

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 numerous marine mammal and seabird species, 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 the Makah, Quileute, and Hoh Indian Tribes and the Quinault Nation.

in the aftermath of an earthquake.

OFFICE REPORT

OLYMPIC COAST NATIONAL MARINE SANCTUARY NEWS AND PROGRAM UPDATES

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

ACHIEVE EFFECTIVE AND COORDINATED MANAGEMENT

Olympic Coast Participates in the Great ShakeOut Earthquake Drill!

Olympic Coast National Marine Sanctuary participated in the Great ShakeOut Earthquake Drill 2016. Staff practiced dropping, covering, and holding on along with 1.1 million participants throughout Washington state on October 20. After the drill, staff held a debrief, went over the office's Emergency Operating Procedures, and discussed emergency scenarios and concerns specific to the local area. An earthquake of a significant magnitude is a real possibility in Washington state and OCNMS staff is now better prepared to act during an earthquake and



IMPROVE OCEAN LITERACY

NOAA B-WET Program Awards to Pacific Northwest Organizations for Environmental Education

NOAA's Pacific Northwest Bay Watershed Education and Training (B-WET) program announced \$452,583 in awards to Washington and Oregon organizations to assist with community-based environmental education programs. The grants support standards-based, hands-on education activities that promote greater understanding about watersheds, the ocean and protected areas such as NOAA's Olympic Coast National Marine Sanctuary. The full FY2017 Federal Funding Opportunity (FFO) can be found at Grants.gov under funding opportunity number NOAA-NOS-ONMS-2017-2005088 and are due on January 4, 2017. Learn more about Pacific Northwest B-WET at http://olympiccoast.noaa.gov/ocean_literacy/bwet.html.

Olympic Coast NOAA Kiosk Makes a Splash at Forks Visitor Center and Kalaloch Lodge

Olympic Coast National Marine Sanctuary is now featured at both Forks Visitor Center and Kalaloch Lodge with newly installed NOAA National Marine Sanctuary Interactive Touch Screen Kiosks. The kiosks offer a high-impact visual and auditory showcase of all the treasures the sanctuary has to offer. With the click of a button, users learn about the various activities of the sanctuary; educational and outreach programs, research projects and resource protection programs as well as extensive information about species, habitats, history and culture. Visitors can also use the kiosk for up-to-the-minute reports on weather and ocean conditions. Forks Visitor Center is a busy tourist attraction reaching approximately 40,000 visitors annually, including fans from the popular book / movie series "Twilight." Kalaloch Lodge, located in Olympic National Park, is a popular destination reaching over 200,000 visitors annually. Both sites are outreach posts near to, or adjacent to, OCNMS.



Sanctuary Education Hosts NatureBridge Olympic Students for Marine Debris Presentations

Olympic Coast National Marine Sanctuary education staff provided educational programming to two separate school groups with NatureBridge Olympic. The two eager groups were comprised of 17 fourth through sixth graders from Harbor Montessori School, and 26 sixth graders from Orcas Island School. Each school group received a personal tour of the Olympic Coast Discovery Center from OCNMS staff covering the National Marine Sanctuary System, an overview of OCNMS, and Ocean Literacy Principles. They also engaged in a presentation on the negative interactions between albatross seabirds and marine debris.

Neah Bay Elementary School Kicks Off Academic Year with Beach Day 2016



Neah Bay Elementary School spent the day at Tsoo-Yess Beach for the school's annual Beach Day. The event celebrates enjoying the natural beauty and outdoor classroom of their home. Olympic Coast National Marine Sanctuary education staff participated in the event, providing marine education activities to more than 160 students. Students rotated through beach stations, explored intertidal communities in the high tide zone, learned about marine debris and its impacts on marine life, and played beach games and activities. Following beach activities, Neah Bay Elementary School Principal hosted a school-wide barbecue before students returned to school.

Students Discuss Debris and Stewardship at Dungeness River Festival

Olympic Coast National Marine Sanctuary (OCNMS) educators provided marine debris education to more than 2,500 visitors at the Dungeness River Festival on September 23-24 in Sequim, Washington, hosted by Dungeness River Audubon Center. Friday was Kid's Day with 1,200 students attending the festival. OCNMS provided a marine debris case study and investigative survey, while leading students to stewardship actions individuals and communities can take to help keep our seas free of debris. Saturday was open to the general public, where visitors could learn about Olympic Coast, the importance of marine protected areas, and the impacts of marine debris on ocean health.



Climate Change and Olympic Coast National Marine Sanctuary Presentation to Newcomers' Club

On October 4, Olympic Coast National Marine Sanctuary (OCNMS) staff presented to 35 members of the Olympic Peninsula Newcomers' Club as their luncheon speaker. OCNMS staff shared effective and tested metaphors from the National Network of Ocean and Climate Change Interpretation (NNOCCI), such as the heat trapping blanket metaphor and marine osteoporosis metaphor. These explanations and messages on our changing climate are easier for general public to understand and relate to. The presentation focused on the impacts of climate change to Olympic Coast, the importance of marine protected areas (MPAs) and the role MPAs play in conservation efforts and marine resource management. The Newcomers' Club members consist of folks who have relocated to the Olympic Peninsula from various parts of the country. This talk provided them with opportunity to learn about the National Marine Sanctuary System and our own ocean treasure off Washington's coast.

Olympic Coast Sanctuary Participates in Dungeness Crab and Seafood Festival

On Oct. 7-9, Olympic Coast National Marine Sanctuary was part of the 15th annual Dungeness Crab and Seafood Festival in Port Angeles (www.crabfestival.org). Sanctuary staff and volunteers hosted an educational booth on general sanctuary information and led hands-on activities on ocean acidification. The event drew between 10,000-15,000 people from the area as well as other parts of the U.S. and Canada. Ocean acidification is a major current marine issue and is relevant to seafood and other marine organisms (crabs, shellfish, etc.). Healthy crabs and shellfish populations and nurseries require ocean conditions favorable for the organisms to build their calcium carbonate shells, which are negatively impacted by increasing acidification.



Olympic Coast Discovery Center Reaches More Than 6,000 Visitors in 2016

Olympic Coast Discovery Center (OCDC), the sanctuary's public visitor center, provided interpretive information about the natural and cultural resources within Olympic Coast National Marine Sanctuary (OCNMS) and sanctuary programs to 6,020 visitors and locals in 2016. The OCDC was open daily from Memorial Day weekend through Labor Day, and weekends in September through mid-October. This number represented an increase by more than 400 people compared to the 2015 season. The Discovery Center closed for the winter

season after serving visitors to the annual Dungeness Crab and Seafood Festival in Port Angeles Oct. 7-9, and will be available by appointment only until reopening May 27, 2017. A total of 22 volunteers participated in Olympic Coast Discovery Center-related activities in 2016 calendar year, of which 15 served as active docents staffing the center, contributing a total of 900 volunteer hours during FY15-16.

Educators Gather for Oregon Coastal Learning Symposium

The 5th annual Oregon Coastal Learning Symposium hosted two hundred preK-12 educators, informal educators, higher education and others to come together to share and refine their skills for using the ocean, forest and community as a context for learning across grades and subjects. Olympic Coast National Marine Sanctuary staff led “Pacific Northwest B-WET: Bringing the Environment into Classrooms in a Meaningful Way” workshop, along with B-WET awardee Karen Matsumoto of Suquamish Tribe and Ocean Guardian teacher Susan Hayes of Siuslaw Middle School. This two-hour, hands-on session explored tools to study ocean and watershed science, including Remotely Operated Vehicles and Understanding Ocean Acidification activities, as well as resources to support outdoor field investigations and stewardship activities in a formal education setting. Information and resources about how to apply for the Pacific Northwest B-WET and Ocean Guardian School funding opportunities were also shared during the workshop and at a lunchtime gathering for symposium attendees. NOAA Pacific Northwest Bay Watershed Education and Training (B-WET) Program is an environmental education program that supports locally relevant, experiential learning focused on K-12 audiences in Washington and Oregon.



Quileute Tribal School Participates in Ocean Science Education

Quileute Tribal School students from third through sixth grades took part in ocean science programming within the Olympic Coast Discovery Center as well as with Feiro Marine Life Center. This ocean science program provided hands on experiential learning to 23 visiting students and four visiting teachers. The students were engaged with an overview of Olympic Coast National Marine Sanctuary, followed by marine debris and albatrosses inquiry, complete with several bolus dissections. At partnering organization Feiro Marine Life Center, students conducted a plankton investigation and learned about animal feeding behaviors. Each station focused on the importance of responsible stewardship actions to reduce the amount of marine debris in the environment, and to prevent future marine debris.

Annual Award Ceremony Honors Olympic Coast Discovery Center Volunteers

On Thursday, October 27 Olympic Coast National Marine Sanctuary (OCNMS) hosted the annual Olympic Coast Discovery Center (OCDC) Volunteer Awards Ceremony in the OCNMS classroom, featuring a presentation on “Historical and Maritime Overview of OCNMS” by Deputy Superintendent George Galasso. OCDC Manager Karlyn Langjahr thanked volunteers for their valuable contributions to OCNMS and presented awards and certificates. Jim Jewell was awarded Top Volunteer for 2016, and Carol Turner earned Runner-up with the second highest number of overall volunteer hours. Dan Wood was awarded Top New Volunteer for his efforts among docents trained in 2016. Sue Griffith received Honorable Mention and all volunteers were celebrated with a potluck dinner with many OCNMS staff in attendance.



Sanctuary Staff Participates in Olympic Peninsula Tourism Summit

On October 28, sanctuary staff Karlyn Langjahr attended the annual Olympic Peninsula Tourism Summit at Fort Worden, Port Townsend, Washington. The summit was conducted by the Olympic Peninsula Tourism Commission with a 2016 theme, “Honoring the Authenticity of Place.” It kicked off on October 27 with a Culinary Day featuring with a panel of speakers at lunch addressing *Operating a "Farm to Fork" Business with an Eye on the Bottom Line*, followed by four different excursion options in the afternoon. October 28 was Tourism Day, with speakers sharing their authentic experiences of place, updates about Olympic National Park, ways the Olympic Peninsula Tourism Commission is promoting the area, and other presentations by regional and local experts. Break-out sessions allowed attendees to delve deeper into a topic of interest for his/her representation, and the popular Vendor Marketplace provided an opportunity for one-on-one business connections and area education. The summit was attended by about 150 representatives from regional chambers, businesses, organizations and agency representatives. Olympic Coast National Marine Sanctuary values the summit for its outreach and awareness platform to existing and potentially new partners for promoting the sanctuary and sanctuary activities.

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

Liam Antrim Receives NOS Employee of the Year Award

Liam Antrim was awarded National Ocean Service (NOS) Employee of the Year for the exemplary service he provided in acting for more than a year in the dual role of Resource Protection Specialist and Acting Research Coordinator for Olympic Coast National Marine Sanctuary. In addition to effectively fulfilling the everyday duties and responsibilities of two key positions, he also developed innovative, new partnerships and programs aimed at resource protection and research. Liam's dedication, perseverance, creativity and cheerful attitude directly led to significant improvements in protecting sanctuary resources and increasing our knowledge of ecologically significant habitats in the sanctuary and the West Coast region. Photo credit: EarthEcho International



Olympic Coast National Marine Sanctuary Concludes Field Season of Oceanographic Moorings

Olympic Coast National Marine Sanctuary (OCNMS) recovered all ten oceanographic moorings, completing the sixteenth consecutive year of a near-shore oceanographic monitoring program. NOAA Corps LTJG Alisha Friel skippered the sanctuary's research vessel, R/V *Tatoosh*, safely through a mechanically challenging season, while Kathy Hough was technical lead for instrumentation and data acquisition. Staff from Quileute Natural Resources assisted on deck and collected plankton and water samples for the tribe's harmful algal bloom monitoring program. Ten instrumented mooring buoys were deployed in late May at five locations, each with buoys at 15 and 42 meter depth, spanning 60 nm of the sanctuary's nearshore waters between Makah Bay and Cape Elizabeth. Instruments record ocean temperature, conductivity (salinity), current velocity and direction, dissolved oxygen, fluorescence (a proxy for plankton) and turbidity, all data to characterize water quality and currents, upwelling and low oxygen events, and ocean productivity. Moorings were serviced on a six-week cycle for cleaning, examination, battery replacement and data download. Data from seasonal deployment will be made available to the public via the OCNMS web page and is used in coastal models in partnership with universities in the region.

Olympic Coast Ocean Acidification Sentinel Site Presentation at Marine Resource Committee Summit

Marine Resource Committees are county-based organizations promoting grassroots marine conservation, research and outreach on the outer Washington coast. During a session at their annual summit focused on climate change and ocean acidification, sanctuary staff Liam Antrim provided a summary of the workshop held in September to evaluate and promote the Olympic Coast as a sentinel site for ocean acidification. Although a summary of findings and recommendations has not been completed, the sentinel site workshop generated support, and identified priorities and collaborations for advancement of research and outreach associated with ocean acidification impacts on regional resources and economies. The outer coast of Washington state is expected to be a site with high vulnerability to ocean acidification impacts. Because these coastal communities are highly dependent on marine resources for commerce and subsistence, it will be critical to foster collaborations in efforts to understand and communicate the science and risks to these communities.

National Advisory Committee on Integrated Ocean Observing Systems Meets in La Push, Washington

The Quileute Tribe hosted a two-day meeting of the U.S. Integrated Ocean Observing System Advisory Committee in La Push, Washington. The meeting focused on ocean observing assets in the Pacific Northwest region that are part of the Northwest Association of Networked Ocean Observing System (NANOOS). A panel from Pacific Northwest representatives, including Olympic Coast National Marine Sanctuary Superintendent, Carol Bernthal, presented their perspectives on the opportunities and challenges for ocean observing in the region. OCNMS highlighted current monitoring efforts, a highly successful partnership with NANOOS, and future needs including improved ocean acidification and climate change data collection, reporting, and modeling. Participants also discussed how NANOOS has supported the economy through partnerships with industry, particularly with respect to shellfish/oyster production.

Participation in Ocean Observatories Initiative (OOI) Meeting hosted by National Science Foundation

On September 27-29, Olympic Coast National Marine Sanctuary (OCNMS) Research Coordinator traveled to Portland, Oregon to meet with regional oceanographic experts assembled by the National Science Foundation (NSF) to discuss progress and opportunities related to a suite of ocean observing platforms deployed in the NE Pacific Ocean by U.S. scientists and their Canadian counterparts. Participants focused discussion on the Cabled, Endurance and Station Papa buoy arrays funded by NSF and shared how they have utilized these cutting-edge resources to better understand physical, chemical, biological and geologic processes operating in ocean and coastal waters of the Pacific Northwest. Following initial discussions about the Ocean Observatories Initiative (OOI) program and workshop goals, participants updated the group on

the progress of funded research projects before breaking into subgroups by geographic region, technical systems, research topics, and major fields of study to provide feedback to NSF on potential future uses, improvements, and additional instruments that would leverage the existing OOI assets. Cyber infrastructure experts also guided the group through data access procedures for OOI data during hands-on technical sessions. NSF was pleased with participant feedback on how OOI assets are being used to answer the region's critical science questions, and suggestions on how the existing arrays could be expanded and improved. Ocean Networks Canada shared similar information about ocean observing assets deployed in Canadian waters off the west coast of British Columbia and in the Salish Sea.

CONSERVE NATURAL RESOURCES IN THE SANCTUARY

Washington CoastSavers Volunteers Clean Beaches During International Coastal Cleanup

On September 17, 433 volunteers collected and hauled off marine debris from our shorelines as part of the 2016 International Coastal Cleanup. Volunteers participated in the cleanup on beaches from Columbia River to Cape Flattery and along the Strait of Juan de Fuca. Olympic Coast National Marine Sanctuary (OCNMS) staff organized volunteers at Neah Bay registration station and coordinated cleanups at Hobuck and Tsoo-Yess beaches. Marine debris is one of the most widespread pollution problems facing the world's ocean and waterways, and it affects Olympic Coast. OCNMS is a founding member of Washington CoastSavers, and contributes significantly to the organization's long-range planning, funding and event coordination. Following the cleanup, volunteers were provided lunch at registration stations, as well as the opportunity to attend the free "Salmon Feed, Poetry Read" in Forks, Washington to celebrate the volunteer effort.



Abandoned Sailboat Wrecks on Remote Shore of Outer Coast Salvaged

On September 6, the U.S. Coast Guard (USCG) responded to a distress call from the S/V *Soteria*, which was disabled and taking on water in heavy weather. The 40-foot, wooden hull sailboat sailing vessel was in the sanctuary, 17 nautical miles off the coast. After communicating with *Soteria* crew, USCG concurred that it was not safe to tow the vessel and advised that the three person crew should be evacuated. A boat-to-boat transfer or helicopter hoist was determined unsafe, so USCG helicopter transferred survival suits to the *Soteria* and the crew abandoned ship one by one and were recovered by the motor life boat. The vessel was abandoned and was later sighted by the sanctuary vessel R/V *Tatoosh* grounded on a rocky reef off Sand Point in Olympic National Park on October 9, three miles from the nearest road. The vessel was also reported as grounded on October 8 by park visitors. The vessel subsequently broke apart, resulting in a debris field north of Sand Point and the original grounding location. Sanctuary staff observed operations by Global Diving and Salvage, which was contracted to remove the debris. Olympic Coast National Marine Sanctuary served as the primary contact for the vessel owner, Salvage company and other resource management agencies. Global worked from October 25 through 27, removing the majority of the debris. Abandoned, wrecked and sunken vessels are threats to natural and cultural resources that require pollution mitigation and coordinated agency response.

Small Fishing Vessel Removed From Wilderness Coast

Global Diving and Salvage, operating under permits from Olympic National Park and Olympic Coast National Marine Sanctuary, successfully removed the wreck of a small fishing vessel from a remote wilderness beach and the adjacent intertidal zone. Global was contracted by the family of the vessel's owner, who tragically lost his life when the vessel capsized in the sanctuary on August 17, 2016. This was the 43rd vessel, for which the sanctuary has records, that has been lost in the sanctuary since the 1994 designation.



SANCTUARY PERMITTING

Issued Permits and Authorizations

OCNMS-2016-007 and Amendment 1 – Kerry Walsh, Global Diving & Salvage

Project Title: Dopp Fishing Boat Recovery

Permitted Activity: Helicopter flights below 2,000' to assess salvage options and complete recovery operations

Project Location: near Norwegian Memorial

Permit Duration: 13 days total permitted ending October 5, 2016

Comment: This permit supported salvage of an aluminum hull, recreational fishing vessel that capsized and caused a human fatality. Helicopter operations occurred on-site over two days, one day for site assessment and one for salvage operations.

OCNMS-2016-008 – Katy Stewart, Global Diving & Salvage

Project Title: Sailing Vessel *Soteria* Recovery

Permitted Activity: Helicopter flights below 2,000' to salvage vessel wreckage

Project Location: Sand Point

Permit Duration: Five days, October 24-28, 2016

Comment: The crew was rescued from the floundering vessel, which grounded at Sand Point in early October and broke apart in heavy weather before salvage of an intact hull could be implemented. Salvage of wreckage strewn over the shoreline was initiated on October 25 and was underway when this report was drafted.

Pending Permit Requests

MULTI-2016-011 – Bill Hansen, National Data Buoy Center

Project Title: NOAA Weather Buoys 46012, 46042, 46FLO, 46013, 46026 and 46041

Permitted Activity: Installation of buoys, and altering or disturbing the seafloor in connection with anchor placement

Project Location: National Marine Sanctuaries in California and the Cape Elizabeth buoy in OCNMS

Permit Duration: Five years, through 2020

Comment: This permit is required because a new NDBC permittee was identified. All NDBC permits from the sanctuaries West Coast region were consolidated into this permit. For OCNMS, because installation of the Cape Elizabeth is anticipated for many years ahead with periodic servicing events (e.g., every 3-5 years) permit conditions were modified to require a fully retrievable mooring design and prohibit buoy anchor abandonment with future deployment events.

OCNMS-2016-003 – Florian Graner, Sealife Productions

Project Title: Intertidal StormCam

Permitted Activity: Altering or disturbing the seafloor in connection with installation of two base plates for camera housing in the intertidal area

Project Location: Sokol Point, north of Hole in the Wall/Rialto Beach

Permit Duration: Fourteen months, April 2016 through June 2017

Comment: This project is a collaboration with Olympic National Park. The permittee has not returned a signed permit and is seeking permission from the Makah Tribe for an alternative installation location, which will require a permit modification. No action since July 2016.

OCNMS-2016-004 – Shawn Larson, Seattle Aquarium

Project Title: Use of Drones for Sea Otter Foraging Data Collection

Permitted Activity: Overflight with drone within sanctuary's overflight restriction zone

Project Location: Nearshore coastal areas where sea otters are distributed; proposed for launch from Makah lands and Giant's Graveyard/Toleak area if Park permission granted

Permit Duration: One year, through June 2017

Comment: All drone use permits will include recording and reporting of observations of wildlife during drone flights to provide information to support further evaluation of disturbance impacts and definition of appropriate operational procedures. Restrictions on drone launch from National Park lands will limit areas of operation allowed in a sanctuary permit. Need to verify new FAA rules for approval and certification for drone use and Makah approval for launch from Makah lands. No action since July 2016.

OCNMS-2016-007 – Tim Wooton, University of Chicago

Project Title: Large-scale shoreline monitoring using aerial photographic platforms

Permitted Activity: Overflight with drone within sanctuary's overflight restriction zone

Project Location: Vicinity of Tatoosh Island

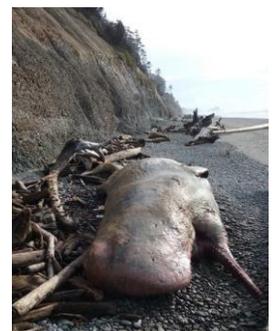
Permit Duration: Five years, through 2021

Comment: All drone use permits will include recording and reporting of observations of wildlife during drone flights to provide information to support further evaluation of disturbance impacts and definition of appropriate operational procedures. Need to verify new FAA rules for approval and certification for drone use. Makah approval (research permit) has been provided for launch from Makah lands. No action since July 2016.

LEARN ABOUT YOUR SANCTUARY / NATURAL HISTORY

Sperm Whale Found Dead on Quinault Shoreline

A dead sperm whale found on the shore south of the Queets River on the Quinault Reservation was reported to NOAA's West Coast Marine Mammal Stranding Network. Sperm whales are large, toothed whales, with adult males reaching 50 feet (18 m) in total length. This is a rare stranding event. Sperm whales off Washington are from the California, Oregon and Washington stock



estimated at 2,100 individuals, of which less than 350 individuals occur in waters off Washington and Oregon. Most are found in offshore areas greater than 1,000 m deep. They are long, deep divers and may remain submerged for over one hour. At last report, Stranding Network responders from Cascadia Research Collective were coordinating with Quinalt wildlife biologists to reach the carcass to complete a necropsy.

REGIONAL / NATIONAL MARINE SANCTUARY SYSTEM NEWS

New Director of the Office of National Marine Sanctuaries Announced

John Armor has accepted the position of director of the Office of National Marine Sanctuaries (ONMS). Since May 2015, John has performed the duties of acting director for ONMS, providing the strategic vision for the program and overall policy direction for the system of 13 national marine sanctuaries and Papahānaumokuākea and Rose Atoll marine national monuments. During his time as acting director, John oversaw some of the most dramatic advancements in place-based conservation in the history of our organization. The designation process has been initiated for two new sanctuaries in Maryland and Wisconsin. Two additional sites, one in California and another in Pennsylvania, have been added to the nomination inventory. As of this writing, another nomination for a site in Alaska is under review. In addition, the Cordell Bank and Gulf of the Farallones national marine sanctuaries more than doubled in size with the latter being renamed as the Greater Farallones National Marine Sanctuary. In August, President Obama announced the expansion of the Papahānaumokuākea Marine National Monument from about 140,000 square miles to almost 580,000 square miles. Under John's leadership, ONMS has continued to advance sanctuary science, enrich our understanding of maritime history, and promote stewardship among new communities.

Before working in the role of acting director, John served as Deputy Director for ONMS for more than two years, where he oversaw the day-to-day administration of a program that includes more than 300 people working across five time zones and \$50 million a year in annual spending. In 2012, John was selected as a participant in NOAA's Leadership Competencies Development Program. During this time, he served as senior policy advisor to the assistant secretary of commerce for conservation and management at NOAA headquarters and deputy director for the Northeast Fisheries Science Center. Earlier, John led the Conservation Policy and Planning Division in ONMS, overseeing a highly complex expansion of the National Marine Sanctuary of American Samoa. He brings extensive experience with the permitting and regulatory side of national marine sanctuaries, having served for eight years writing regulatory actions and advising leadership on permitting and policy decisions.

MARINE-RELATED NEWS COVERAGE

Volunteers Clear Tons of Trash From Coastal, Strait Beaches

“More than 200 volunteers cleared several tons of debris from more than 50 beaches along the Pacific coast and the Strait of Juan de Fuca during this month's International Coastal Cleanup, said Washington CoastSavers coordinator Jon Schmidt.”

www.peninsuladailynews.com/news/volunteers-clear-tons-of-trash-from-coastal-strait-beaches

Blyn Naturalist Publishes Guide to Northwest

“With the Strait of Juan de Fuca and Olympic National Park just outside his front door, it was only natural for author Robert Steelquist to develop a deep love and curiosity for the wild — a passion he hopes to spread to others through his new book, ‘The Northwest Coastal Explorer.’”

www.peninsuladailynews.com/life/blyn-naturalist-publishes-guide-to-northwest

Scientists Link Toxic Algae to Warm Water

“In the northern hemisphere's winter of 2013-2014 an unusual patch of warm water appeared in the northern Pacific ocean. Scientists dubbed it ‘the blob’ and it persisted over the region until this year.”

www.voanews.com/a/toxic-algae-and-the-blob/3535242.html

Warm Pacific Ocean 'Blob' Facilitated Vast Toxic Algae Bloom

“A new study finds that unusually warm Pacific Ocean temperatures helped cause a massive bloom of toxic algae last year that closed lucrative fisheries from California to British Columbia and disrupted marine life from seabirds to sea lions.”

<http://bigstory.ap.org/article/89b80475f6ab43ffb743730e0f4d906e/warm-pacific-ocean-blob-facilitated-vast-toxic-algae-bloom>

West Coast Fisheries Hit Hard By Poor Ocean Conditions

“United States commercial fisheries are doing fine overall, but fishermen on the West Coast are hurting. An 2015 annual report out Wednesday from the National Oceanic and Atmospheric Administration shows a stark fall-off in the big seafood money-makers in the Pacific Northwest.”

<http://kuow.org/post/west-coast-fisheries-hit-hard-poor-ocean-conditions>

Scientists Are Closer To Understanding What Makes Ocean's Toxic Algae Bloom

“Last winter was the first time the Dungeness crab fishery in Oregon closed temporarily because of toxic algae in the ocean. And even just a week ago, another toxic bloom was happening off the coast. Scientists are just beginning to understand what triggers these conditions. A study this month from Oregon State University and the National Oceanic and Atmospheric Administration provides a rare peak below the waves.”

www.opb.org/news/article/what-makes-toxic-algae-bloom/

Update on Killer Whale "Class of 2015"

“After more than 14,000 whale watch trips and numerous encounters this summer and early fall with the Southern Resident Community of orcas, Pacific Whale Watch Association (PWWA) crews are reporting that the kids are alright – the “Class of 2015,” as the fleet has dubbed eight killer whale calves born into the endangered population last year, appear to be healthy, active and thriving.”

<http://sanjuanislander.com/news-articles/environment-science-whales/whales-2/23043/kids>

These Eight Baby Killer Whales are Beating the Odds

“Whale watchers say eight orcas born in the past several months appear to be thriving, bolstering the endangered southern resident population that frequents Puget Sound.”

www.bellinghamherald.com/news/local/article106707717.html

Orcas Have Returned to Puget Sound

“They're back. The southern resident killer whales have returned to Puget Sound. The Orca Network and the Langley Whale Center members of the J pod and other whales were spotted earlier this week in Saratoga Passage between Whidbey Island and Camano Island.”

<http://komonews.com/news/local/orcas-have-returned-to-puget-sound>

NOAA Says Tagging, Fungal Infection Contributed to Orca's Death

“Federal biologists have indefinitely suspended a satellite tagging program to track endangered orca whales. The move comes after an expert panel concluded a fungal infection contributed to the death of a 20-year-old member of the L pod.”

<http://knkx.org/post/noaa-says-tagging-fungal-infection-contributed-orcas-death>

A Canadian Necropsy Reveals More Info About a Southern Resident Orca

“A Canadian necropsy revealed that a Southern resident orca was killed by a fungal infection possibly caused by a satellite tag. According to Fisheries and Oceans Canada, a 20-year-old male killer whale identified as L95 was found dead near Esperanza Inlet, B.C. on March 30. A necropsy was performed to determine the cause of the animal's death. L95 was tagged by National Oceanic and Atmospheric Administration using a satellite-linked limpet-style tag approximately five weeks prior to his death.”

www.islandsweekly.com/community/396823101.html

Whales, Sea Turtles, Seals: The Unintended Catch of Abandoned Fishing Gear

“There are less than 500 North Atlantic right whales left in the world. And now, one less: This weekend, one of the 45-ton creatures was found dead off the coast of Maine, completely entangled in fishing line — head, flippers and all. This was not an isolated incident.”

www.opb.org/news/article/npr-whales-sea-turtles-seals-the-unintended-catch-of-abandoned-fishing-gear

Environmental Risks Identified For Grays Harbor Oil Terminal

“Regulators say an oil terminal proposed for a coastal Washington state harbor poses several environmental problems.”

<http://kuow.org/post/environmental-risks-identified-grays-harbor-oil-terminal>

Thousands Flock to Port Angeles for Weekend's Crab Fest

“Between 15,000 and 20,000 people are expected to eat about 10,000 pounds of fresh crab today, Saturday and Sunday during the 15th annual Dungeness Crab & Seafood Festival in downtown Port Angeles, said

event co-founder Scott Nagel.”

www.peninsuladailynews.com/news/thousands-flock-to-port-angeles-for-weekends-crab-fest

2 Big Storms Coming To Western Wash.; Conflicting Models On Whether Saturday's Will Be Historic

“Very stormy weather is on its way to Western Washington. Forecasters have issued a high wind warning starting Thursday evening at 6 p.m., through Friday morning at 7. That means there could be gusts of up to 55 miles per hour and there will be several inches of rain, especially in the mountains.”

<http://knkx.org/post/2-big-storms-coming-western-wash-conflicting-models-whether-saturdays-will-be-historic>

500 'Champagne' Methane Seeps Discovered Off Pacific Coast

“About 500 new streams of shimmering methane bubbles have been discovered off the Pacific Northwest coast. The discovery, which took place in June, will be a major topic for discussion at the 2016 National Ocean Exploration Forum, a congressionally mandated meeting about ocean exploration priorities that is taking place in New York and New Jersey on Oct. 20 and 21.”

www.livescience.com/56556-500-champagne-methane-seeps-discovered.html

Obama Makes Puget Sound Part of His Legacy

“We know Puget Sound’s sob stories all too well: the salmon are disappearing, the orcas are starving, it’s being flooded by gross dirty stormwater and overflow.”

<http://crosscut.com/2016/10/puget-sound-protection-president-obama>

Working for the Earth: Students Train for Ecological Projects

“Thirteen students from three high schools in East Jefferson County have finished field training for the newly accredited Watershed Science and Stewardship Class.”

www.peninsuladailynews.com/news/working-for-the-earthstudents-train-for-ecological-projects/

More Elwha Fish Find Way to Dam-Free Upper watershed

“More sockeye, chinook and bull trout have made it above the former Glines Canyon dam site so far this spawning season than documented in any year since the unprecedented dam-removal project completed on the Elwha River.”

www.seattletimes.com/seattle-news/environment/more-elwha-fish-find-way-to-dam-free-upper-watershed

NOAA Announces Revisions to Federal Fishery Management Guidelines

“NOAA Fisheries today announced final revisions to the guidelines that federal managers will use as they routinely update the nation’s marine fisheries plans. The revised federal fishery management guidelines, known as the National Standard 1 guidelines of the Magnuson-Stevens Fishery Conservation and Management Act, are intended to provide more flexibility and be more effective in ending and preventing overfishing.”

www.nmfs.noaa.gov/mediacenter/2016/10_October/13_10_.html

World's Largest Marine Park Created in Ross Sea in Antarctica in Landmark Deal

“EU and 24 countries sign long-awaited agreement to protect 1.1m sq km of water in Southern Ocean, ensuring that fewer younger fish will be caught.”

www.theguardian.com/world/2016/oct/28/worlds-largest-marine-park-created-in-ross-sea-in-antarctica-in-landmark-deal

OCNMS ONLINE

Visit our website at: <http://olympiccoast.noaa.gov/>.

Follow us on Facebook and Twitter!

<https://www.facebook.com/usolympiccoastgov>

<https://twitter.com/olympiccoast>

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.*

OCEAN-RELATED WEBSITES

National Oceanic and Atmospheric Administration

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

National Ocean Service

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

Office of National Marine Sanctuaries

<http://sanctuaries.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>

CoastWatch – West Coast Regional Node

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

Northwest Association of Networked Ocean Observing Systems

<http://www.nanoos.org/>

NOAA's Pacific Marine Environmental Laboratory

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

OLYMPIC COAST NATIONAL MARINE SANCTUARY

Learn More About Your Sanctuary

The Sanctuary Office Report is produced bi-monthly by Olympic Coast National Marine Sanctuary in conjunction with sanctuary advisory council meetings. To learn more about the sanctuary, please visit our website at: <http://olympiccoast.noaa.gov/>.

To learn more about the sanctuary advisory council, please visit: http://olympiccoast.noaa.gov/involved/sac/sac_welcome.html.

Office of National Marine Sanctuaries (ONMS)
Olympic Coast National Marine Sanctuary is one of the marine protected areas in the National Marine Sanctuary System encompassing more than 600,000 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 Papahānaumokuākea and Rose Atoll marine national monuments. Visit the ONMS website at: <http://sanctuaries.noaa.gov/>.

Get Involved!

To learn how to get involved in the sanctuary visit: <http://olympiccoast.noaa.gov/involved/welcome.html>.

OCNMS Staff

- Carol Bernthal** – Superintendent
- George Galasso** – Deputy Superintendent for Policy & Programs
- Kevin Grant** – Deputy Superintendent for Operations & Administration
- Liam Antrim** – Resource Protection Specialist
- Eric Evans** – IT Consultant
- Carey Floyd** – Graphic and Web Designer
- Alisha Friel** – NOAA Corps Officer, Vessel Operations Coordinator
- Nicole Harris** – Education Specialist
- Kathy Hough** – Survey Technician
- Norma Klein** – Office Administrator
- Karlyn Langjahr** – SAC Coordinator and Discovery Center Manager
- Jacqueline Laverdure** – Education and Outreach Coordinator
- Rebecca Lewis** – Education and Stewardship Specialist
- Robert Rountree** – Visitor Services Specialist
- Jenny Waddell** – Research Coordinator
- Nancy Wright** – Geographer

Contact Information Olympic Coast National Marine Sanctuary

115 East Railroad Ave., Suite 301
Port Angeles, WA 98362
Phone (360) 457-6622
Fax (360) 457-8496

