NOAA FISHERIES SERVICE

Ecosystem Survey of *Delphinus* Species 2009: Mandates and Research Overview

Protected Resources Division

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Mandates

The NOAA Fisheries Southwest Fisheries Science Center (SWFSC) is responsible for monitoring and estimating abundance of all cetacean species (whales, dolphins, and porpoises) in the California Current Ecosystem off the US West Coast. This research is mandated domestically by the Marine Mammal Protection Act and the Endangered Species Act.

Section 117 of the Marine Mammal Protection Act requires that NOAA Fisheries prepare stock assessments for each marine mammal stock which occurs in waters under the jurisdiction of the United States. Each assessment describes the geographic range of the affected stock and provides the minimum population estimate, current and maximum net productivity rates, and current population trend for that stock. Stock assessment reports are required to be reviewed at least once every three years. The Endangered Species Act requires a recovery plan and a designation of critical habitat for each listed species. Recovery plans specify the research needed to monitor and evaluate the status of endangered species. For west-coast cetaceans, our SWFSC research cruises provide most of the data needed to carry out MMPA stock assessments, to meet the population research requirements of the recovery plans, and to designate critical habitat. However, species and stocks with distributions restricted to waters very close to the coast and those with distributions that span political boundaries (e.g. U.S.-Mexico border) are more difficult to assess and require dedicated research efforts in order to meet these mandates.

Research Overview

The Ecosystem Survey of *Delphinus* Species Research Cruise 2009 was a one-time research cruise designed to further our understanding of abundance, stock structure, morphology and life history parameters for the short- and long-beaked common dolphin (*Delphinus delphis* and *D. capensis*, respectively). Both are important members of the California Current ecosystem and the range of at least one stock extends south into Mexican waters. A large and growing coastal human population in Southern California impacts the Southern California Bight, and exposure to a wide range of anthropogenic impacts (commercial and recreational fisheries, habitat degradation due to pollution and ocean noise) is emerging as a threat to *Delphinus* populations in this region. This research took a multidisciplinary approach and collected data on distribution, school size, reproduction, health and habitat of both *Delphinus* species to estimate abundance, key reproductive parameters (e.g. pregnancy rates and calving interval), and contaminant concentrations as an index of health by species and stock. More information can be found at: http://swfsc.noaa.gov/prd-delphinus.aspx.