

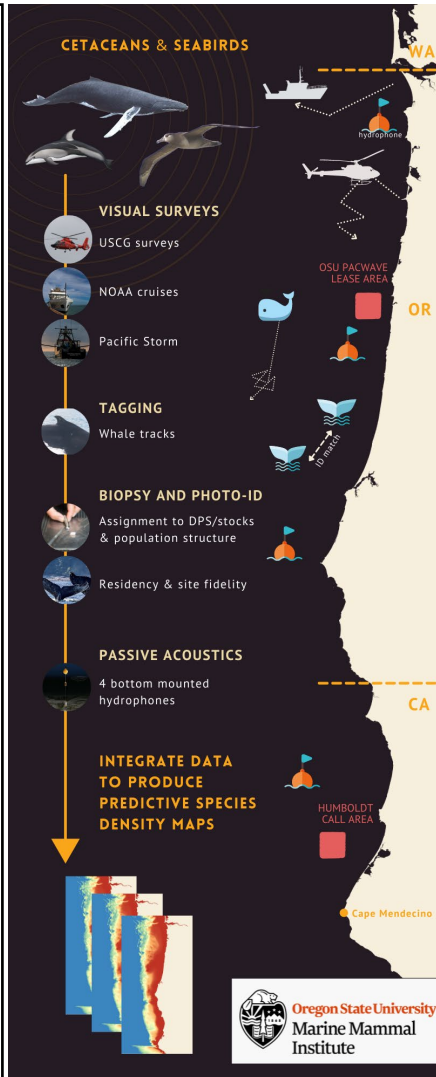
Baseline Data Collection on Cetaceans and Seabirds in the Outer Continental Shelf and Slope of Northern California and Oregon to Inform Offshore Wind Energy Development

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Control Number
2237-1502

Technology Summary

Multi-year, multi-season visual surveys and passive acoustic monitoring of cetaceans and seabirds in the Northern California Current (Cape Mendocino to the Columbia River mouth – a distinct oceanographic province that naturally defines an ecologically meaningful region for cetaceans and seabirds) will provide complementary data on species occurrence, distribution, and abundance. These data will be integrated using ensemble methods to develop spatially and temporally explicit Species Distribution Models (SDMs) to produce predictive density maps. Large whale photo-ID, biopsy sampling, and archival tag deployments will add site-fidelity, blue whale calling rates, dive behavior, population structure, and humpback whale DPS assignment to enhance and contextualize the SDMs.



Key Personnel

C. Scott Baker, Barbara A. Lagerquist, Rachael A. Orben, Daniel M. Palacios, Kate M. Stafford, Leigh G. Torres - Marine Mammal Institute, Oregon State University
John Calambokidis - Cascadia Research Collective
Elizabeth A. Becker - ManTech International Corporation

Program Summary

Period of performance: 48 months

Federal funds: \$1,998,807
Cost-share: \$ 572,251
Total budget: \$2,571,058

	Key Milestones & Deliverables
Years 1 and 2	<ul style="list-style-type: none"> Cetacean and seabird sightings and acoustic recordings
Years 3 and 4	<ul style="list-style-type: none"> Spatially and temporally (seasonal, annual) explicit species-specific density maps for cetaceans and seabirds Photo-ID matches, genetic profiles and DPS assignment Tagged whale site fidelity, habitat use, dive behavior

Technology Impact

The project data streams will be integrated using state-of-the-art statistical methods to generate SDMs capable of predicting species density and distribution. SDMs will resolve seasonal and interannual variation and provide a temporally integrated climatological product. These density maps provide critical information for siting decisions required for offshore wind energy development, for obtaining necessary permits for moving forward, and for assessing their impacts.

Marine Species Distribution Models to inform Wind Energy Development

