2009	1312	NEWS20090105	31.14857	-80.92273	D	1503	1322	NEWS047	w/ Calf	0.30
103	01	05	2009	1312	NEWS20090105	31.14857	-80.92273	E	2009 Calf of 1503	1322	NEWS047	Calf	0.30
104	01	05	2009	1322	NEWS20090105	31.14728	-81.13985	F	3343	1412	NEWS048		0.55
105	01	05	2009	1322	NEWS20090105	31.14728	-81.13985	G	BK03BOF07	1412	NEWS048		0.55
106	01	05	2009	1322	NEWS20090105	31.14728	-81.13985	H	3681	1412	NEWS048		0.55
107	01	05	2009	1322	NEWS20090105	31.14728	-81.13985	I	3310	1412	NEWS048		0.55
108	01	05	2009	1329	NEWS20090105	31.15185	-81.13613	J	CT05SEUS08	1414	NEWS049		N/A
109	01	05	2009	1334	NEWS20090105	31.12923	-81.18078	K	3540	1415	NEWS050		0.86
110	01	05	2009	1334	NEWS20090105	31.12923	-81.18078	L	2007 Calf of 2430	1415	NEWS050		0.86
111	01	05	2009	1334	NEWS20090105	31.12923	-81.18078	M	3430	1415	NEWS050		0.86
112	01	05	2009	1334	NEWS20090105	31.12923	-81.18078	N	3651	1415	NEWS050		0.86
113	01	05	2009	1334	NEWS20090105	31.12923	-81.18078	O	3503	1415	NEWS050		0.86
114	01	05	2009	1334	NEWS20090105	31.12923	-81.18078	P	3611	1415	NEWS050		0.86
115	01	05	2009	1334	NEWS20090105	31.12923	-81.18078	Q	2007 Calf of 2645	1415	NEWS050		0.86
116	01	05	2009	1334	NEWS20090105	31.12923	-81.18078	R	3411	1415	NEWS050		0.86
117	01	05	2009	1334	NEWS20090105	31.12923	-81.18078	S	2008 Calf of 2753	1415	NEWS050	Yearling	0.86
118	01	05	2009	1557	NEWS20090105	31.44558	-81.08237	T	1246	1613	NEWS051	w/ Calf	0.52
119	01	05	2009	1557	NEWS20090105	31.44558	-81.08237	U	2009 Calf of 1246	1613	NEWS051	Calf	0.52
120	01	10	2009	1151	NEWS20090110	31.24473	-81.21080	A	2123	1209	NEWS052	w/ Calf	0.65
121	01	10	2009	1151	NEWS20090110	31.24473	-81.21080	B	2009 Calf of 2123	1209	NEWS052	Calf	0.65

Whale Number	Month	Day	Year	Time (Local)	Survey Name	Latitude	Longitude	RIWH Letter	EGNO	Time of Report (Local)	NRW Number	Comments	Sighting Distance (nmi)
122	01	10	2009	1205	NEWS20090110	31.26267	-81.10805	C	1151	1227	NEWS053	w/ Calf	1.26
123	01	10	2009	1205	NEWS20090110	31.26267	-81.10805	D	2009 Calf of 1151	1227	NEWS053	Calf	1.26
124	01	10	2009	1221	NEWS20090110	31.27838	-80.73843	E	3611	1243	NEWS054		0.29
125	01	10	2009	1221	NEWS20090110	31.27838	-80.73843	F	3430	1243	NEWS054		0.29
126	01	10	2009	1317	NEWS20090110	31.43403	-80.71786	G	3290	1338	NEWS055		N/A
127	01	14	2009	1300	NEWS20090114	30.86898	-81.22945	A	S007	1356	NEWS056		0.89
128	01	14	2009	1314	NEWS20090114	30.90298	-81.22445	B	1611	1357	NEWS057	w/ Calf	N/A
129	01	14	2009	1314	NEWS20090114	30.90298	-81.22445	C	2009 Calf of 1611	1357	NEWS057	Calf	N/A
130	01	14	2009	1407	NEWS20090114	30.96290	-81.28923	D	1711	1424	NEWS058	w/ Calf	1.26
131	01	14	2009	1407	NEWS20090114	30.96290	-81.28923	E	2009 Calf of 1711	1424	NEWS058	Calf	1.26
132	01	14	2009	1459	NEWS20090114	31.06965	-81.17537	F	2123	1511	NEWS059	w/ Calf	0.85
133	01	14	2009	1459	NEWS20090114	31.06965	-81.17537	G	2009 Calf of 2123	1511	NEWS059	Calf	0.85
134	01	14	2009	1528	NEWS20090114	31.14327	-81.09725	H	3311	1604	NEWS060	Entangled (Bridle)	0.59
135	01	19	2009	1014	NEWS20090119	30.87523	-81.21007	A	3513	1052	NEWS061		0.52
136	01	19	2009	1014	NEWS20090119	30.87523	-81.21007	B	No Photos	1052	NEWS061	No Photos	0.52
137	01	19	2009	1110	NEWS20090119	31.08000	-81.29063	C	1281	1220	NEWS062	w/ Calf	0.23
138	01	19	2009	1110	NEWS20090119	31.08000	-81.29063	D	2009 Calf of 1281	1220	NEWS062	Calf	0.23
139	01	19	2009	1153	NEWS20090119	31.07615	-81.21922	E	2123	1223	NEWS063	w/ Calf	0.43
140	01	19	2009	1153	NEWS20090119	31.07615	-81.21922	F	2009 Calf of 2123	1223	NEWS063	Calf	0.43
141	01	19	2009	1327	NEWS20090119	31.39082	-80.74043	G	3541	1411	NEWS064		0.44
142	01	19	2009	1327	NEWS20090119	31.39082	-80.74043	H	S017	1411	NEWS064		0.44
143	01	19	2009	1327	NEWS20090119	31.39082	-80.74043	I	3546	1411	NEWS064		0.44
144	01	19	2009	1327	NEWS20090119	31.39082	-80.74043	J	3520	1411	NEWS064		0.44
145	01	19	2009	1327	NEWS20090119	31.39082	-80.74043	K	3503	1411	NEWS064		0.44
146	01	19	2009	1327	NEWS20090119	31.39082	-80.74043	L	3317	1411	NEWS064		0.44
147	01	19	2009	1327	NEWS20090119	31.39082	-80.74043	M	3411	1411	NEWS064		0.44
148	01	19	2009	1327	NEWS20090119	31.39082	-80.74043	N	2006 Calf of 1248	1411	NEWS064	CT14SEUS08	0.44
149	01	19	2009	1327	NEWS20090119	31.39082	-80.74043	#1	CT02BOF2007	1411	NEWS064		0.44
150	01	19	2009	1413	NEWS20090119	31.42708	-80.80832	O	3623	1435	NEWS065		0.37
151	01	19	2009	1413	NEWS20090119	31.42708	-80.80832	P	3651	1435	NEWS065		0.37
152	01	19	2009	1413	NEWS20090119	31.42708	-80.80832	Q	3681	1435	NEWS065		0.37
153	01	19	2009	1533	NEWS20090119	31.22675	-81.21525	R	1246	1551	NEWS066	w/ Calf	N/A
154	01	19	2009	1533	NEWS20090119	31.22675	-81.21525	S	2009 Calf of 1246	1551	NEWS066	Calf	N/A
155	01	24	2009	1319	NEWS20090124	31.12948	-81.02831	A	1611	1333	NEWS067	w/ Calf	0.24
156	01	24	2009	1319	NEWS20090124	31.12948	-81.02831	B	2009 Calf of 1611	1333	NEWS067	Calf	0.24
157	01	24	2009	1417	NEWS20090124	31.29043	-81.12650	C	2660	1440	NEWS068		0.38
158	02	01	2009	0841	NEWS20090201	31.33048	-81.17350	A	3311	1033	NEWS069	Entangled (Bridle)	N/A
159	02	01	2009	1059	NEWS20090201	31.08942	-81.21800	B	1281	1114	NEWS070	w/ Calf	0.00
160	02	01	2009	1059	NEWS20090201	31.08942	-81.21800	C	2009 Calf of 1281	1114	NEWS070	Calf	0.00
161	02	01	2009	1303	NEWS20090201	30.77348	-81.26169	D	3294	N/A	N/A	Prev. Entgled (1st Time Sighted Gear Free)	N/A

Whale Number	Month	Day	Year	Time (Local)	Survey Name	Latitude	Longitude	RIWH Letter	EGNO	Time of Report (Local)	NRW Number	Comments	Sighting Distance (nmi)
162	02	01	2009	1359	NEWS20090201	31.16513	-81.09937	E	3311	N/A	N/A	Entangled (Bridle), Resight of sighting 1 same day	N/A
163	02	01	2009	1515	NEWS20090201	31.15510	-81.19250	F	No Photos	1539	NEWS071	w/ Calf (No Photos)	N/A
164	02	01	2009	1515	NEWS20090201	31.15510	-81.19250	G	No Photos	1539	NEWS071	Calf (No Photos)	N/A
165	02	02	2009	1002	NEWS20090202	30.92688	-81.25875	A	3125	1016	NEWS072		0.39
166	02	02	2009	1002	NEWS20090202	30.92688	-81.25875	B	3760	1016	NEWS072		0.39
167	02	02	2009	1040	NEWS20090202	31.05170	-80.98070	C	3351	1115	NEWS073		1.09
168	02	02	2009	1040	NEWS20090202	31.05170	-80.98070	D	3208 (SE07CT09)	1115	NEWS073		1.09
169	02	02	2009	1045	NEWS20090202	31.06550	-80.98537	E	3405	1116	NEWS074		N/A
170	02	02	2009	1045	NEWS20090202	31.06550	-80.98537	F	3279	1116	NEWS074		N/A
171	02	02	2009	1045	NEWS20090202	31.06550	-80.98537	G	3110	1116	NEWS074		N/A
172	02	02	2009	1045	NEWS20090202	31.06550	-80.98537	H	2209	1116	NEWS074		N/A
173	02	02	2009	1045	NEWS20090202	31.06550	-80.98537	I	BK13SEUS08	1116	NEWS074		N/A
174	02	02	2009	1045	NEWS20090202	31.06550	-80.98537	J	2743	1116	NEWS074		N/A
175	02	02	2009	1045	NEWS20090202	31.06550	-80.98537	#1	CT02BOF2007	1116	NEWS074		N/A
176	02	02	2009	1058	NEWS20090202	31.06850	-80.99198	K	2920	1119	NEWS075		N/A
177	02	02	2009	1142	NEWS20090202	31.16361	-80.91969	L	1402	1216	NEWS076		1.81
178	02	02	2009	1142	NEWS20090202	31.16361	-80.91969	M	2740	1216	NEWS076		1.81
179	02	02	2009	1142	NEWS20090202	31.16361	-80.91969	N	2541	1216	NEWS076		1.81
180	02	02	2009	1142	NEWS20090202	31.16361	-80.91969	O	CT05SEUS08	1216	NEWS076		1.81
181	02	02	2009	1257	NEWS20090202	31.24307	-81.16905	P	3317	1313	NEWS077		0.58
182	02	02	2009	1257	NEWS20090202	31.24307	-81.16905	Q	1303	1313	NEWS077		0.58
183	02	02	2009	1348	NEWS20090202	31.37105	-81.18528	R	1281	1351	NEWS078	w/ Calf	0.74
184	02	02	2009	1348	NEWS20090202	31.37105	-81.18528	S	2009 Calf of 1281	1351	NEWS078	Calf	0.74
185	02	02	2009	1521	NEWS20090202	31.25713	-81.17995	T	1946	1542	NEWS079	w/ Calf	N/A
186	02	02	2009	1521	NEWS20090202	31.25713	-81.17995	U	2009 Calf of 1946	1542	NEWS079	Calf	N/A
187	02	06	2009	1102	NEWS20090206	31.09147	-81.16260	A	2791	1113	NEWS080		0.47
188	02	06	2009	1226	NEWS20090206	31.28345	-80.98122	B	2520	1242	NEWS081	w/ Calf	0.00
189	02	06	2009	1226	NEWS20090206	31.28345	-80.98122	C	2009 Calf of 2520	1242	NEWS081	Calf	0.00
190	02	07	2009	1019	NEWS20090207	31.43624	-80.82539	A	2370	1056	NEWS082		0.74
191	02	07	2009	1019	NEWS20090207	31.43624	-80.82539	B	3302	1056	NEWS082		0.74
192	02	07	2009	1134	NEWS20090207	31.33040	-80.96948	C	3294	1208	NEWS083	Prev. Entgled	N/A
193	02	07	2009	1204	NEWS20090207	31.26755	-81.12310	D	2008 Calf of 2753	1234	NEWS084	Yearling	0.95
194	02	07	2009	1204	NEWS20090207	31.26755	-81.12310	E	2007 Calf of 1701	1234	NEWS084	Prev. Entgled	0.95
195	02	07	2009	1227	NEWS20090207	31.24927	-81.16444	F	1246	1239	NEWS085	w/ Calf	0.93
196	02	07	2009	1227	NEWS20090207	31.24927	-81.16444	G	2009 Calf of 1246	1239	NEWS085	Calf	0.93
197	02	07	2009	1334	NEWS20090207	31.06922	-80.99692	H	2520	1348	NEWS086	w/ Calf	0.83
198	02	07	2009	1334	NEWS20090207	31.06922	-80.99692	I	2009 Calf of 2520	1348	NEWS086	Calf	0.83
199	02	07	2009	1359	NEWS20090207	31.02142	-81.12749	J	1711	1415	NEWS087	w/ Calf	0.75
200	02	07	2009	1359	NEWS20090207	31.02142	-81.12749	K	2009 Calf of 1711	1415	NEWS087	Calf	0.75

Whale Number	Month	Day	Year	Time (Local)	Survey Name	Latitude	Longitude	RIWH Letter	EGNO	Time of Report (Local)	NRW Number	Comments	Sighting Distance (nmi)
201	02	07	2009	1441	NEWS20090207	30.93534	-81.25961	L	2008 Calf of 3130	1501	NEWS088	Yearling	0.09
202	02	07	2009	1520	NEWS20090207	30.86578	-81.24065	M	1946	1542	NEWS089	w/ Calf	1.06
203	02	07	2009	1520	NEWS20090207	30.86578	-81.24065	N	2009 Calf of 1946	1542	NEWS089	Calf	1.06
204	02	07	2009	1525	NEWS20090207	30.90429	-81.21916	O	2007 Calf of 2614	1542	NEWS090	Entangled	1.16
205	02	08	2009	0922	NEWS20090208	30.85977	-81.36748	A	1281	0935	NEWS091	w/ Calf	N/A
206	02	08	2009	0922	NEWS20090208	30.85977	-81.36748	B	2009 Calf of 1281	0935	NEWS091	Calf	N/A
207	02	08	2009	0942	NEWS20090208	30.86782	-81.19009	C	2370	1045	NEWS092		N/A
208	02	08	2009	0942	NEWS20090208	30.86782	-81.19009	D	3323	1045	NEWS092		N/A
209	02	08	2009	0942	NEWS20090208	30.86782	-81.19009	E	3302	1045	NEWS092		N/A
210	02	08	2009	0942	NEWS20090208	30.86782	-81.19009	F	3312	1045	NEWS092		N/A
211	02	08	2009	0956	NEWS20090208	30.87465	-81.18179	G	S016	1045	NEWS093		N/A
212	02	08	2009	0956	NEWS20090208	30.87465	-81.18179	H	2008 Calf of 3293	1045	NEWS093	Yearling	N/A
213	02	08	2009	1009	NEWS20090208	30.87175	-81.19973	I	3610	1047	NEWS094	Prev. Entangled	N/A
214	02	08	2009	1043	NEWS20090208	30.92157	-81.11897	J	2123	1059	NEWS095	Calf	0.74
215	02	08	2009	1043	NEWS20090208	30.92157	-81.11897	K	2009 Calf of 2123	1059	NEWS095	w/ Calf	0.74
216	02	08	2009	1147	NEWS20090208	31.08117	-81.22104	L	2008 Calf of 2753	1205	NEWS096	Yearling	0.16
217	02	08	2009	1221	NEWS20090208	31.13477	-80.86403	M	2520	1245	NEWS097	Calf	0.00
218	02	08	2009	1221	NEWS20090208	31.13477	-80.86403	N	2009 Calf of 2520	1245	NEWS097	w/ Calf	0.00
219	02	09	2009	0942	NEWS20090209	30.94517	-80.96290	A	3301	1000	NEWS098		0.72
220	02	09	2009	0942	NEWS20090209	30.94517	-80.96290	B	3401	1000	NEWS098		0.72
221	02	09	2009	0942	NEWS20090209	30.94517	-80.96290	C	3302	1000	NEWS098		0.72
222	02	09	2009	1021	NEWS20090209	31.00233	-81.03228	D	CT05SEUS08	1103	NEWS099		1.11
223	02	09	2009	1021	NEWS20090209	31.00233	-81.03228	E	3323	1103	NEWS099		1.11
224	02	09	2009	1021	NEWS20090209	31.00233	-81.03228	F	3610	1103	NEWS099		1.11
225	02	09	2009	1033	NEWS20090209	30.99553	-81.04222	G	2008 Calf of 2753	1106	NEWS100	Yearling	N/A
226	02	09	2009	1033	NEWS20090209	30.99553	-81.04222	H	2008 Calf of 2790	1106	NEWS100	Yearling	N/A
227	02	09	2009	1041	NEWS20090209	30.98352	-81.00480	I	2007 Calf of 2614	1106	NEWS100	Entangled	0.02
228	02	09	2009	1041	NEWS20090209	30.98352	-81.00480	J	3570	1110	NEWS101		0.02
229	02	09	2009	1041	NEWS20090209	30.98352	-81.00480	#1	3401	1110	NEWS101		0.02
230	02	09	2009	1041	NEWS20090209	30.98352	-81.00480	#2	2008 Calf of 1408	1110	NEWS101	Yearling	0.02
231	02	09	2009	1041	NEWS20090209	30.98352	-81.00480	#3	3323	1110	NEWS101		0.02
232	02	09	2009	1401	NEWS20090209	30.97917	-80.99757	K	2406	1428	NEWS102		0.28
233	02	09	2009	1406	NEWS20090209	30.96988	-81.00671	L	3570	1428	NEWS102		N/A
234	02	09	2009	1406	NEWS20090209	30.96988	-81.00671	M	CT05SEUS08	1428	NEWS102		N/A
235	02	09	2009	1406	NEWS20090209	30.96988	-81.00671	N	3401	1428	NEWS102		N/A
236	02	09	2009	1406	NEWS20090209	30.96988	-81.00671	O	3301	1428	NEWS102		N/A
237	02	09	2009	1406	NEWS20090209	30.96988	-81.00671	P	No Photos	1428	NEWS102	No Photos	N/A
238	02	09	2009	1436	NEWS20090209	30.95774	-80.99438	Q	2007 Calf of 2614	1430	NEWS103	Entangled	N/A
239	02	10	2009	0920	NEWS20090210	30.99345	-81.23308	A	2007 Calf of 2614	1047	NEWS104	Entangled	N/A
240	02	10	2009	0945	NEWS20090210	30.99335	-81.21243	B	3570	1112	NEWS105		N/A
241	02	10	2009	0945	NEWS20090210	30.99335	-81.21243	C	1402	1112	NEWS105		N/A
242	02	10	2009	0945	NEWS20090210	30.99335	-81.21243	D	3125	1112	NEWS105		N/A

Whale Number	Month	Day	Year	Time (Local)	Survey Name	Latitude	Longitude	RIWH Letter	EGNO	Time of Report (Local)	NRW Number	Comments	Sighting Distance (nmi)
243	02	10	2009	0945	NEWS20090210	30.99335	-81.21243	E	3120	1112	NEWS105		N/A
244	02	10	2009	0945	NEWS20090210	30.99335	-81.21243	F	1506	1112	NEWS105		N/A
245	02	10	2009	0945	NEWS20090210	30.99335	-81.21243	G	3401	1112	NEWS105		N/A
246	02	10	2009	0945	NEWS20090210	30.99335	-81.21243	H	3245	1112	NEWS105		N/A
247	02	10	2009	0945	NEWS20090210	30.99335	-81.21243	I	3301	1112	NEWS105		N/A
248	02	10	2009	0945	NEWS20090210	30.99335	-81.21243	J	SE07BK08	1112	NEWS105		N/A
249	02	10	2009	0945	NEWS20090210	30.99335	-81.21243	#1	1307	1112	NEWS105		N/A
250	02	10	2009	1002	NEWS20090210	30.98900	-81.21857	K	1901	1116	NEWS106		N/A
251	02	10	2009	1002	NEWS20090210	30.98900	-81.21857	L	3401	1116	NEWS106		N/A
252	02	10	2009	1002	NEWS20090210	30.98900	-81.21857	#2	3245	1116	NEWS106		N/A
253	02	10	2009	1008	NEWS20090210	30.98708	-81.22002	M	1901	1122	NEWS107		N/A
254	02	10	2009	1008	NEWS20090210	30.98708	-81.22002	N	2541	1122	NEWS107		N/A
255	02	10	2009	1024	NEWS20090210	30.90172	-81.11773	O	2008 Calf of 2753	1127	NEWS108	Yearling	0.98
256	02	10	2009	1024	NEWS20090210	30.90172	-81.11773	P	CT05SEUS08	1127	NEWS108		0.98
257	02	10	2009	1024	NEWS20090210	30.90172	-81.11773	Q	CT03RB06	1127	NEWS108		0.98
258	02	10	2009	1024	NEWS20090210	30.90172	-81.11773	R	2008 Calf of 2790	1127	NEWS108	Yearling	0.98
259	02	10	2009	1024	NEWS20090210	30.90172	-81.11773	S	2007 Calf of 1620	1127	NEWS108		0.98
260	02	10	2009	1024	NEWS20090210	30.90172	-81.11773	T	3610	1127	NEWS108		0.98
261	02	10	2009	1024	NEWS20090210	30.90172	-81.11773	U	3411	1127	NEWS108		0.98
262	02	10	2009	1024	NEWS20090210	30.90172	-81.11773	V	2370	1127	NEWS108		0.98
263	02	10	2009	1043	NEWS20090210	30.87840	-81.04977	W	3312	1134	NEWS109		0.30
264	02	10	2009	1043	NEWS20090210	30.87840	-81.04977	X	3323	1134	NEWS109		0.30
265	02	10	2009	1043	NEWS20090210	30.87840	-81.04977	Y	3111	1134	NEWS109		0.30
266	02	10	2009	1043	NEWS20090210	30.87840	-81.04977	Z	3302	1134	NEWS109		0.30
267	02	10	2009	1043	NEWS20090210	30.87840	-81.04977	AA	CT02BOF2007	1134	NEWS109		0.30
268	02	10	2009	1043	NEWS20090210	30.87840	-81.04977	BB	3560	1134	NEWS109		0.30
269	02	10	2009	1043	NEWS20090210	30.87840	-81.04977	CC	3523? (S013)	1134	NEWS109		0.30
270	02	10	2009	1043	NEWS20090210	30.87840	-81.04977	DD	BK01BOF07	1134	NEWS109		0.30
271	02	10	2009	1043	NEWS20090210	30.87840	-81.04977	EE	2608	1134	NEWS109		0.30
272	02	10	2009	1201	NEWS20090210	31.03620	-81.06828	FF	2008 Calf of 3115	1214	NEWS110	Yearling	0.16
273	02	10	2009	1224	NEWS20090210	31.07797	-81.23038	GG	1151	1246	NEWS111	w/ Calf	0.34
274	02	10	2009	1224	NEWS20090210	31.07797	-81.23038	HH	2009 Calf of 1151	1246	NEWS111	Calf	0.34
275	02	10	2009	1321	NEWS20090210	31.18322	-80.84857	II	1266	1339	NEWS112	w/ Calf	0.00
276	02	10	2009	1321	NEWS20090210	31.18322	-80.84857	JJ	2009 Calf of 1266	1339	NEWS112	Calf	0.00
277	02	10	2009	1344	NEWS20090210	31.20852	-81.14155	KK	1142	1408	NEWS113	w/ Calf	1.52
278	02	10	2009	1344	NEWS20090210	31.20852	-81.14155	LL	2009 Calf of 1142	1408	NEWS113	Calf	1.52
279	02	10	2009	1444	NEWS20090210	31.37728	-81.03547	MM	1603	1504	NEWS114		0.39
280	02	10	2009	1605	NEWS20090210	31.55345	-80.91612	NN	3430	1621	NEWS115		1.17
281	02	10	2009	1605	NEWS20090210	31.55345	-80.91612	OO	3308	1621	NEWS115		1.17
282	02	12	2009	0927	NEWS20090212	31.27511	-81.20650	A	No Photos	0946	NEWS116	No Photos	N/A
283	02	12	2009	0945	NEWS20090212	31.60792	-80.80247	B	No Photos	0957	NEWS117	No Photos	N/A
284	02	12	2009	0945	NEWS20090212	31.60792	-80.80247	C	No Photos	0957	NEWS117	No Photos	N/A

Whale Number	Month	Day	Year	Time (Local)	Survey Name	Latitude	Longitude	RIWH Letter	EGNO	Time of Report (Local)	NRW Number	Comments	Sighting Distance (nmi)
285	02	12	2009	0945	NEWS20090212	31.60792	-80.80247	D	No Photos	0957	NEWS117	No Photos	N/A
286	02	12	2009	0945	NEWS20090212	31.60792	-80.80247	E	No Photos	0957	NEWS117	No Photos	N/A
287	02	12	2009	0958	NEWS20090212	31.66473	-80.69177	F	2007 Calf of 2614	1020	NEWS118	Entangled	N/A
288	02	13	2009	0958	NEWS20090213	31.49005	-80.95898	A	2920	1027	NEWS120		0.38
289	02	13	2009	1059	NEWS20090213	31.37638	-81.08086	B	2007 Calf of 1620	1145	NEWS121		0.44
290	02	13	2009	1059	NEWS20090213	31.37638	-81.08086	C	3541	1145	NEWS121		0.44
291	02	13	2009	1059	NEWS20090213	31.37638	-81.08086	D	2608	1145	NEWS121		0.44
292	02	13	2009	1108	NEWS20090213	31.36003	-81.06668	E	3279	1147	NEWS122		N/A
293	02	13	2009	1108	NEWS20090213	31.36003	-81.06668	F	3520	1147	NEWS122		N/A
294	02	13	2009	1122	NEWS20090213	31.34345	-81.04549	G	1971	1149	NEWS123		N/A
295	02	13	2009	1122	NEWS20090213	31.34345	-81.04549	H	3245	1149	NEWS123		N/A
296	02	13	2009	1122	NEWS20090213	31.34345	-81.04549	I	3411	1149	NEWS123		N/A
297	02	13	2009	1122	NEWS20090213	31.34345	-81.04549	J	3421	1149	NEWS123		N/A
298	02	13	2009	1225	NEWS20090213	31.22328	-81.07203	K	2740	1243	NEWS124		0.62
299	02	13	2009	1225	NEWS20090213	31.22328	-81.07203	L	2743	1243	NEWS124		0.62
300	02	13	2009	1317	NEWS20090213	31.08686	-81.11025	M	3150	1411	NEWS125		2.80
301	02	13	2009	1317	NEWS20090213	31.08686	-81.11025	N	3570	1411	NEWS125		2.80
302	02	13	2009	1317	NEWS20090213	31.08686	-81.11025	O	BK13SEUS08	1411	NEWS125		2.80
303	02	13	2009	1317	NEWS20090213	31.08686	-81.11025	P	BK03BOF07	1411	NEWS125		2.80
304	02	13	2009	1317	NEWS20090213	31.08686	-81.11025	Q	3401	1411	NEWS125		2.80
305	02	13	2009	1326	NEWS20090213	31.05783	-81.09903	R	SE07BK08	1413	NEWS126		N/A
306	02	13	2009	1326	NEWS20090213	31.05783	-81.09903	S	2795	1413	NEWS126		N/A
307	02	13	2009	1326	NEWS20090213	31.05783	-81.09903	T	CT02BOF2007	1413	NEWS126		N/A
308	02	13	2009	1326	NEWS20090213	31.05783	-81.09903	U	3442	1413	NEWS126		N/A
309	02	13	2009	1326	NEWS20090213	31.05783	-81.09903	V	1706	1413	NEWS126		N/A
310	02	13	2009	1326	NEWS20090213	31.05783	-81.09903	W	3110	1413	NEWS126		N/A
311	02	13	2009	1326	NEWS20090213	31.05783	-81.09903	X	3301	1413	NEWS126		N/A
312	02	13	2009	1326	NEWS20090213	31.05783	-81.09903	Y	BK01BOF07	1413	NEWS126		N/A
313	02	13	2009	1326	NEWS20090213	31.05783	-81.09903	Z	3191 (SE07CT29)	1413	NEWS126		N/A
314	02	13	2009	1326	NEWS20090213	31.05783	-81.09903	#1	3603	1413	NEWS126		N/A
315	02	13	2009	1348	NEWS20090213	31.14008	-81.08192	AA	3343	1416	NEWS127		N/A
316	02	13	2009	1348	NEWS20090213	31.14008	-81.08192	BB	3351	1416	NEWS127		N/A
317	02	13	2009	1348	NEWS20090213	31.14008	-81.08192	CC	3560	1416	NEWS127		N/A
318	02	13	2009	1417	NEWS20090213	31.09355	-81.08310	DD	3346	1437	NEWS128	Entangled (Kingfisher)	0.60
319	02	13	2009	1417	NEWS20090213	31.09355	-81.08310	EE	3323	1437	NEWS128		0.60
320	02	13	2009	1440	NEWS20090213	31.03080	-81.27455	FF	2008 Calf of 2330	1514	NEWS129	Yearling	0.18
321	02	13	2009	1444	NEWS20090213	31.01834	-81.27063	GG	S029	1516	NEWS130		N/A
322	02	13	2009	1450	NEWS20090213	31.01908	-81.25864	HH	S024	1518	NEWS131		N/A
323	02	13	2009	1450	NEWS20090213	31.01908	-81.25864	II	2427	1518	NEWS131	Prev. Entangled	N/A
324	02	13	2009	1450	NEWS20090213	31.01908	-81.25864	JJ	2007 Calf of 1425	1518	NEWS131		N/A
325	02	13	2009	1450	NEWS20090213	31.01908	-81.25864	KK	2007 Calf of 2645	1518	NEWS131		N/A

Whale Number	Month	Day	Year	Time (Local)	Survey Name	Latitude	Longitude	RIWH Letter	EGNO	Time of Report (Local)	NRW Number	Comments	Sighting Distance (nmi)
326	02	13	2009	1450	NEWS20090213	31.01908	-81.25864	LL	3620	1518	NEWS131		N/A
327	02	13	2009	1450	NEWS20090213	31.01908	-81.25864	#2	3681	1518	NEWS131		N/A
328	02	13	2009	1503	NEWS20090213	31.03038	-81.08961	MM	3442	1520	NEWS132		0.20
329	02	13	2009	1503	NEWS20090213	31.03038	-81.08961	NN	2008 Calf of 2790	1520	NEWS132	Yearling	0.20
330	02	13	2009	1531	NEWS20090213	30.97123	-81.13792	OO	3513	1623	NEWS133		0.74
331	02	13	2009	1531	NEWS20090213	30.97123	-81.13792	PP	3312	1623	NEWS133		0.74
332	02	13	2009	1531	NEWS20090213	30.97123	-81.13792	QQ	2006 Calf of 1248	1623	NEWS133		0.74
333	02	13	2009	1531	NEWS20090213	30.97123	-81.13792	#3	3610	1623	NEWS133		0.74
334	02	13	2009	1550	NEWS20090213	30.99343	-81.25767	RR	2008 Calf of 1243	1625	NEWS134	Yearling	0.58
335	02	13	2009	1604	NEWS20090213	30.93310	-81.24232	SS	1515	1628	NEWS135	w/ Calf	0.00
336	02	13	2009	1604	NEWS20090213	30.93310	-81.24232	TT	2009 Calf of 1515	1628	NEWS135	Calf	0.00
337	02	21	2009	0949	NEWS20090221	30.87205	-81.38933	A	1611	1008	NEWS136	w/ Calf	N/A
338	02	21	2009	0949	NEWS20090221	30.87205	-81.38933	B	2009 Calf of 1611	1008	NEWS136	Calf	N/A
339	02	21	2009	1014	NEWS20090221	30.67363	-81.30973	C	1946	N/A	N/A	w/ Calf, Resight of sighting 4 same day	0.60
340	02	21	2009	1014	NEWS20090221	30.67363	-81.30973	D	2009 Calf of 1946	N/A	N/A	Calf, Resight of sighting 4 same day	0.60
341	02	21	2009	1020	NEWS20090221	30.66082	-81.28700	E	2008 Calf of 1245	1058	NEWS137	Yearling	1.42
342	02	21	2009	1032	NEWS20090221	30.67800	-81.31728	F	1946	1103	NEWS138	w/ Calf, Mom and Calf w/ 1 Whale	N/A
343	02	21	2009	1032	NEWS20090221	30.67800	-81.31728	G	2009 Calf of 1946	1103	NEWS138	Calf, Mom and Calf w/ 1 Whale	N/A
344	02	21	2009	1032	NEWS20090221	30.67800	-81.31728	H	S023	1103	NEWS138	Mom and Calf w/ 1 Whale	N/A
345	02	21	2009	1044	NEWS20090221	30.65118	-81.15130	I	1503	1109	NEWS139	w/ Calf	1.22
346	02	21	2009	1044	NEWS20090221	30.65118	-81.15130	J	2009 Calf of 1503	1109	NEWS139	Calf	1.22
347	02	21	2009	1114	NEWS20090221	30.76125	-81.27389	K	3760	1141	NEWS140		1.67
348	02	21	2009	1114	NEWS20090221	30.76125	-81.27389	L	3314	1141	NEWS140		1.67
349	02	21	2009	1114	NEWS20090221	30.76125	-81.27389	M	3312	1141	NEWS140		1.67
350	02	21	2009	1114	NEWS20090221	30.76125	-81.27389	N	2007 Calf of 1425	1141	NEWS140		1.67
351	02	21	2009	1114	NEWS20090221	30.76125	-81.27389	O	3301	1141	NEWS140		1.67
352	02	21	2009	1114	NEWS20090221	30.76125	-81.27389	P	3610	1141	NEWS140		1.67
353	02	21	2009	1114	NEWS20090221	30.76125	-81.27389	Q	2008 Calf of 1408	1141	NEWS140	Yearling	1.67
354	02	21	2009	1114	NEWS20090221	30.76125	-81.27389	R	BK01BOF07	1141	NEWS140		1.67
355	02	21	2009	1241	NEWS20090221	30.94123	-81.18769	S	2503	1304	NEWS141	w/ Calf	0.48
356	02	21	2009	1241	NEWS20090221	30.94123	-81.18769	T	2009 Calf of 2503	1304	NEWS141	Calf	0.48
357	02	21	2009	1316	NEWS20090221	31.02932	-81.18063	U	1142	1356	NEWS142	w/ Calf	0.23
358	02	21	2009	1316	NEWS20090221	31.02932	-81.18063	V	2009 Calf of 1142	1356	NEWS142	Calf	0.23
359	02	21	2009	1321	NEWS20090221	31.03310	-81.19085	W	3370	1356	NEWS143	w/ Calf	N/A
360	02	21	2009	1321	NEWS20090221	31.03310	-81.19085	X	2009 Calf of 3370	1356	NEWS143	Calf	N/A
361	02	21	2009	1359	NEWS20090221	31.09317	-81.09241	Y	S025	1428	NEWS144		0.55
362	02	21	2009	1442	NEWS20090221	31.26108	-80.89418	Z	1246	1505	NEWS145	w/ Calf	N/A
363	02	21	2009	1442	NEWS20090221	31.26108	-80.89418	AA	2009 Calf of 1246	1505	NEWS145	Calf	N/A

Whale Number	Month	Day	Year	Time (Local)	Survey Name	Latitude	Longitude	RIWH Letter	EGNO	Time of Report (Local)	NRW Number	Comments	Sighting Distance (nmi)
364	02	21	2009	1532	NEWS20090221	31.40409	-81.10765	BB	1281	1601	NEWS146	w/ Calf	1.20
365	02	21	2009	1532	NEWS20090221	31.40409	-81.10765	CC	2009 Calf of 1281	1601	NEWS146	Calf	1.20
366	02	26	2009	1304	NEWS20090226	31.42548	-80.86062	A	2007 Calf of 2645	1341	NEWS147		0.49
367	02	26	2009	1304	NEWS20090226	31.42548	-80.86062	B	BK02BOF07	1341	NEWS147		0.49
368	02	26	2009	1358	NEWS20090226	31.48705	-80.66393	C	SE06CT05	1439	NEWS148		0.23
369	02	26	2009	1411	NEWS20090226	31.50665	-80.65417	D	3570	1441	NEWS149		N/A
370	02	26	2009	1411	NEWS20090226	31.50665	-80.65417	E	SE07BK08	1441	NEWS149		N/A
371	02	26	2009	1411	NEWS20090226	31.50665	-80.65417	F	3323	1441	NEWS149		N/A
372	02	26	2009	1411	NEWS20090226	31.50665	-80.65417	G	3301	1441	NEWS149		N/A
373	02	26	2009	1411	NEWS20090226	31.50665	-80.65417	H	3545	1441	NEWS149		N/A
374	02	27	2009	1219	NEWS20090227	31.16592	-81.04562	A	3139	1251	NEWS150	w/ Calf	1.04
375	02	27	2009	1219	NEWS20090227	31.16592	-81.04562	B	2009 Calf of 3139	1251	NEWS150	Calf	1.04
376	03	04	2009	1034	NEWS20090304	30.88525	-81.16549	A	2541	1042	NEWS151		N/A
377	03	04	2009	1034	NEWS20090304	30.88525	-81.16549	B	2008 Calf of 1408	1042	NEWS151	Yearling	N/A
378	03	05	2009	1038	NEWS20090305	29.34082	-80.89217	A	No Photos	1103	NEWS152	w/ Calf (No Photos)	N/A
379	03	05	2009	1038	NEWS20090305	29.34082	-80.89217	B	No Photos	1103	NEWS152	Calf (No Photos)	N/A
380	03	05	2009	1253	NEWS20090305	29.21609	-80.66576	C	3311	1317	NEWS153	Entangled (Bridle)	N/A
381	03	05	2009	1548	NEWS20090305	29.27342	-80.97947	D	2142	1620	NEWS154		N/A
382	03	05	2009	1548	NEWS20090305	29.27342	-80.97947	E	2770	1620	NEWS154		N/A
383	03	05	2009	1548	NEWS20090305	29.27342	-80.97947	F	1249	1620	NEWS154		N/A
384	03	05	2009	1555	NEWS20090305	29.28372	-80.97828	G	3466	1622	NEWS155		N/A
385	03	05	2009	1555	NEWS20090305	29.28372	-80.97828	H	1043	1622	NEWS155		N/A
386	03	06	2009	1025	NEWS20090306	28.84443	-80.47300	A	3311	1454	NEWS157	Entangled (Bridle	N/A
387	03	07	2009	0953	NEWS20090307	30.99377	-81.10598	A	1142	1034	NEWS158	w/ Calf	0.54
388	03	07	2009	0953	NEWS20090307	30.99377	-81.10598	B	2009 Calf of 1142	1034	NEWS158	Calf	0.54
389	03	07	2009	1006	NEWS20090307	30.99595	-80.95617	C	1281	1036	NEWS159	w/ Calf	1.13
390	03	07	2009	1006	NEWS20090307	30.99595	-80.95617	D	2009 Calf of 1281	1036	NEWS159	Calf	1.13
391	03	07	2009	1054	NEWS20090307	31.10080	-81.17465	E	2503	1105	NEWS160	w/ Calf	1.02
392	03	07	2009	1054	NEWS20090307	31.10080	-81.17465	F	2009 Calf of 2503	1105	NEWS160	Calf	1.02
393	03	09	2009	0957	NEWS20090309	30.97397	-81.20052	A	3232	1019	NEWS161		0.01
394	03	09	2009	1012	NEWS20090309	31.00181	-80.92188	B	1249	1045	NEWS162		0.98
395	03	09	2009	1012	NEWS20090309	31.00181	-80.92188	C	1403	1045	NEWS162		0.98
396	03	09	2009	1012	NEWS20090309	31.00181	-80.92188	D	1270	1045	NEWS162		0.98
397	03	09	2009	1012	NEWS20090309	31.00181	-80.92188	E	2770	1045	NEWS162		0.98
398	03	09	2009	1012	NEWS20090309	31.00181	-80.92188	F	BK01BOF07	1045	NEWS162		0.98
399	03	09	2009	1012	NEWS20090309	31.00181	-80.92188	G	3570	1045	NEWS162		0.98
400	03	09	2009	1012	NEWS20090309	31.00181	-80.92188	H	S034	1045	NEWS162		0.98
401	03	09	2009	1012	NEWS20090309	31.00181	-80.92188	I	2142	1045	NEWS162		0.98
402	03	10	2009	1031	NEWS20090310	30.88500	-80.94697	A	1803	1107	NEWS163		0.07
403	03	10	2009	1031	NEWS20090310	30.88500	-80.94697	B	1317	1107	NEWS163		0.07
404	03	10	2009	1031	NEWS20090310	30.88500	-80.94697	C	3191 (SE07CT29)	1107	NEWS163		0.07

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405	03	10	2009	1031	NEWS20090310	30.88500	-80.94697	D	S032	1107	NEWS163		0.07
406	03	10	2009	1058	NEWS20090310	30.92705	-80.95245	E	3391 (CT29)	1110	NEWS164		0.50
407	03	10	2009	1435	NEWS20090310	31.39037	-80.68028	F	BK01BOF07	1510	NEWS165		0.48
408	03	10	2009	1435	NEWS20090310	31.39037	-80.68028	G	3570	1510	NEWS165		0.48
409	03	10	2009	1435	NEWS20090310	31.39037	-80.68028	H	3760	1510	NEWS165		0.48
410	03	10	2009	1447	NEWS20090310	31.43047	-80.58290	I	1403	1514	NEWS166		N/A
411	03	10	2009	1447	NEWS20090310	31.43047	-80.58290	J	1616	1514	NEWS166		N/A
412	03	10	2009	1447	NEWS20090310	31.43047	-80.58290	K	1121	1514	NEWS166		N/A
413	03	10	2009	1522	NEWS20090310	31.51083	-80.87773	L	1281	1533	NEWS167	w/ Calf	1.64
414	03	10	2009	1522	NEWS20090310	31.51083	-80.87773	M	2009 Calf of 1281	1533	NEWS167	Calf	1.64
415	03	10	2009	1549	NEWS20090310	31.52245	-80.91267	N	3139	1607	NEWS168	w/ Calf	0.67
416	03	10	2009	1549	NEWS20090310	31.52245	-80.91267	O	2009 Calf of 3139	1607	NEWS168	Calf	0.67
417	03	11	2009	0951	NEWS20090311	31.47518	-80.79455	A	3650	1022	NEWS169		0.54
418	03	11	2009	0951	NEWS20090311	31.47518	-80.79455	B	3570	1022	NEWS169		0.54
419	03	11	2009	0951	NEWS20090311	31.47518	-80.79455	C	BK01BOF07	1022	NEWS169		0.54
420	03	11	2009	1006	NEWS20090311	31.49252	-80.82765	D	2008 Calf of 1243	1026	NEWS170	Yearling	0.53
421	03	11	2009	1019	NEWS20090311	31.47178	-81.11080	E	1204	1048	NEWS171	w/ Calf	0.67
422	03	11	2009	1019	NEWS20090311	31.47178	-81.11080	F	2009 Calf of 1204	1048	NEWS171	Calf	0.67
423	03	11	2009	1021	NEWS20090311	31.48495	-81.12313	G	1612	1053	NEWS172	w/ Calf	0.20
424	03	11	2009	1021	NEWS20090311	31.48495	-81.12313	H	2009 Calf of 1612	1053	NEWS172	Calf	0.20
425	03	11	2009	1302	NEWS20090311	31.08690	-80.80737	I	2145	1325	NEWS173	w/ Calf	N/A
426	03	11	2009	1302	NEWS20090311	31.08690	-80.80737	J	2009 Calf of 2145	1325	NEWS173	Calf	N/A
427	03	12	2009	1043	NEWS20090312	30.89118	-81.22907	A	3317	1057	NEWS174	w/ Calf	0.49
428	03	12	2009	1043	NEWS20090312	30.89118	-81.22907	B	2009 Calf of 3317	1057	NEWS174	Calf	0.49
429	03	12	2009	1116	NEWS20090312	30.94007	-81.21737	C	2791	1139	NEWS175	w/ Calf	0.29
430	03	12	2009	1116	NEWS20090312	30.94007	-81.21737	D	2009 Calf of 2791	1139	NEWS175	Calf	0.29
406	03	10	2009	1058	NEWS20090310	30.92705	-80.95245	E	3391 (CT29)	1110	NEWS164		0.50
407	03	10	2009	1435	NEWS20090310	31.39037	-80.68028	F	BK01BOF07	1510	NEWS165		0.48
408	03	10	2009	1435	NEWS20090310	31.39037	-80.68028	G	3570	1510	NEWS165		0.48
409	03	10	2009	1435	NEWS20090310	31.39037	-80.68028	H	3760	1510	NEWS165		0.48
410	03	10	2009	1447	NEWS20090310	31.43047	-80.58290	I	1403	1514	NEWS166		N/A
411	03	10	2009	1447	NEWS20090310	31.43047	-80.58290	J	1616	1514	NEWS166		N/A
412	03	10	2009	1447	NEWS20090310	31.43047	-80.58290	K	1121	1514	NEWS166		N/A
413	03	10	2009	1522	NEWS20090310	31.51083	-80.87773	L	1281	1533	NEWS167	w/ Calf	1.64
414	03	10	2009	1522	NEWS20090310	31.51083	-80.87773	M	2009 Calf of 1281	1533	NEWS167	Calf	1.64
415	03	10	2009	1549	NEWS20090310	31.52245	-80.91267	N	3139	1607	NEWS168	w/ Calf	0.67
416	03	10	2009	1549	NEWS20090310	31.52245	-80.91267	O	2009 Calf of 3139	1607	NEWS168	Calf	0.67
417	03	11	2009	0951	NEWS20090311	31.47518	-80.79455	A	3650	1022	NEWS169		0.54
418	03	11	2009	0951	NEWS20090311	31.47518	-80.79455	B	3570	1022	NEWS169		0.54
419	03	11	2009	0951	NEWS20090311	31.47518	-80.79455	C	BK01BOF07	1022	NEWS169		0.54
420	03	11	2009	1006	NEWS20090311	31.49252	-80.82765	D	2008 Calf of 1243	1026	NEWS170	Yearling	0.53
421	03	11	2009	1019	NEWS20090311	31.47178	-81.11080	E	1204	1048	NEWS171	w/ Calf	0.67

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422	03	11	2009	1019	NEWS20090311	31.47178	-81.11080	F	2009 Calf of 1204	1048	NEWS171	Calf	0.67
423	03	11	2009	1021	NEWS20090311	31.48495	-81.12313	G	1612	1053	NEWS172	w/ Calf	0.20
424	03	11	2009	1021	NEWS20090311	31.48495	-81.12313	H	2009 Calf of 1612	1053	NEWS172	Calf	0.20
425	03	11	2009	1302	NEWS20090311	31.08690	-80.80737	I	2145	1325	NEWS173	w/ Calf	N/A
426	03	11	2009	1302	NEWS20090311	31.08690	-80.80737	J	2009 Calf of 2145	1325	NEWS173	Calf	N/A
427	03	12	2009	1043	NEWS20090312	30.89118	-81.22907	A	3317	1057	NEWS174	w/ Calf	0.49
428	03	12	2009	1043	NEWS20090312	30.89118	-81.22907	B	2009 Calf of 3317	1057	NEWS174	Calf	0.49
429	03	12	2009	1116	NEWS20090312	30.94007	-81.21737	C	2791	1139	NEWS175	w/ Calf	0.29
430	03	12	2009	1116	NEWS20090312	30.94007	-81.21737	D	2009 Calf of 2791	1139	NEWS175	Calf	0.29
431	03	12	2009	1144	NEWS20090312	31.03208	-81.08887	E	1719	1205	NEWS176	Mom and Calf w/ 2 Whales	2.90
432	03	12	2009	1144	NEWS20090312	31.03208	-81.08887	F	3101	1205	NEWS176	w/ Calf, Mom and Calf w/ 2 Whales	2.90
433	03	12	2009	1144	NEWS20090312	31.03208	-81.08887	G	2009 Calf of 3101	1205	NEWS176	Calf, Mom and Calf w/ 2 Whales	2.90
434	03	12	2009	1144	NEWS20090312	31.03208	-81.08887	H	2615	1205	NEWS176	Mom and Calf w/ 2 Whales	2.90
435	03	12	2009	1345	NEWS20090312	31.35868	-81.15044	I	3139	1357	NEWS177	w/ Calf	1.51
436	03	12	2009	1345	NEWS20090312	31.35868	-81.15044	J	2009 Calf of 3139	1357	NEWS177	Calf	1.51
437	03	12	2009	1413	NEWS20090312	31.43960	-81.06615	K	1204	1428	NEWS178	w/ Calf	0.38
438	03	12	2009	1413	NEWS20090312	31.43960	-81.06615	L	2009 Calf of 1204	1428	NEWS178	Calf	0.38
439	03	16	2009	1350	NEWS20090316	30.94045	-81.08108	A	1204	1406	NEWS179	w/ Calf	0.37
440	03	16	2009	1350	NEWS20090316	30.94045	-81.08108	B	2009 Calf of 1204	1406	NEWS179	Calf	0.37
441	03	16	2009	1526	NEWS20090316	31.17117	-81.20760	C	1968	1537	NEWS180		0.74
442	03	16	2009	1526	NEWS20090316	31.17117	-81.20760	D	2413	1537	NEWS180		0.74
422	03	11	2009	1019	NEWS20090311	31.47178	-81.11080	F	2009 Calf of 1204	1048	NEWS171	Calf	0.67
423	03	11	2009	1021	NEWS20090311	31.48495	-81.12313	G	1612	1053	NEWS172	w/ Calf	0.20
424	03	11	2009	1021	NEWS20090311	31.48495	-81.12313	H	2009 Calf of 1612	1053	NEWS172	Calf	0.20
425	03	11	2009	1302	NEWS20090311	31.08690	-80.80737	I	2145	1325	NEWS173	w/ Calf	N/A
426	03	11	2009	1302	NEWS20090311	31.08690	-80.80737	J	2009 Calf of 2145	1325	NEWS173	Calf	N/A
427	03	12	2009	1043	NEWS20090312	30.89118	-81.22907	A	3317	1057	NEWS174	w/ Calf	0.49
428	03	12	2009	1043	NEWS20090312	30.89118	-81.22907	B	2009 Calf of 3317	1057	NEWS174	Calf	0.49
429	03	12	2009	1116	NEWS20090312	30.94007	-81.21737	C	2791	1139	NEWS175	w/ Calf	0.29
430	03	12	2009	1116	NEWS20090312	30.94007	-81.21737	D	2009 Calf of 2791	1139	NEWS175	Calf	0.29
431	03	12	2009	1144	NEWS20090312	31.03208	-81.08887	E	1719	1205	NEWS176	Mom and Calf w/ 2 Whales	2.90
432	03	12	2009	1144	NEWS20090312	31.03208	-81.08887	F	3101	1205	NEWS176	w/ Calf, Mom and Calf w/ 2 Whales	2.90
433	03	12	2009	1144	NEWS20090312	31.03208	-81.08887	G	2009 Calf of 3101	1205	NEWS176	Calf, Mom and Calf w/ 2 Whales	2.90
434	03	12	2009	1144	NEWS20090312	31.03208	-81.08887	H	2615	1205	NEWS176	Mom and Calf w/ 2 Whales	2.90
435	03	12	2009	1345	NEWS20090312	31.35868	-81.15044	I	3139	1357	NEWS177	w/ Calf	1.51
436	03	12	2009	1345	NEWS20090312	31.35868	-81.15044	J	2009 Calf of 3139	1357	NEWS177	Calf	1.51
437	03	12	2009	1413	NEWS20090312	31.43960	-81.06615	K	1204	1428	NEWS178	w/ Calf	0.38
438	03	12	2009	1413	NEWS20090312	31.43960	-81.06615	L	2009 Calf of 1204	1428	NEWS178	Calf	0.38

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439	03	16	2009	1350	NEWS20090316	30.94045	-81.08108	A	1204	1406	NEWS179	w/ Calf	0.37
440	03	16	2009	1350	NEWS20090316	30.94045	-81.08108	B	2009 Calf of 1204	1406	NEWS179	Calf	0.37
441	03	16	2009	1526	NEWS20090316	31.17117	-81.20760	C	1968	1537	NEWS180		0.74
442	03	16	2009	1526	NEWS20090316	31.17117	-81.20760	D	2413	1537	NEWS180		0.74
443	03	16	2009	1536	NEWS20090316	31.17453	-80.75368	E	1320	1602	NEWS181		0.52
444	03	16	2009	1621	NEWS20090316	31.27522	-80.96173	F	1281	1602	NEWS182	w/ Calf, 2 Mom and Calf Pairs	0.46
445	03	16	2009	1621	NEWS20090316	31.27522	-80.96173	G	2009 Calf of 1281	1602	NEWS182	Calf, 2 Mom and Calf Pairs	0.46
446	03	16	2009	1621	NEWS20090316	31.27522	-80.96173	H	2611	1602	NEWS182	w/ Calf, 2 Mom and Calf Pairs	0.46
447	03	16	2009	1621	NEWS20090316	31.27522	-80.96173	I	2009 Calf of 2611	1602	NEWS182	Calf, 2 Mom and Calf Pairs	0.46
448	03	19	2009	1336	NEWS20090319	31.29487	-81.14850	A	1611	1406	NEWS183	w/ Calf	0.68
449	03	19	2009	1336	NEWS20090319	31.29487	-81.14850	B	2009 Calf of 1611	1406	NEWS183	Calf	0.68
450	03	19	2009	1536	NEWS20090319	31.54360	-80.72457	C	1968	1600	NEWS184		0.57
451	03	19	2009	1536	NEWS20090319	31.54360	-80.72457	D	2413	1600	NEWS184		0.57
452	03	19	2009	1631	NEWS20090319	30.93585	-81.06305	E	1281	1641	NEWS185	w/ Calf	N/A
453	03	19	2009	1631	NEWS20090319	30.93585	-81.06305	F	2009 Calf of 1281	1641	NEWS185	Calf	N/A
454	03	23	2009	1242	NEWS20090323	30.94428	-81.04884	A	2791	1302	NEWS186	w/ Calf	0.63
455	03	23	2009	1242	NEWS20090323	30.94428	-81.04884	B	2009 Calf of 2791	1302	NEWS186	Calf	0.63
456	03	23	2009	1425	NEWS20090323	31.20313	-81.09932	C	2008 Calf of 3020	1450	NEWS187	Yearling	1.16
457	03	24	2009	1042	NEWS20090324	31.07503	-81.16109	A	2791	1055	NEWS188	w/ Calf	0.51
458	03	24	2009	1042	NEWS20090324	31.07503	-81.16109	B	2009 Calf of 2791	1055	NEWS188	Calf	0.51
459	03	24	2009	1325	NEWS20090324	31.48412	-81.07912	C	1970	1338	NEWS189	w/ Calf	N/A
460	03	24	2009	1325	NEWS20090324	31.48412	-81.07912	D	2009 Calf of 1970	1338	NEWS189	Calf	N/A
461	03	25	2009	1422	NEWS20090325	31.48383	-81.07228	A	1970	1434	NEWS190	w/ Calf	N/A
462	03	25	2009	1422	NEWS20090325	31.48383	-81.07228	B	2009 Calf of 1970	1434	NEWS190	Calf	N/A
463	03	30	2009	1133	NEWS20090330	31.46197	-80.81753	A	1233	1213	NEWS191	w/ Calf	1.68
464	03	30	2009	1133	NEWS20090330	31.46197	-80.81753	B	2009 Calf of 1233	1213	NEWS191	Calf	1.68
465	03	30	2009	1238	NEWS20090330	31.33342	-80.81973	C	3317	1315	NEWS192	w/ Calf	0.00
466	03	30	2009	1238	NEWS20090330	31.33342	-80.81973	D	2009 Calf of 3317	1315	NEWS192	Calf	0.00
467	03	30	2009	1345	NEWS20090330	31.19167	-80.87510	E	2791	1407	NEWS193	w/ Calf	0.47
468	03	30	2009	1345	NEWS20090330	31.19167	-80.87510	F	2009 Calf of 2791	1407	NEWS193	Calf	0.47
443	03	16	2009	1536	NEWS20090316	31.17453	-80.75368	E	1320	1602	NEWS181		0.52
444	03	16	2009	1621	NEWS20090316	31.27522	-80.96173	F	1281	1602	NEWS182	w/ Calf, 2 Mom and Calf Pairs	0.46
445	03	16	2009	1621	NEWS20090316	31.27522	-80.96173	G	2009 Calf of 1281	1602	NEWS182	Calf, 2 Mom and Calf Pairs	0.46
446	03	16	2009	1621	NEWS20090316	31.27522	-80.96173	H	2611	1602	NEWS182	w/ Calf, 2 Mom and Calf Pairs	0.46
447	03	16	2009	1621	NEWS20090316	31.27522	-80.96173	I	2009 Calf of 2611	1602	NEWS182	Calf, 2 Mom and Calf Pairs	0.46
448	03	19	2009	1336	NEWS20090319	31.29487	-81.14850	A	1611	1406	NEWS183	w/ Calf	0.68
449	03	19	2009	1336	NEWS20090319	31.29487	-81.14850	B	2009 Calf of 1611	1406	NEWS183	Calf	0.68
450	03	19	2009	1536	NEWS20090319	31.54360	-80.72457	C	1968	1600	NEWS184		0.57

Whale Number	Month	Day	Year	Time (Local)	Survey Name	Latitude	Longitude	RIWH Letter	EGNO	Time of Report (Local)	NRW Number	Comments	Sighting Distance (nmi)
451	03	19	2009	1536	NEWS20090319	31.54360	-80.72457	D	2413	1600	NEWS184		0.57
452	03	19	2009	1631	NEWS20090319	30.93585	-81.06305	E	1281	1641	NEWS185	w/ Calf	N/A
453	03	19	2009	1631	NEWS20090319	30.93585	-81.06305	F	2009 Calf of 1281	1641	NEWS185	Calf	N/A
454	03	23	2009	1242	NEWS20090323	30.94428	-81.04884	A	2791	1302	NEWS186	w/ Calf	0.63
455	03	23	2009	1242	NEWS20090323	30.94428	-81.04884	B	2009 Calf of 2791	1302	NEWS186	Calf	0.63
456	03	23	2009	1425	NEWS20090323	31.20313	-81.09932	C	2008 Calf of 3020	1450	NEWS187	Yearling	1.16
457	03	24	2009	1042	NEWS20090324	31.07503	-81.16109	A	2791	1055	NEWS188	w/ Calf	0.51
458	03	24	2009	1042	NEWS20090324	31.07503	-81.16109	B	2009 Calf of 2791	1055	NEWS188	Calf	0.51
459	03	24	2009	1325	NEWS20090324	31.48412	-81.07912	C	1970	1338	NEWS189	w/ Calf	N/A
460	03	24	2009	1325	NEWS20090324	31.48412	-81.07912	D	2009 Calf of 1970	1338	NEWS189	Calf	N/A
461	03	25	2009	1422	NEWS20090325	31.48383	-81.07228	A	1970	1434	NEWS190	w/ Calf	N/A
462	03	25	2009	1422	NEWS20090325	31.48383	-81.07228	B	2009 Calf of 1970	1434	NEWS190	Calf	N/A
463	03	30	2009	1133	NEWS20090330	31.46197	-80.81753	A	1233	1213	NEWS191	w/ Calf	1.68
464	03	30	2009	1133	NEWS20090330	31.46197	-80.81753	B	2009 Calf of 1233	1213	NEWS191	Calf	1.68
465	03	30	2009	1238	NEWS20090330	31.33342	-80.81973	C	3317	1315	NEWS192	w/ Calf	0.00
466	03	30	2009	1238	NEWS20090330	31.33342	-80.81973	D	2009 Calf of 3317	1315	NEWS192	Calf	0.00
467	03	30	2009	1345	NEWS20090330	31.19167	-80.87510	E	2791	1407	NEWS193	w/ Calf	0.47
468	03	30	2009	1345	NEWS20090330	31.19167	-80.87510	F	2009 Calf of 2791	1407	NEWS193	Calf	0.47

Appendix 2. NEWS 2008-2009 demographic information for preliminarily identified right whales. Whales listed in italics are 2008-2009 mothers and whales with an asterisk "*" indicate possible unique animals to the NEWS area. (Whale histories provided by NEA)

EGNO	Sex	Age	Mother in 2008-2009 season	Last Calving	Number of Calves (including 2008-2009 season)	Comments
1012	*F*	*Adult*	*Yes*	*2005*	*7*	*Mother/calf seen twice in NEWS area*
1043	M	Adult	No	N/A	N/A	Seen only once south of the SEWS survey area; Never sighted in the NEWS survey area
1121	M	Adult	No	N/A	N/A	Seen only once in NEWS survey area
1142	*F*	*Adult*	*Yes*	*2004*	*8*	*Mother/calf seen three times in NEWS area*
1151	*F*	*Adult*	*Yes*	*2006*	*6*	*Seen in NEWS area before and after calving, sighted once w/o calf and twice with calf*
1158	F	Adult	No	1991	N/A	Seen four times in NEWS survey area
1204	*F*	*Adult*	*Yes*	*2005*	*7*	*Mother/calf seen three times in NEWS area*
1233	*F*	*Adult*	*Yes*	*2004*	*5*	*Mother/calf seen only once in NEWS area*
1240	*F*	*Adult*	*Yes*	*2005*	*8*	*Seen only once in NEWS area before calving*
1246	*F*	*Adult*	*Yes*	*2005*	*7*	*Mother/calf seen four times in NEWS area*
1249	M	27	No	N/A	N/A	Seen once in NEWS survey area and once south of the SEWS survey area
1266	*F*	*Adult*	*Yes*	*2004*	*7*	*Mother/calf seen only once in NEWS area*
1270	M	Adult	No	N/A	N/A	Seen only once in NEWS survey area
1281	*F*	*Adult*	*Yes*	*2006*	*7*	*Mother/calf seen nine times in NEWS area*
1303	*F*	*Adult*	*Yes*	*2005*	*6*	*Seen only once in NEWS area before calving*
1307	M	Adult	No	N/A	N/A	Seen only once in NEWS survey area
1317*	M	26	No	N/A	N/A	Seen only once in NEWS survey area
1320*	M	Adult	No	N/A	N/A	Seen only once in NEWS survey area
1402	M	25	No	N/A	N/A	Seen twice in NEWS survey area
1403	M	Adult	No	N/A	N/A	Seen twice in NEWS survey area
1503	*F*	*24*	*Yes*	*2006*	*4*	*Mother/calf seen three times in NEWS area and once in CEWS survey area*
1506	M	24	No	N/A	N/A	Seen only once in NEWS survey area
1515	*F*	*Adult*	*Yes*	*2003*	*6*	*Mother/calf seen twice in NEWS area*
1603	M	Adult	No	N/A	N/A	Seen only once in NEWS survey area
1608	*F*	*23*	*Yes*	*2003*	*2*	*Mother/calf seen only once in NEWS area*
1611	*F*	*23*	*Yes*	*2006*	*3*	*Seen in NEWS area before and after calving, sighted once w/o calf and four times with calf*
1612	*F*	*Adult*	*Yes*	*2003*	*5*	*Mother/calf seen only once in NEWS area*
1616	M	Adult	No	N/A	N/A	Seen only once in NEWS survey area
1706	F	22	No	N/A	N/A	Seen only once in NEWS survey area
1711	*F*	*22*	*Yes*	*2003*	*2*	*Mother/calf seen four times in NEWS area*
1719*	F	Adult	No	N/A	N/A	Seen only once in NEWS survey area
1803*	M	21	No	N/A	N/A	Seen only once in NEWS survey area
1817	*F*	*Adult*	*Yes*	*2006*	*4*	*Seen twice in NEWS area before calving*
1901	M	20	No	N/A	N/A	Seen twice in NEWS survey area
1946	*F*	*20*	*Yes*	*2006*	*4*	*Mother/calf seen five times in NEWS area and twice in CEWS survey area*

EGNO	Sex	Age	Mom in 2008-2009 season	Last Calving	Number of Calves (including 2008-2009 season)	Comments
1968	F	20	No	N/A	N/A	Seen three times in NEWS survey area and once in CEWS survey area
1970	*F*	*Adult*	*Yes*	*2005*	*4*	*Mother/calf seen twice in NEWS area*
1971	M	20	No	N/A	N/A	Seen only once in NEWS survey area
2123	*F*	*18*	*Yes*	*2006*	*4*	*Mother/calf seen five times in NEWS area*
2142	M	18	No	N/A	N/A	Seen once in NEWS survey area and once south of the SEWS survey area
2145	*F*	*18*	*Yes*	*2007*	*4*	*Seen in NEWS area before and after calving, sighted once w/o calf and once with calf*
2209	M	17	No	N/A	N/A	Seen only once in NEWS survey area
2320	*F*	*Adult*	*Yes*	*2006*	*2*	*Mother/calf seen only once in NEWS area*
2370*	U	Unknown	No	N/A	N/A	Seen three times in NEWS survey area
2406	M	15	No	N/A	N/A	Seen only once in NEWS survey area
2413	F	15	No	2005	N/A	Seen twice in NEWS survey area and once in CEWS survey area
2427	M	15	No	N/A	N/A	Seen only once in NEWS survey area
2503	*F*	*14*	*Yes*	*2006*	*2*	*Mother/calf seen twice in NEWS area*
2520	*F*	*Adult*	*Yes*	*2003*	*4*	*Mother/calf seen three times in NEWS area*
2541	M	14	No	N/A	N/A	Seen three times in NEWS survey area
2608	M	13	No	N/A	N/A	Seen twice in NEWS survey area
2611	*F*	*13*	*Yes*	*2007*	*2*	*Seen in NEWS area before and after calving, sighted once w/o calf and twice with calf*
2615	M	13	No	N/A	N/A	Seen only once in NEWS survey area
2660	*F*	*13*	*Yes*	*2006*	*2*	*Seen three times in NEWS area before calving*
2740*	M	12	No	N/A	N/A	Seen twice in NEWS survey area
2743	M	12	No	N/A	N/A	Seen twice in NEWS survey area
2770	M	Adult	No	N/A	N/A	Seen once in NEWS survey area and once south of the SEWS survey area
2791	*F*	*12*	*Yes*	*2006*	*2*	*Seen in NEWS area before and after calving, sighted once w/o calf and four times with calf*
2795	M	Adult	No	N/A	N/A	Seen only once in NEWS survey area
2920*	U	Adult	No	N/A	N/A	Seen twice in NEWS survey area
3101	*F*	*8*	*Yes*	*N/A*	*1*	*Mother/calf seen only once in NEWS area; First known calving event in 2008-2009 season*
3110	M	8	No	N/A	N/A	Seen twice in NEWS survey area
3111	M	8	No	N/A	N/A	Seen only once in NEWS survey area
3120	M	8	No	N/A	N/A	Seen only once in NEWS survey area
3125*	M	8	No	N/A	N/A	Seen twice in NEWS survey area
3130*	F	8	No	2008	N/A	Seen only once in NEWS survey area; Seen with 2008 calf of 3130 (yearling)
*3139**	*F*	*8*	*Yes*	*N/A*	*1*	*Mother/calf seen three times in NEWS area; First known calving event in 2008-2009 season*
3150	M	8	No	N/A	N/A	Seen only once in NEWS survey area
3191*	U	Unknown	No	N/A	N/A	Seen twice in NEWS survey area
3208	M	7	No	N/A	N/A	Seen only once in NEWS survey area
3232	F	7	No	N/A	N/A	Seen only once in NEWS survey area

EGNO	Sex	Age	Mom in 2008-2009 season	Last Calving	Number of Calves (including 2008-2009 season)	Comments
3245*	M	7	No	N/A	N/A	Seen three times in NEWS survey area
3279	M	7	No	N/A	N/A	Seen twice in NEWS survey area
3290	*F*	*7*	*Yes*	*N/A*	*1*	*Seen three times in NEWS area before calving; First known calving event in 2008-2009 season*
3293*	F	Adult	No	2008	N/A	Seen only once in NEWS survey area; Seen with 2008 calf of 3293 (yearling)
3294	U	Unknown	No	N/A	N/A	Seen twice in NEWS survey area and once in CEWS survey area; First sighted entangled and then gear-free during 2008-2009 season
3301	M	6	No	N/A	N/A	Seen five times in NEWS survey area and once in CEWS survey area
3302	M	6	No	N/A	N/A	Seen four times in NEWS survey area
3308	M	6	No	N/A	N/A	Seen four times in NEWS survey area
3310	M	6	No	N/A	N/A	Seen twice in NEWS survey area
3311	U	6	No	N/A	N/A	Seen three times in NEWS survey area and twice south of the SEWS survey area; "Bridle", first sighted entangled in 2008-2009 season
3312	M	6	No	N/A	N/A	Seen three times in NEWS survey area and once in CEWS survey area
3314	F	6	No	N/A	N/A	Seen once in NEWS survey area and once in CEWS survey area
3317	*F*	*6*	*Yes*	*N/A*	*1*	*Seen in NEWS area before and after calving, sighted three times w/o calf and twice with calf; First known calving event in 2008-2009 season*
3320	*F*	*Adult*	*Yes*	*N/A*	*1*	*Mother/calf seen only once in NEWS area; First known calving event in 2008-2009 season*
3323	M	6	No	N/A	N/A	Seen six times in NEWS survey area
3329	F	6	No	N/A	N/A	Seen only once in NEWS survey area
3333*	M	6	No	N/A	N/A	Seen twice in NEWS survey area
3343	M	6	No	N/A	N/A	Seen three times in NEWS survey area
3346	M	6	No	N/A	N/A	Seen only once in NEWS survey area; "Kingfisher", entangled since 2004
3351*	M	6	No	N/A	N/A	Seen twice in NEWS survey area
3370	*F*	*Unknown*	*Yes*	*N/A*	*1*	*Mother/calf seen only once in NEWS area; First known calving event in 2008-2009 season*
3391	M	Unknown	No	N/A	N/A	Seen only once in NEWS survey area
3401	M	5	No	N/A	N/A	Seen six times in NEWS survey area
3405	F	5	No	N/A	N/A	Seen twice in NEWS survey area
3411	F	5	No	N/A	N/A	Seen four times in NEWS survey area
3421	M	5	No	N/A	N/A	Seen only once in NEWS survey area
3430	F	5	No	N/A	N/A	Seen four times in NEWS survey area
3440	*F*	*Adult*	*Yes*	*N/A*	*1*	*Seen only once in NEWS area before calving; First known calving event in 2008-2009 season*
3442	M	5	No	N/A	N/A	Seen twice in NEWS survey area
3466	M	5	No	N/A	N/A	Seen only once south of the SEWS survey area; Never sighted in the NEWS survey area
3503	F	4	No	N/A	N/A	Seen seven times in NEWS survey area
3510	M	4	No	N/A	N/A	Seen twice in NEWS survey area
3513	F	4	No	N/A	N/A	Seen twice in NEWS survey area

EGNO	Sex	Age	Mom in 2008-2009 season	Last Calving	Number of Calves (including 2008-2009 season)	Comments
3520	F	4	No	N/A	N/A	Seen twice in NEWS survey area
3523	F	4	No	N/A	N/A	Seen only once in NEWS survey area
3540	F	4	No	N/A	N/A	Seen twice in NEWS survey area
3541	M	4	No	N/A	N/A	Seen twice in NEWS survey area
3545	M	4	No	N/A	N/A	Seen only once in NEWS survey area
3546	F	4	No	N/A	N/A	Seen only once in NEWS survey area
3550	U	4	No	N/A	N/A	Seen twice in NEWS survey area
3560	U	4	No	N/A	N/A	Seen twice in NEWS survey area
3570	U	4	No	N/A	N/A	Seen eight times in NEWS survey area
3603	F	3	No	N/A	N/A	Seen only once in NEWS survey area
3610	U	U	No	N/A	N/A	Seen four times in NEWS survey area and once in CEWS survey area
3611	U	3	No	N/A	N/A	Seen six times in NEWS survey area
3617	U	3	No	N/A	N/A	Seen only once in NEWS survey area
3620	M	3	No	N/A	N/A	Seen only once in NEWS survey area
3623	U	3	No	N/A	N/A	Seen only once in NEWS survey area
3650	F	3	No	N/A	N/A	Seen only once in NEWS survey area
3651	M	3	No	N/A	N/A	Seen three times in NEWS survey area
3681	U	3	No	N/A	N/A	Seen four times in NEWS survey area
3691	U	3	No	N/A	N/A	Seen twice in NEWS survey area
3760	U	2	No	N/A	N/A	Seen twice in NEWS survey area and once in CEWS survey area
2006 Calf of 1248	U	3	No	N/A	N/A	Seen twice in NEWS survey area
2006 Calf of 1946	U	3	No	N/A	N/A	Seen only once in NEWS survey area
2007 Calf of 1425	U	2	No	N/A	N/A	Seen twice in NEWS survey area
2007 Calf of 1620	U	2	No	N/A	N/A	Seen twice in NEWS survey area
2007 Calf of 1701	U	2	No	N/A	N/A	Seen twice in NEWS survey area; First sighted entangled and then gear-free during 2008-2009 season
2007 Calf of 1710*	U	2	No	N/A	N/A	Seen only once in NEWS survey area
2007 Calf of 2430	U	2	No	N/A	N/A	Seen three times in NEWS survey area
2007 Calf of 2614	U	2	No	N/A	N/A	Seen four times in NEWS survey area and once in SCGA survey area; First sighted entangled in 2008-2009 season
2007 Calf of 2645	U	2	No	N/A	N/A	Seen four times in NEWS survey area
2007 Calf of 3360	U	2	No	N/A	N/A	Seen only once in NEWS survey area
2008 Calf of 1243	U	1	No	N/A	N/A	Seen twice in NEWS survey area
2008 Calf of 1245	U	1	No	N/A	N/A	Seen only once in CEWS survey area; Never sighted in the NEWS survey area

EGNO	Sex	Age	Mom in 2008-2009 season	Last Calving	Number of Calves (including 2008-2009 season)	Comments
2008 Calf of 1408	U	1	No	N/A	N/A	Seen twice in NEWS survey area and once in CEWS survey area
2008 Calf of 2330	U	1	No	N/A	N/A	Seen only once in NEWS survey area
2008 Calf of 2753	U	1	No	N/A	N/A	Seen seven times in NEWS survey area
2008 Calf of 2790	U	1	No	N/A	N/A	Seen three times in NEWS survey area
2008 Calf of 3020*	U	1	No	N/A	N/A	Seen only once in NEWS survey area
2008 Calf of 3115	U	1	No	N/A	N/A	Seen only once in NEWS survey area
2008 Calf of 3130	U	1	No	N/A	N/A	Seen twice in NEWS survey area, once with Mom EGNO 3130
2008 Calf of 3293*	U	1	No	N/A	N/A	Seen twice in NEWS survey area, once with Mom EGNO 3293

Appendix 3. NEWS 2008-2009 whale/vessel interaction report forms.

Whale/Vessel Interaction Report Form

Date 1 /4 /2009 **Unique Report #** 429

Survey Agency or Organization: WLT **Contact** Patricia Naessig 507-581-1147

Survey Area Northern EWS

Observer's Last Name(s) Brower, Grassia, Marko

Are there photos? Yes **Location/name of photo files** 2009-01-04-WT-GA

Is there video? No **Location/name of video files** N/A

Whale Information (Initial)

Time of initial whale sighting (local, 24 hour) 1126 **Total number of whales** 14 **Number of calves** 0

Whale IDs 2006 Calf of 1946, 3611, 3651, 3310, BK03BOF07, 3503, 3343, 3540, 3430, 2008 Calf of 2753 & Unknown

Whale's initial activity (select the one that best fits; use description for additional activities)

Select: SAG

Description of whale activity North of the 1 and 2 channel buoys were 3 groups (a SAG of at least 3 whales and 2 singles). South of the 1 and 2 channel buoys was a group of 2 stationary whales. Near the "STS" sea bouy were 3 groups (a SAG of 4 whales about 1 nm SW of the sea bouy, a single whale about 1.5 nm SW of the buoy and another SAG of 3 whales about 1.5 nm south of the buoy. The initial location below is for the group of whales closest to the vessels at the beginning of event (the SAG of 4 whales SW of the sea buoy).

Heading of Whale/Whale group NONE

Whale's initial latitude 31.04507 **Whale's initial longitude** -81.25617 **(NAD 83 datum assumed)**

Whale Information (Post Interaction)

Time whale was observed at the last location (local, 24 hour) 1234

Whale's last latitude 31.05817 **Whale's last longitude** -81.27419 **(NAD 83 datum assumed)**

Did the whale change course? No **Did the whale's activity change?** No

New heading of Whale/Whale group N/A

Description of activity/direction change:

The whales did not appear to react to the presence of the 3 vessels in the area during the time the Wildlife Trust survey team was observing the whales. The final location information above is for the group of whales closest to the vessels at the end of the event (the 2 whales south of the 1 and 2 channel buoys).

Additional Information

Before 1030, the Brunswick Harbor Pilots contacted GDNR LE to report that there were about 6-7 right whales milling around the "STS" sea buoy. At that time, the Brunswick harbor pilots' boat was at the "STS" buoy getting ready to bring a car carrier inbound through the Brunswick channel. At 1035, a GDNR LE vessel contacted Clay George at GDNR to inform him of the presence of the right whales near the "STS" buoy and to let him know that the GDNR LE vessel standing by near the whales. Clay George passed the whale sighting information onto the ground contact for the WTGA survey team. The ground contact then called the Brunswick harbor pilots and was told that the Brunswick Pilot Boat and GDNR LE boat were going to attempt to place themselves between the whales and the channel in an attempt to form a type "whale free" corridor for the car carrier to enter the channel. The ground contact informed the Brunswick Harbor Pilots that the survey plane would be transiting down to the "STS" sea buoy and attempt to act as an aerial lookout for the inbound ship. The ground contact then immediately called the survey plane at 1057 and informed them of the situation and insturcted them to fly to the "STS" sea buoy. The survey plane arrived at the "STS" sea buoy at 1111 and immedately made contact with the GDNR LE vessel and the harbor pilots. The survey plane then circled the area surrounding the sea buoy and found 7 groups of whales within about a 2 nm radius of the the sea buoy. The survey plane noted the locations of these groups and passed that information onto the vessels. The survey plane then flew the channel as the car carrier was inbound to make sure no whales were in the direct course of the ship. After flying the channel inbound, the survey team again flew the channel outbound to double check that no whales were present in the channel. Finally, the survey plane returned to the locations of the whales in the area and further documented the 14 whales in the area.

Whale/Vessel Interaction Report Form

Date 1 /4 /2009 **Unique Report #** 429

Vessel Information

Is this a close approach (500 yard rule?) Yes **Homeport** Unknown **State Reg. #** Unknown

Vessel 1 **of** 3 **(one sheet for each vessel)** **Time vessel was spotted (24 hour)** 1112

Vessel Length (feet) 600 **Vessel Name** Unknown

Vessel Code MV-C **Vessel Type:** Large Merchant

Vessel Description CAR CARRIER

Vessel Speed (knots) 0 **Vessel Speed (Qualitative):** None **Vessel Heading** NONE

Method of determining speed Visual

Inbound/Outbound: Inbound **Destination Port** BRUNSWICK

Origin Port Unknown

Description of vessel's initial location relative to whale(s)

When the survey plane first arrived in the area, the car carrier was about 300 yards east of the sea bouy with the pilot boat alongside. This placed the car carrier about 1 nm to the northeast of the closest group of whales.

Vessel's initial latitude 31.03552 **Vessel's initial longitude** -81.24202 **(NAD 83 datum assumed)**

Closest distance between whale and vessel 500 **Units:** Yards

Was communication attempted? (Did you try to hail them?): Yes

Was communication achieved? (Did they respond?): Yes

Did the vessel's heading change?: Yes **New Heading** NW

Did the vessel's speed change?: Yes **New Speed (knots)** 5-6

New Vessel Speed Qualitative: Slow

Description of vessel's last location relative to whale(s)

The car carrier was in the Brunswick channel heading northwest with the pilot boat tracking just to the south of the channel. This placed the car carrier about 1 nm to the northwest of the closest group of whales.

Notes on the communication effort

Once the survey plane arrived in the area of the Brunswick channel entrance, the NOAA pilots made contact with both the GDNR LE boat and the Brunswick harbor pilot onboard the car carrier via VHF channel 16. While the survey plane was marking the locations of the various groups of whales in the area, the NOAA pilots were relaying the whales' cordinates back to the car carrier, GDNR LE boat and pilot boat.

Time of vessel's last recorded location (local, 24 hour) 1142

Vessel's last latitude 31.06912 **Vessel's last longitude** -81.26047 **(NAD 83 datum assumed)**

Additional whale information specific to this vessel

Once the harbor pilot was off loaded to the car carrier at the sea buoy, the pilot boat positioned itself about 500 feet to the north of the SAG of 4 whales to the southwest of the sea buoy. The GDNR LE boat positioned itself north of the car carrier and about 200 yards south of the 3 groups of whales north of the channel entrance. The car carrier then began its approach to the channel entrance from the sea buoy. While the car carrier was on it's approach, the GDNR LE vessel tracked the car carrier to the north and the pilot boat did the same to the south of the car carrier. This placed the GDNR LE boat and the pilot boat between the car carrier and the whales to the north and south of the sea buoy and channel entrance. Once the car carrier was clear of the whales closest to the sea buoy, the survey plane flew up and down the channel to make sure there were no whales in the channel. The car carrier then entered the channel once it appeared to be clear of whales.

Whale/Vessel Interaction Report Form

Date 1 /4 /2009 **Unique Report #** 429

Vessel Information

Is this a close approach (500 yard rule?) Yes **Homeport** Brunswick **State Reg. #** Unknown

Vessel 2 **of** 3 **(one sheet for each vessel)** **Time vessel was spotted (24 hour)** 1112

Vessel Length (feet) 25 **Vessel Name** N/A

Vessel Code RECV **Vessel Type:** Other

Vessel Description GDNR Law Enforcement Vessel

Vessel Speed (knots) 0 **Vessel Speed (Qualitative):** None **Vessel Heading** None

Method of determining speed Visual

Inbound/Outbound: Inbound **Destination Port** Brunswick

Origin Port Brunswick

Description of vessel's initial location relative to whale(s)

When the survey plane first arrived in the area, the GDNR vessel was about 300 yards to the southeast of the 3 groups of whales to the north of the channel entrance and about 300 yards to the northwest of the car carrier and pilot boat near the sea buoy.

Vessel's initial latitude 31.04992 **Vessel's initial longitude** -81.24516 **(NAD 83 datum assumed)**

Closest distance between whale and vessel 200 **Units:** Yards

Was communication attempted? (Did you try to hail them?): Yes

Was communication achieved? (Did they respond?): Yes

Did the vessel's heading change?: Yes **New Heading** NW

Did the vessel's speed change?: Yes **New Speed (knots)** 5-6

New Vessel Speed Qualitative: Slow

Description of vessel's last location relative to whale(s)

The GDNR LE boat was positioned near the northern buoy (buoy 2) at the entrance to the Brunswick channel and about 200 yards south of the whales north of the channel entrance. A final location was not recorded for the GDNR LE vessel.

Notes on the communication effort

Once the survey plane arrived in the area of the Brunswick channel entrance, the NOAA pilots made contact with both the GDNR LE boat and the Brunswick harbor pilot onboard the car carrier via VHF channel 16. While the survey plane was marking the locations of the various groups of whales in the area, the NOAA pilots were relaying the whales' cordinates back to the car carrier, GDNR LE boat and pilot boat.

Time of vessel's last recorded location (local, 24 hour)

Vessel's last latitude **Vessel's last longitude** **(NAD 83 datum assumed)**

Additional whale information specific to this vessel

Once the harbor pilot was off loaded to the car carrier at the sea buoy, the pilot boat positioned itself about 500 feet to the north of the SAG of 4 whales to the southwest of the sea buoy. The GDNR LE boat positioned itself north of the car carrier and about 200 yards south of the 3 groups of whales north of the channel entrance. The car carrier then began its approach to the channel entrance from the sea buoy. While the car carrier was on it's approach, the GDNR LE vessel tracked the car carrier to the north and the pilot boat did the same to the south of the car carrier. This placed the GDNR LE boat and the pilot boat between the car carrier and the whales to the north and south of the sea buoy and channel entrance. When the car carrier entered the channel, the GDNR LE vessel stopped at the channel entrance and remained near the northern buoy at the entrance of the Brunswick channel.

Whale/Vessel Interaction Report Form

Date 1 /4 /2009 **Unique Report #** 429

Vessel Information

Is this a close approach (500 yard rule?) Yes **Homeport** Brunswick **State Reg. #** N/A

Vessel 3 **of** 3 **(one sheet for each vessel)** **Time vessel was spotted (24 hour)** 1112

Vessel Length (feet) 20 **Vessel Name** N/A

Vessel Code PIBO **Vessel Type:** Other

Vessel Description Brunswick Harbor Pilot Boat

Vessel Speed (knots) 0 **Vessel Speed (Qualitative):** None **Vessel Heading** None

Method of determining speed VISUAL

Inbound/Outbound: Inbound **Destination Port** BRUNSWICK

Origin Port BRUNSWICK

Description of vessel's initial location relative to whale(s)

When the survey plane first arrived in the area, the car carrier was about 300 yards east of the sea bouy with the pilot boat alongside. This placed the pilot boat about 1 nm to the northeast of the closest group of whales.

Vessel's initial latitude 31.03552 **Vessel's initial longitude** -81.24202 **(NAD 83 datum assumed)**

Closest distance between whale and vessel 500 **Units:** Feet

Was communication attempted? (Did you try to hail them?): Yes

Was communication achieved? (Did they respond?): Yes

Did the vessel's heading change?: Yes **New Heading** NW

Did the vessel's speed change?: Yes **New Speed (knots)** 5-6

New Vessel Speed Qualitative: Slow

Description of vessel's last location relative to whale(s)

The car carrier was in the Brunswick channel heading northwest with the pilot boat tracking along just south of it. This placed the pilot boat about 1 nm to the northwest of the closest group of whales. A final location was not recorded for the pilot boat.

Notes on the communication effort

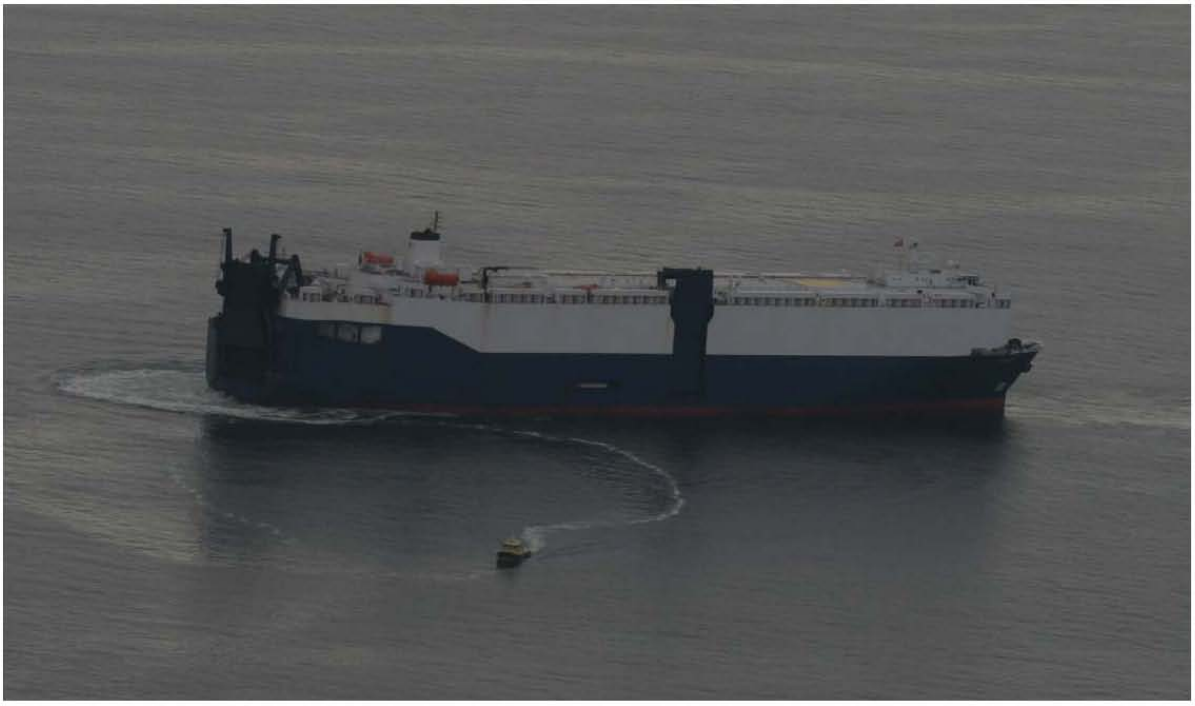
Once the survey plane arrived in the area of the Brunswick channel entrance, the NOAA pilots made contact with both the GDNR LE boat and the Brunswick harbor pilot onboard the car carrier via VHF channel 16. While the survey plane was marking the locations of the various groups of whales in the area, the NOAA pilots were relaying the whales' cordinates back to the car carrier, GDNR LE boat and pilot boat.

Time of vessel's last recorded location (local, 24 hour)

Vessel's last latitude **Vessel's last longitude** **(NAD 83 datum assumed)**

Additional whale information specific to this vessel

Once the harbor pilot was off loaded to the car carrier at the sea buoy, the pilot boat positioned itself about 500 feet to the north of the SAG of 4 whales to the southwest of the sea buoy. The GDNR LE boat positioned itself north of the car carrier and about 200 yards south of the 3 groups of whales north of the channel entrance. The car carrier then began its approach to the channel entrance from the sea buoy. While the car carrier was on it's approach, the GDNR LE vessel tracked the car carrier to the north and the pilot boat did the same to the south of the car carrier. This placed the GDNR LE boat and the pilot boat between the car carrier and the whales to the north and south of the sea buoy and channel entrance. When the car carrier entered the channel, the pilot boat continued to track alongside the car carrier up the channel.



January 4, 2009 WT-GA Whale/Vessel Interaction Vessel 1 (Car Carrier) and Vessel 3 (Pilot Boat)

Whale/Vessel Interaction Report Form

Date 1 /19/2009 **Unique Report #** 230

Survey Agency or Organization: WLT **Contact** Patricia Naessig 507-581-1147

Survey Area Northern EWS

Observer's Last Name(s) Brower, Grassia and Marko

Are there photos? Yes **Location/name of photo files** 2009-01-19-WT-GA

Is there video? No **Location/name of video files** N/A

Whale Information (Initial)

Time of initial whale sighting (local, 24 hour) 1110 **Total number of whales** 2 **Number of calves** 1

Whale IDs 1281 and 2009 Calf of 1281

Whale's initial activity (select the one that best fits; use description for additional activities)

Select: Swimming/Traveling

Description of whale activity Mom/calf pair were initially seen swimming south and headed into the Brunswick channel.

Heading of Whale/Whale group SE

Whale's initial latitude 31.08 **Whale's initial longitude** -81.29063 **(NAD 83 datum assumed)**

Whale Information (Post Interaction)

Time whale was observed at the last location (local, 24 hour) 1148

Whale's last latitude 31.07502 **Whale's last longitude** -81.28203 **(NAD 83 datum assumed)**

Did the whale change course? Yes **Did the whale's activity change?** No

New heading of Whale/Whale group NE

Description of activity/direction change:

Mom/calf pair swam into channel and milled about, then headed back out of the chanel to the northeast. The dredge, Dodge Island, and sea turtle trawler, Catina Renea, made their way northwest inbound in the Brunswick channel and passed about 300 yards to the southwest of the whales. When the survey plane left the whales, they were still north of the Brunswick channel. The whales did not appear to react to the presence of the 2 vessels in the area during the time the Wildlife Trust survey team was observing the whales.

Additional Information

The dredge, Dodge Island, initially spotted the mom and calf near the Brunswick channel. The dredge right whale observer, Rachel Sayre, called the WTGA ground contact to report the sighting, and the ground contact relayed the information to the survey plane. The survey plane was in the area of the sighting and went to locate the whales. The plane was in contact with the Dodge Island throughout the whale/vessel interaction. The Dodge Island reported that they were relaying whale information to the other 2 vessels, the Catina Renea and The Miami, who were working with them. The survey plane remained with the mother and calf until the whales were well to the north of the channel and clear of any vessel traffic.

Whale/Vessel Interaction Report Form

Date 1 /19/2009 **Unique Report #** 230

Vessel Information

Is this a close approach (500 yard rule?) Yes **Homeport** N/A **State Reg. #** N/A

Vessel 1 **of** 2 **(one sheet for each vessel)** **Time vessel was spotted (24 hour)** 1137

Vessel Length (feet) 265 **Vessel Name** Dodge Island

Vessel Code DR-W **Vessel Type:** Large Merchant

Vessel Description Dredge operating in Brunswick Channel

Vessel Speed (knots) 5 **Vessel Speed (Qualitative):** Slow **Vessel Heading** NW

Method of determining speed Visual

Inbound/Outbound: Inbound **Destination Port** Brunswick

Origin Port Brunswick

Description of vessel's initial location relative to whale(s)

The dredge, Dodge Island, was at the Brunswick channel sea buoy and headed northwest about to enter the channel. The mom and calf were to the north of the channel and about 600 yards to the northwest of the dredge.

Vessel's initial latitude 31.0686 **Vessel's initial longitude** -81.28059 **(NAD 83 datum assumed)**

Closest distance between whale and vessel 300 **Units:** Yards

Was communication attempted? (Did you try to hail them?): Yes

Was communication achieved? (Did they respond?): Yes

Did the vessel's heading change?: No **New Heading**

Did the vessel's speed change?: No **New Speed (knots)**

New Vessel Speed Qualitative:

Description of vessel's last location relative to whale(s)

After passing about 300 yards to the south of the mom and calf, the dredge continued northwest up the Brunswick channel. The whales stayed north of the channel.

Notes on the communication effort

The dredge, Dodge Island, initially spotted the mom and calf near the Brunswick channel. The dredge right whale observer, Rachel Sayre, called the WTGA ground contact to report the sighting, and the ground contact relayed the information to the survey plane. The survey plane remained in contact with the Dodge Island throughout the whale/vessel interaction via VHF. The Dodge Island reported that they were relaying the whale information to the other 2 vessels working with them, the Catina Renea and The Miami.

Time of vessel's last recorded location (local, 24 hour) 1147

Vessel's last latitude 31.0746 **Vessel's last longitude** -81.28977 **(NAD 83 datum assumed)**

Additional whale information specific to this vessel

Whale/Vessel Interaction Report Form

Date 1 /19/2009 **Unique Report #** 230

Vessel Information

Is this a close approach (500 yard rule?) Yes **Homeport** N/A **State Reg. #** N/A

Vessel 2 **of** 2 **(one sheet for each vessel)** **Time vessel was spotted (24 hour)** 1138

Vessel Length (feet) 50 **Vessel Name** Catina Renea

Vessel Code FV-T **Vessel Type:** Other

Vessel Description Turtle relocation trawler working in association with dredge operations in Brunswick channel

Vessel Speed (knots) 5 **Vessel Speed (Qualitative):** Slow **Vessel Heading** NW

Method of determining speed Visual

Inbound/Outbound: Inbound **Destination Port** Brunswick

Origin Port Brunswick

Description of vessel's initial location relative to whale(s)

Sea turtle trawler, Catina Renea, was at the Brunswick channel sea buoy and headed northwest just behind the dredge, Dodge Island. The mom and calf were to the north of the channel and about 600 yards to the northwest of the trawler.

Vessel's initial latitude 31.07073 **Vessel's initial longitude** -81.27797 **(NAD 83 datum assumed)**

Closest distance between whale and vessel 300 **Units:** Yards

Was communication attempted? (Did you try to hail them?): No

Was communication achieved? (Did they respond?): N/A

Did the vessel's heading change?: No **New Heading**

Did the vessel's speed change?: No **New Speed (knots)**

New Vessel Speed Qualitative:

Description of vessel's last location relative to whale(s)

After passing about 300 yards to the south of the mom and calf, the trawler continued northwest up the Brunswick channel just behind the dredge. The whales stayed north of the channel.

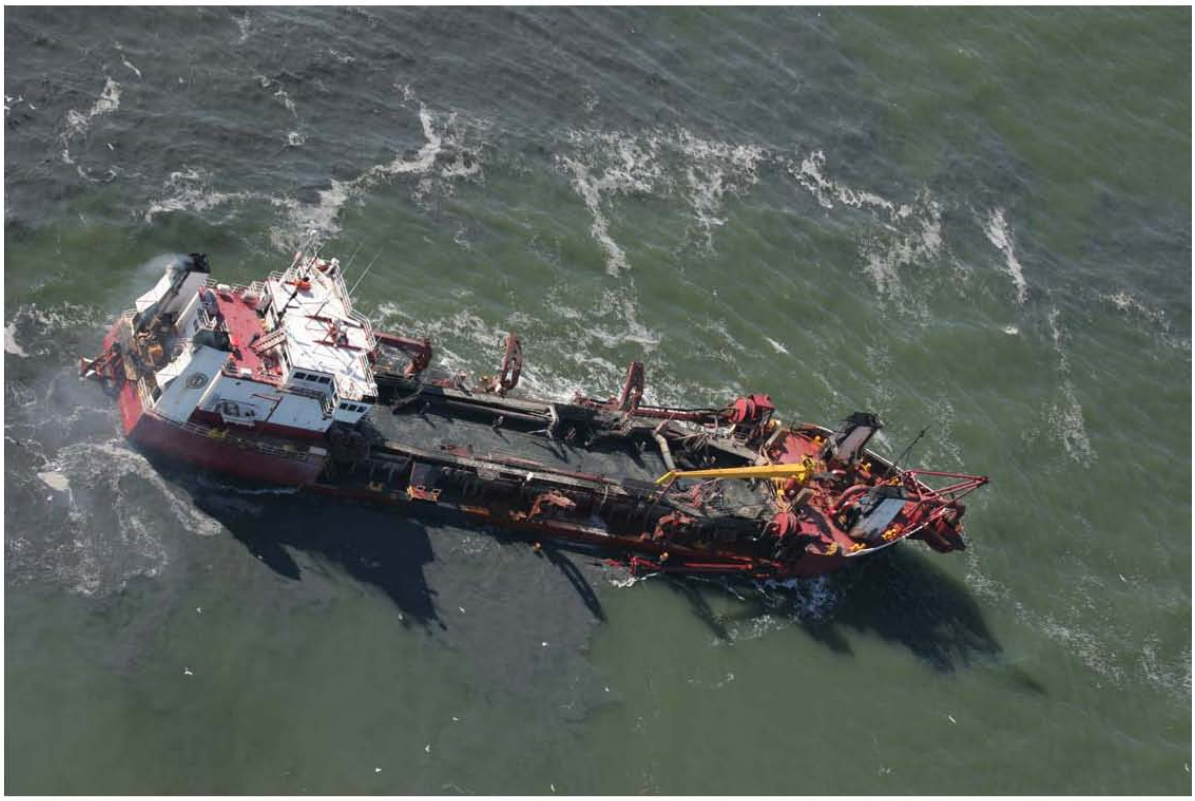
Notes on the communication effort

The dredge, Dodge Island, initially spotted the mom and calf near the Brunswick channel. The dredge right whale observer, Rachel Sayre, called the WTGA ground contact to report the sighting, and the ground contact relayed the information to the survey plane. The survey plane remained in contact with the Dodge Island throughout the whale/vessel interaction via VHF. The Dodge Island reported that they were relaying the whale information to the other 2 vessels working with them, the Catina Renea and The Miami. So, the survey plane was not in direct contact with the Catina Renea, but the whale location information was being passed on to them via the dredge.

Time of vessel's last recorded location (local, 24 hour) 1148

Vessel's last latitude 31.0742 **Vessel's last longitude** -81.28826 **(NAD 83 datum assumed)**

Additional whale information specific to this vessel



January 19, 2009 WT-GA Whale/Vessel Interaction Vessel 1 (Dredge *Dodge Island*)

POSSIBLE VESSEL STRIKE OFF HILTON HEAD, SC ON MARCH 31, 2009
WILDLIFE TRUST GEORGIA SURVEY TEAM RESPONSE

On March 31, 2009, the Wildlife Trust Georgia (WTGA) survey team was flying a Northern EWS (NEWS) survey off the coast of Georgia in the survey aircraft, NOAA57. At about 1315(L), the survey team received a satellite phone call from Barb Zoodsma, NOAA SEUS Right Whale Recovery Program Coordinator. Ms. Zoodsma informed the team that a boater had reported hitting a whale about 3-4 miles off Hilton Head, SC. The possible vessel strike was reported to the Coast Guard and occurred at 1251(L) at 32° 08N 080° 34W. It was also reported that the captain of the vessel had seen blood in the water following the possible strike and the vessel was taking on water. Since the WTGA survey team was the closest team to the incident, Ms. Zoodsma requested that they head up to the location of the possible vessel strike to attempt to locate and document the whale involved. The WTGA survey team told Ms. Zoodsma that they would assess the fuel capacity of the plane and contact her back if there was a need to refuel. Otherwise, NOAA57 would immediately head up to the location of the possible vessel strike.

It was determined that NOAA57 had enough fuel to transit up to Hilton Head and then remain on site for about 1.5 hours. Thus, the decision was made to not refuel and the WTGA team ended their NEWS survey at 1322(L) and began to transit north. During the transit, the NOAA57 pilots contacted the Coast Guard vessels and aircraft assisting the sinking, the *Glory Days* (Figure 1). It was reported to the NOAA57 pilots that the Coast Guard had two vessels, a helicopter and another aircraft on scene at 1342(L). It was also reported that the Coast Guard helicopter had the last known sighting of the whale at 1310(L) and 32° 07.5N 080° 31.3W. At 1346(L), the Coast Guard informed the NOAA57 pilots that their aircraft would be leaving the area of the incident and that NOAA57 was safe to enter the area. At 1352(L), NOAA57 reached the last known location of the whale (Figure 2). Upon arrival, five vessels were visible in the area. These five vessels were the *Glory Days* with a Coast Guard inflatable and a private recreational vessel rafted up alongside it, another private recreational vessel about 100 feet to the southeast and a Coast Guard cutter about 200 yards to the west of the other vessels (Figure 1). The survey team immediately began to fly a one mile circle around the area and search for any sign of the whale. After searching for ten minutes, there was no sign of the whale or any sign of blood in the water. By this time, the Coast Guard cutter was also rafted up alongside the Coast Guard inflatable (Figure 1). The Coast Guard had transferred a pump onboard the *Glory Days* to pump out water and help keep the vessel afloat.

The WTGA survey team continued to expand their search area by increasing their circles to two and three mile radiuses from the last know location of the whale for the next forty minutes. During this search pattern, NOAA57 was contacted by the Wildlife Trust South Carolina/Georgia survey team (SCGA). They had been surveying off the north coast of South Carolina and were transiting down to assist or relieve NOAA57 in the search for the whale. It was determined that both planes had about 1.5 hours of fuel left at that time. So, it was decided that NOAA57 would continue the search and the SCGA plane, N1375L, would refuel at Hilton Head and then relieve NOAA57. At 1437(L), the NOAA57 pilots again contacted the Coast Guard and were given the information that the whale appeared to be heading to the northeast when last sighted. The WTGA survey team decided to move their search pattern to the northeast. A location four miles northeast of the last whale sighting was chosen and a four mile radius circle was flown around this point (32° 12N 080° 32W). Again, no sign of the whale was sighted. At 1456(L), the WTGA survey team decided to begin a ladder search pattern starting at the location of the last whale sighting (32° 07.5N 080° 31.3W) and working to the north. The search pattern consisted of east/west transect lines that were five miles long and two mile connector lines (Figure 2). It was decided that this search pattern would allow the survey team to cover the area to the northeast of the whale sighting more intensively. Using this search pattern, the WTGA survey team was able to cover an area that extended five miles to the east and eight miles to the north of the last sighting of the whale (Figure 2). At 1518(L), the WTGA survey team was relieved by the SCGA survey team and NOAA57 headed into Hilton Head to refuel. The WTGA survey team never sighted any evidence of a whale in the areas they searched. Also, by the time NOAA57 was heading into Hilton Head, the vessel *Glory Days* was underway and heading inshore with assistance from the Coast Guard and Sea Tow.

Figure 1: Vessel *Glory Days* (middle vessel in top image) with Coast Guard and private vessel assistance following possible vessel strike.

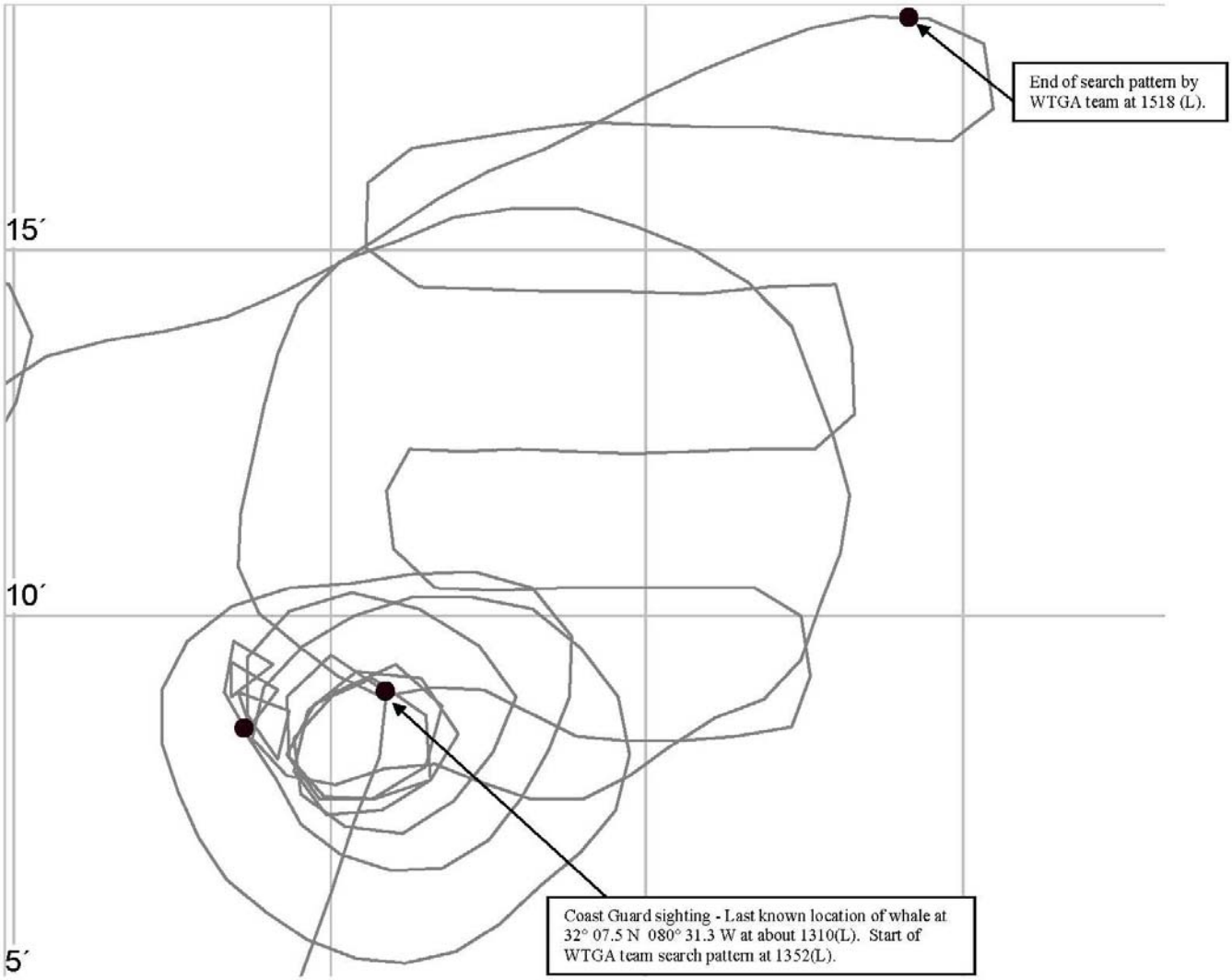


Figure 2: Wildlife Trust Georgia (WTGA) survey team search pattern for whale involved in possible vessel strike on March 31, 2009.