

Marine Mammal and Sea Turtle Sightings from Aerial Surveys in the Proposed Undersea Warfare Training Range (USWTR) in Onslow Bay, North Carolina for June - December 2007

Peter B. Nilsson, Ryan J. McAlarney, William A. McLellan, D. Ann Pabst

University of North Carolina Wilmington

Onslow Bay, off the coast of North Carolina, is currently the US Navy's preferred site for an undersea warfare training range (USWTR). To determine the abundance and distribution of marine mammals and sea turtles within the USWTR, a monitoring program that includes aerial, vessel and passive acoustic survey techniques is currently being undertaken by Duke University, St. Andrews University and the University of North Carolina Wilmington. We report here the results for the aerial survey component from June through December 2007. Surveys were flown in a Cessna 337, at 305 m altitude and 185 km/hr speed, with a pilot, co-pilot and two observers. The survey, consisting of ten 74 km long track-lines spaced 6.5 km apart, creating a 5 km boundary around the USWTR site, was flown 1 – 2 times a month. Beaufort Sea State (BSS) ranged from 1 to 4, with most surveys flown in a BSS 2 or 3. Fifteen cetacean sightings were made in the survey area: bottlenose dolphins, *Tursiops truncatus* (n=8); unidentified delphinids (n=6); spotted dolphins, *Stenella frontalis* (n=1); and short-finned pilot whales, *Globicephala macrorhynchus* (n=1). Most sightings occurred in November (n=9). Encounter rates were strongly linked to BSS, with 13 sightings made in a BSS 2 (5.24 encounters/1000 km flown), two in a BSS 3 (0.43 encounters/1000 km flown) and zero sightings in a BSS 4. Additionally, 95 sea turtle sightings were made, 75% of which occurred in a BSS 2 or below. Surveys will continue through at least May 2008.