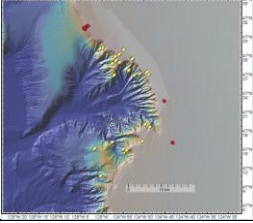







## OCNMS Research and Monitoring, 2016 Field Season

<http://olympiccoast.noaa.gov/science/surveycruises/surveycruises.html>

<p><b>NOAA Ship <i>Rainier</i> Surveys Quinault Canyon</b> Coastal planners, fishery managers, and oceanographic researchers received important seafloor and water column data from the special multibeam sonar survey of Quinault Canyon completed in May 2016 by the NOAA Ship <i>Rainier</i>.</p>	
<p><b><i>E/V Nautilus</i> Ground Truths Sonar Reflectance in Quinault Canyon</b> In support of long-term seafloor mapping goals of OCNMS and partners, the <i>E/V Nautilus</i> ground truthed diverse ecosystems at the head of Quinault Canyon, specifically to dive on surficial geology targets and characterize the seafloor habitats mapped in May 2016 by the NOAA Ship <i>Rainier</i>.</p>	
<p><b>Pelagic Seabird Surveys, 2016</b> Since 2006, sanctuary researchers have conducted monthly pelagic seabird surveys from May through September using the sanctuary's own research vessel the <i>R/V Tatoosh</i>. The effort was completed in 2016 with support from Bob Boekelheide, a local bird expert who has served as Citizen at Large on the OCNMS Advisory Council.</p>	
<p><b>Oceanographic Research Moorings 2016</b> OCNMS completed the sixteenth year of its oceanographic mooring program during the 2016 field season. Data collected included ocean temperature, conductivity, salinity, density, dissolved oxygen, pressure, water velocity and direction, fluorescence, and turbidity. Some changes in instrument distribution among sites were made in 2016 due to instrument losses incurred in 2015.</p>	
<p><b>Subtidal dive surveys asses sea otter expansion on nearshore habitats, 2016</b> For the second consecutive year, research divers from NOAA Fisheries' Northwest Fisheries Science Center joined with Olympic Coast National Marine Sanctuary to conduct subtidal dive surveys along the outer Washington coast. Dives focused on documenting nearshore biological communities - algae, invertebrates and fish - in kelp beds at five locations.</p>	
<p><b>Field Report on Intertidal Monitoring 2016</b> OCNMS continued long-term monitoring at rocky intertidal sites on the Quinault Nation (Point Grenville) and the Makah Tribe's shore (Kydikabbit Point) adjacent to the sanctuary.</p>	

**Sea Otter Census 2016**

Between June 28 and July 1, 2016, Liam Antrim, Acting Research Coordinator at OCNMS, joined Anita McMillan (Washington Department of Fish and Wildlife), Lisa Triggs (Point Defiance Zoo and Aquarium), and Terre Zorman (Kent Middle School science teacher) at Duk Point about 5 miles north of Cape Alava. Using spotting scopes and binoculars to locate otters, observers counted animals and record sea otter numbers and locations on detailed field maps of the shoreline rocks and kelp beds.

**Citizen Science 2016**

OCNMS currently coordinates 20 citizen science volunteers and two student groups who collect shoreline debris data from 100 meter beach segments on 13 sites on a monthly basis. On an annual basis, this amounts to over 700 volunteer hours dedicated to this program. The monitoring segments span 250 miles (400 kilometers) of shoreline on the outer coast of Washington and Strait of Juan de Fuca.

