

OLYMPIC COAST NATIONAL MARINE SANCTUARY

A REPORT FOR SANCTUARY ADVISORY COUNCIL MEMBERS

REPORTING PERIOD: MAY 12 – JULY 6, 2012

ABOUT THE SANCTUARY

Olympic Coast National Marine Sanctuary spans 3,189 square miles of marine waters off the rugged Olympic Peninsula coastline. The sanctuary extends 25 to 50 miles seaward, covering much of the continental shelf and several major submarine canyons.

The sanctuary protects a productive upwelling zone - home to rich marine mammal and seabird faunas, diverse populations of kelp and intertidal algae, and thriving invertebrate communities. The sanctuary is also rich in cultural resources, with over 150 documented historical shipwrecks and the vibrant contemporary cultures of Makah, Quileute, and Hoh Indian Tribes, and Quinault Nation.

OFFICE REPORT

OLYMPIC COAST NATIONAL MARINE SANCTUARY NEWS AND PROGRAM UPDATES

Organized by
Olympic Coast
National Marine
Sanctuary
(OCNMS or
sanctuary)
management
plan priority
areas

TREATY TRUST RESPONSIBILITIES

Intergovernmental Policy Council Science Panel Discusses Collaborative Proposal

Research Coordinator Ed Bowlby and Research Specialist Jennifer Bright participated in a conference call with the Olympic Coast Intergovernmental Policy Council's (IPC) Science Panel. The main topic of discussion was whether to move forward in finalizing a pre-proposal to a private foundation to fund tribal staff to be cross-trained on post-processing remotely operated vehicle video data with staff from the Olympic Coast National Marine Sanctuary (OCNMS) and Washington State University (WSU). All four coastal treaty tribes and the representative for the state of Washington were very interested in developing a pre-proposal.

ACHIEVE EFFECTIVE AND COORDINATED MANAGEMENT

Port Angeles City Council Endorses Request for Proposal for Marine Campus

The Port Angeles City Council approved the city's participation in the issuance of a joint request for proposals, by the Feiro Marine Life Center, NOAA Olympic Coast National Marine Sanctuary and the City of Port Angeles. The Request for Proposals will be for a pre-design study for a public facility focused on marine-based research, education and outreach. This study will build on the sanctuary's 2012 facility strategy and evaluate the potential for a joint facility on the Port Angeles Water Front.

Volunteers Contributions Recognized for Supporting Olympic Coast National Marine Sanctuary

Olympic Coast National Marine Sanctuary volunteers were recognized and thanked for contributing 1675 hours of service in 2011 and the first half of 2012. Volunteers staff the Olympic Coast Discovery Center, represent OCNMS at numerous outreach events, assist staff with clerical work, and help out in many other ways as needed. David Lindau, OCNMS

Volunteer of the Year nominee, was also recognized as one of 14 volunteers across the system in a special conference call with Dan Basta and Jason Patlis, National Marine Sanctuary Foundation Executive Director. Each year the National Marine Sanctuary Foundation gives out a Volunteer of the Year award to one outstanding individual from a national marine sanctuary.

USCG Air Station/Sector Field Office Port Angeles Change of Command

Sanctuary staff attended the change of command ceremony for the local Coast Guard Command. Captain Keith McTigue has taken command of Air Station/Sector Field Office Port Angeles, which includes several stations that provide support to the waters of the Olympic Coast National Marine Sanctuary.

CONDUCT COLLABORATIVE RESEARCH, ASSESSMENTS AND MONITORING TO INFORM ECOSYSTEM-BASED MANAGEMENT

Olympic Coast National Marine Sanctuary Deploys Scientific Research Moorings

Deployment of the OCNMS near-shore research moorings in 2012 commenced Wednesday May 24. This season 10 moorings will be deployed from the *R/V* Tatoosh off Washington's outer coast between Makah Bay and Cape Elizabeth, which is approximately 27NM north of Grays Harbor. For more information on OCNMS' mooring program follow the link: www.olympiccoast.noaa.gov/science/oceanography/oceanography.html. The mooring deployment is the official beginning to the 2012 OCNMS field research season, which typically runs to mid-October. The moorings will be serviced every 6 weeks to collect data used to monitor water quality, currents and ocean productivity in support of investigations into climate change, ocean acidification, hypoxia, harmful algal blooms and other aspects of nearshore ecology in the sanctuary.

Olympic Coast National Marine Sanctuary Teachers and Volunteers Scheduled to Participate in Moorings Deployment off Washington Coast

Three observers recommended by Olympic Coast National Marine Sanctuary (OCNMS) will assist University of Washington and Quileute Tribe Natural Resources during a research cruise aboard *R/V THOMPSON* to deploy both the NEMO surface mooring, há?ba, and the NEMO Subsurface mooring off the Washington coast. Observers include OCNMS Volunteer Miriam Bobkoff, Clallam Bay Elementary School Teacher John Wonderly and OCNMS Volunteer / Olympic Peninsula Home Connection Teacher Sue Griffith. The [Applied Physics Laboratory of the University of Washington \(APL-UW\)](http://www.apl.uw.edu/) and the [Northwest Association of Networked Ocean Observing Systems \(NANOOS\)](http://www.nanoos.org/) originally launched the ocean observing array off the outer coast of Washington near La Push in July 2010.

Watching Out for Washington's State Sea Otters

OCNMS Research Coordinator Ed Bowlby monitored the sea otter reporting hotline number for Washington State for several weeks in the absence of the primary responder at U.S. Fish and Wildlife Service. During the week of May 21st, response included coordinating transport of a dead, stranded and tagged sea otter that had been captured in 2011. The carcass was sent to the National Wildlife Health Center in Madison, Wisconsin, for a full necropsy. This was a joint effort with Washington Department of Fish and Wildlife, U.S. Geological Survey's Biological Resources Division, and Olympic Coast National Marine Sanctuary.

IMPROVE OCEAN LITERACY

North Olympic Watershed Program Reaches More Than 850 Students

The North Olympic Watershed Program, a joint partnership between Feiro Marine Life Center, Olympic National Park, and Olympic Coast National Marine Sanctuary, finished another successful spring season serving fourth and fifth grade classes from six school districts. Fourth grade students observe, touch and learn about live, local, marine life as well as collect and observe plankton with staff from Feiro Marine Life Center. The fourth grade students also learn how to pack a waste-free lunch from marine sanctuary staff. Fifth grade students walk the Peabody creek watershed learning about what makes a healthy watershed from Olympic National Park and Feiro Marine Life Center staff and then learn more from marine sanctuary staff about watersheds, ocean currents, and marine debris by dissecting albatross boluses. All the students discuss how we can decrease marine debris and tour the Olympic Coast Discovery Center where the beauty of natural history, maritime heritage and technology combine to educate students and visitors about a variety of ocean topics.

Olympic Coast National Marine Sanctuary Commemorates Captain Jacques-Yves Cousteau with Two Special Events

Olympic Coast National Marine Sanctuary honored the life and work of Jacques-Yves Cousteau (1910-1997) with two special events – a demonstration by scuba divers at City Pier and a four-day “Junior Oceanographers’ Explorers Camp.” The demonstration by scuba divers attracted an audience of approximately sixty people, mainly youth, who had the opportunity to see samples of marine invertebrates brought up by the divers.

During the second event, Junior Oceanographers’ Explorers Camp, thirteen upper middle school and high school campers followed in the footsteps of Cousteau. The program is a partnership between Olympic Coast National Marine Sanctuary and Feiro Marine Life Center. During the four-day camp, students experienced the science and mechanics behind underwater exploration by building underwater Remotely Operated Vehicles (ROVs). Four teams developed ROVs and completed a special mission at the city pool for a crowd of family members and spectators.

Peninsula College Marine Biology Students Visit the Olympic Coast Discovery Center

Twenty Peninsula College students learned about the National Marine Sanctuary Program with a tour through the Olympic Coast Discovery Center with Education Specialist, Janet Lamont. In the adjacent classroom marine mammal skulls were displayed and Peninsula College Instructor, Barbara Blackie, described how to identify marine mammals that frequent the Olympic Coast Marine Sanctuary.

Chimacum Middle School learns about Marine Debris

Every year approximately one hundred Chimacum middle school and high school students take a four-day excursion to explore a few local Olympic Peninsula wonders. Their first and last stop is at NOAA’s Olympic Coast Discovery Center and the Feiro Marine Life Center. This year students learned about the National Marine Sanctuary System with a tour of the Olympic Coast Discovery Center. They also learned about marine debris by dissecting albatross boluses to find squid beaks, wood debris, plastics, fishing line, rope chards, and various other marine debris particles which the birds had ingested. At the Feiro Marine Life Center the students collect and view plankton under a microscope, capture live animals in a beach seine, and explore sea life in the touch tanks.

Olympic Coast Students Study Beaches and Marine Debris

Olympic Coast National Marine Sanctuary and Seattle Aquarium educators accompanied students and teachers from Pacific Beach Elementary and Quileute Tribal School on *Ocean Science* beach field trips, where students studied beach ecology and monitored for marine debris.

Sanctuary Participates in 4th Annual Ocean and River Resources Fair

Olympic Coast National Marine Sanctuary education staff and interns provided hands-on activities and information at the 4th *Annual Ocean and River Resources Fair*. The event highlighted citizen science, volunteer and educational activities on the North Olympic Peninsula. The event was sponsored by North Pacific Coast Marine Resource Committee.

Olympic Coast National Marine Sanctuary conducts Teacher Training at Olympic National Park NatureBridge for Geographic Information Systems

Marine Geographer Nancy Wright conducted an in-service training at the Olympic National Park NatureBridge for 26 teachers from Kitsap and Clallam Counties. Focusing on the use of Geographic Information Systems (GIS) for coastal oil spill response and seafloor mapping, Nancy explained the utility of the software and the value of maps in managing natural resources. She provided the teachers with curriculum for a GIS oil spill response module developed by OCNMS and Pacific Education Institute.

Learning about Deep-Sea Coral

Research Coordinator Ed Bowlby was the featured speaker at the Newcomers’ Club luncheon meeting on July 3. He provided a slide and video presentation on deep-sea coral explorations in the Olympic Coast National Marine Sanctuary. There was wide interest and amazement from the forty some members that such fascinating deep-sea communities existed off the Washington coast.

CONSERVE NATURAL RESOURCES IN THE SANCTUARY

Olympic Coast National Marine Sanctuary Overflight Regulations Posted on Updated FAA Charts

Revised aeronautical charts have been released by the Federal Aviation Administration (FAA) including information on overflight regulations for Olympic Coast National Marine Sanctuary off the Washington coast. The charts depict existing

overflight zones that have been in place for many years. NOAA has worked with the FAA to ensure clear notation of sanctuary regulations on aeronautical charts, which provides appropriate notice to pilots and ensures the protection of resources under NOAA's stewardship. The recent move by the FAA will greatly facilitate NOAA's efforts to improve regulatory compliance and improve protection of wildlife from harassment caused by low overflights.

Shoreline Debris Monitoring Initiated

Sanctuary volunteers initiated a scientific monitoring program for shoreline debris at 6 locations in May-June 2012. The number of monitoring locations will be expanded over time in collaboration with county-based marine resources committees. Specific indicators of Japan tsunami debris will be incorporated into monitoring as indicators are identified. This monitoring will provide quantitative data for amounts and types of marine debris useful for analysis of trends and informing management responses. Similar monitoring programs have been implemented in Hawaii, Alaska, Oregon and British Columbia.

Olympic Coast National Marine Sanctuary promotes collaboration on marine debris

Olympic Coast National Marine Sanctuary hosted a meeting between Nancy Wallace, Marine Debris Division Chief, Nir Barnes, West Coast Marine Debris Regional Coordinator and representatives of Olympic Coast National Marine Sanctuary, Olympic National Park and the US Fish and Wildlife Washington Maritime National Wildlife Refuge Complex. Federal managers from the sanctuary, park and refuges discussed how they would collaborate on issues related to Japanese Tsunami Marine Debris.

West Coast Sanctuary Staff Participate in Essential Fish Habitat (EFH) Review

The West Coast Region submitted comments to the Pacific Fishery Management Council on the draft Requests for proposal to Modify Existing Essential Fish Habitat (EFH) for Pacific Coast Groundfish from all west coast sanctuary sites.

SANCTUARY PERMITTING (May 21 through July 13, 2012)

Issued Permits and Approvals

OCNMS-2012-002 - Meagan Cummings, Lamont-Doherty Earth Observatory

Project Title: Cascadia Thrust Zone Structures

Permitted Activity: Installation of two ocean bottom seismometers, which will be retrieved at the end of field work with only the steel anchors abandoned in the sanctuary..

Project Location: The seismic survey will encompass the area ~43.5–47°N and ~124–125°W off the coasts of Oregon and Washington. Installation of ocean bottom seismometers includes two instruments in the sanctuary -124.805485/47.163039 N and -124.609591/47.141813 N

OCNMS-2012-003 - Dr. Jeff Jenner, NOAA National Weather Service

Project Title: Cape Elizabeth Weather Buoy 46041 Servicing

Permitted Activity: Installation of a moored weather buoy at station 46041 (discharging and depositing attached buoy components; placing a structure on the seabed) and periodic maintenance, with buoy anchor abandonment on the seafloor with each buoy retrieval event (abandoning a structure on the seabed).

Project Location: within a 5 nautical mile radius of the current location of NOAA weather buoy 46041 (47° 21'10" N 124° 43'50" W

OCNMS-2012-004 – Laura Jurgens, University of California Davis Bodega Marine Laboratory

Project Title: Understanding how regional climate and foundation species interact to affect temperature extremes within biological habitats

Permitted Activity: Installation of up to 18 temperature loggers by attachment to intertidal rocks with marine epoxy, and installation of markers, including drilling of rock to install small marker bolts

Project Location: Point of Arches and Taylor Point

OCNMS-2012-005 – Kevin Ryan, U.S. Fish and Wildlife Service

Project Title: Aerial Seabird and Sea Otter Surveys

Permitted Activity: Low altitude overflights within the OCNMS overflight restriction zone to survey seabird colonies and sea otters

Project Location: Near national wildlife refuge islands within OCNMS and over sanctuary waters

OCNMS-2012-006 – Dr. Simone Alin

Project Title: Wave Glider in Support of Ocean Acidification Research
Permitted Activity: Deployment of a wave glider within, or outside on a programmed course that enters the sanctuary
Project Location: throughout the sanctuary

Pending Permit Requests

Dr. Brad Hanson, NOAA/Northwest Fisheries Science Center

Project Title: Determining the distribution of killer whales and other cetaceans in the coastal waters of the U.S. using acoustic recorders

Permitted Activity: Deployment of two bottom-anchored moorings with acoustic recorders in OCNMS and one each in Gulf of the Farallones and Monterey Bay national marine sanctuaries.

Project Location: OCNMS mooring locations 48°10.148N/125°38.705W and 48°20.061N/125°06.840W

Thomas Butler, NatureBridge

Project Title: NatureBridge Citizen Science Ocean Drift Card Project

Permitted Activity: Deployment of wooden drift cards (to track nearshore current patterns). A few dozen cards will be deployed at each location each year.

Project Location: La Push and Cape Flattery areas

LEARN ABOUT YOUR SANCTUARY

New information about resources in the sanctuary is always emerging. This section of the office report is reserved for sharing brief descriptions of recent studies, observations, findings, reports, forecasts related to the sanctuary.

Reports from Coastal Observation and Seabird Survey Team (COASST)

COASST volunteers recently reported numerous Black-footed Albatross on beaches south of Moclips. After reporting the sightings to COASST staff at the University of Washington we believe this is “normal” for May through November when lost juveniles and exhausted adults wash ashore during the post-breeding season.

From NOAA CoastWatch, West Coast Node

<http://coastwatch.pfel.noaa.gov/xfer/olympic/>

Sea Surface Temperature the first week of July was 12° to 14° C (53.6° to 57.2° F), typical of the warming trend in coastal conditions between spring and the summer months (June, July, August) due to temporary upwelling and increased surface heating from the south.

Ocean Color Chlorophyll is a proxy for light availability and particulate (inorganic) loading in the upper water column. During the first week of July, the northern half of the sanctuary showed concentrations from 4.0 -10.0 µg/L – indicative of a strong upwelling and typical for the season. No data was available for the southern half of the sanctuary.

From Northwest Fisheries Science Center

<http://www.nwafc.noaa.gov/research/divisions/fed/oeip/g-forecsc.cfm>

2011 was characterized by the continuation of La Niña conditions that were initiated in July of 2010. Combined with persistently negative Pacific Decadal Oscillation (PDO) values throughout the year and a high biomass of lipid-rich northern copepods supporting the base of the food-chain, 2011 had the potential to be a good year for supporting juvenile salmon entering the ocean. However, this positive bio-physical outlook is tempered by observations of low winter-time ichthyoplankton (larval stages of fish-prey for salmon) abundance and poor upwelling (both in terms of the total amount and duration) throughout the year. Considering the previous two years (2009 and 2010) were characterized by below-average ocean conditions, the NMFS web site suggested that 2011 was an intermediate year with the foundation to support a rich biological community if the ocean conditions remain positive in 2012.

Positive Signs for 2012

- Strong negative values of the PDO were observed in autumn 2011; if these values persist through winter and early spring 2011-2012, they could result in the best ocean conditions observed in decades. This is the first indication that 2012 could result in some of the highest returns of Columbia River coho salmon in 2013 and spring Chinook in 2014.
- Negative ONI values indicate cold La Niña conditions at the equator. These negative values are expected to continue into spring 2012, which suggests that the northern North Pacific Ocean will also remain cold through spring 2012, giving rise to continuation of good ocean conditions.

- Northern copepod biomass in 2011 has been the highest in recent years, indicating improved ocean conditions compared to the past few years. This suggests good feeding conditions for the baitfish upon which juvenile salmon feed (however see “ichthyoplankton” below).
- Catches of coho in the September 2011 survey were relatively high, ranking 5th overall among 14 annual surveys.

Negative Signs for 2012

- Even though the spring transition occurred near the date of the climatological average (early April), upwelling from April through early June was relatively weak. Another negative indicator is that upwelling ceased very early, in mid-September.
- Throughout 2011 NMFS found low values of copepod species–richness values, an indication of improving ocean conditions; however, these low anomalies were less negative than in other “good” years.
- Ichthyoplankton biomass in January-March 2011 (winter) was among the lowest values in our time series, indicating poor feeding conditions for salmon that entered the sea in spring 2011.
- Catches of juvenile spring Chinook in the June surveys were poor, ranking 10th of 14 years.

NEWS COVERAGE

Port Angeles Holds Workshops On *Tsunami Debris*

<http://kgmi.com/Port-Angeles-Holds-Workshops-On-Tsunami-Debris/13186819>

Tsunami-debris presentation slated tonight

<http://www.peninsuladailynews.com/article/20120521/NEWS/305219998/tsunami-debris-presentation-slated-tonight>

Spy Satellites Used In Search For Tsunami Debris

<http://www.boisestatepublicradio.org/post/spy-satellites-used-search-tsunami-debris>

<http://www.kplu.org/post/spy-satellites-used-search-tsunami-debris>

Expert warns of debris deluge to come

<http://www.peninsuladailynews.com/article/20120523/news/305239985/expert-warns-of-debris-deluge-to-come>

Port Angeles vision of a marine research 'campus' takes first sail

<http://www.peninsuladailynews.com/article/20120611/news/306119998/port-angeles-vision-of-a-marine-research-8216-campus-8217-takes>

Endangered orcas habitat scheduled for seismic tests on June 11th ...

<http://blog.seattlepi.com/candacewhiting/2012/06/09/endangered-orcas-habitat-scheduled-for-seismic-tests-on-june-11th-2012/>

WEB SITE (<http://olympiccoast.noaa.gov/>)

Follow the OCNMS on Facebook!

<http://www.facebook.com/#!/usolympiccoastgov>

Please take a few moments to peruse the site. Your feedback is greatly appreciated.

Comments and suggestions can be sent to Jacqueline.Laverdure@noaa.gov.

FUN, OCEAN RELATED WEB SITES

National Oceanic & Atmospheric Administration

<http://www.noaa.gov/>

National Ocean Service

<http://www.nos.noaa.gov/>

Office of National Marine Sanctuaries

<http://www.sanctuaries.nos.noaa.gov/>

NOAA Marine Debris Program

<http://marinedebris.noaa.gov/>

NOAA Online Media Library

<http://sanctuaries.noaa.gov/photos>

Encyclopedia of National Marine Sanctuaries

<http://www8.nos.noaa.gov/onms/park/>

NOAA Ocean Explorer

<http://oceanexplorer.noaa.gov/>

National Data Buoy Center

<http://www.ndbc.noaa.gov/rmd.shtml>

Washington's Ocean Resources

<http://www.ecy.wa.gov/programs/sea/ocean/index.html>

Learn More About Your Sanctuary

The Sanctuary Office Report is produced bi-monthly by the Olympic Coast National Marine Sanctuary in conjunction with Sanctuary Advisory Council meetings. To learn more about the Sanctuary please visit our web site at: <http://www.olympiccoast.noaa.gov>.

To learn more about the Sanctuary Advisory Council please visit:
http://olympiccoast.noaa.gov/involved/sac/sac_welcome.html

The Office of National Marine Sanctuaries

The Olympic Coast National Marine Sanctuary is one of 14 marine protected areas in the National Marine Sanctuary System encompassing more than 150,000 square miles of marine and Great Lakes waters from Washington State to the Florida Keys, and from Lake Huron to American Samoa. The system includes 13 national marine sanctuaries and the Papahānaumokuākea Marine National Monument. Visit the ONMS web site at: <http://www.sanctuaries.nos.noaa.gov/>

OCNMS Staff

- Carol Bernthal** – Superintendent
- George Galasso** – Deputy Superintendent
- Patrick A’Hearn** – Oceanography Specialist (contractor)
- Liam Antrim** – Resource Protection Specialist
- Thomas Baker** – Resource Protection Specialist (recalled to active USCG duty through March 2012)
- Lauren Bennett**-Acting Sanctuary Advisory Coordinator (contractor)
- Ed Bowlby** – Research Coordinator
- Katie Brenkman** – Research Technician (contractor)
- Jennifer Bright** – Research Technician (contractor)
- Eric Evans** – IT Consultant (contractor)
- Rick Fletcher**– R/V Tatoosh Captain, Research Program Support (contractor)
- Carey Floyd** – Graphic and Web Designer (contractor)
- Norma Klein** – Office Administrator
- Janet Lamont** – Visitor Services Specialist (contractor)
- Jacqueline Laverdure**– Education Specialist
- Heidi Pedersen** –Education Specialist (contractor)
- Robert Rountree** – Visitor Services Specialist (contractor)
- Robert Steelquist** – Education and Outreach Coordinator
- LT Nathan Witherly** – Operations Officer (NOAA Corps)
- Nancy Wright** - Geographer

To
http



uary visit:
elcome.html

- Contact Information -

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