

Olympic Coast National Marine Sanctuary

2011 Management Plan Implementation Report



January 2012

I. Introduction

This document is the first annual report on the implementation of Olympic Coast National Marine Sanctuary's (OCNMS or sanctuary) 2011 management plan. Annual implementation reports will be based on the federal government's fiscal year (FY). This report covers FY 2011, the period from October 1, 2010 through September 30, 2011. In 2008 OCNMS began work to update the original 1994 management plan. While the OCNMS Final Management Plan/Environmental Assessment was not approved until September 2011, OCNMS based its FY 2011 Annual Operating Plan on the action plans in the draft management plan available in the summer of 2010. Thus, OCNMS strove to begin implementation on the non-regulatory parts of the management plan prior to its final approval. OCNMS refers to FY 2011 as "Year Zero" of the management plan implementation.

Management Plan Background

Three years of planning, consultation, and writing went into the development of the sanctuary's 2011 management plan and revised regulations. This included public scoping sessions initiated in 2008, issue prioritization and the development of action plans with the close involvement of the OCNMS Advisory Council (AC) and the Olympic Coast Intergovernmental Policy Council (IPC), compliance with the National Environmental Policy Act requiring the development of draft and final environmental assessment documents, consideration of public comments, numerous consultations with other agencies and the Coastal Treaty Tribes, and a federal rulemaking process requiring the publication of Proposed and Final Rules (regulations). The results are a comprehensive final management plan and a revised set of sanctuary regulations published in November 2011. The final management plan and final rule are available on the OCNMS website (<http://olympiccoast.noaa.gov>).

The 2011 final management plan/environmental assessment contains information about the sanctuary's environment and resources, priority management issues and the programs and actions proposed to address them. The management plan includes twenty action plans to guide sanctuary management in the years ahead. The action plans are grouped under these priority issues:

- Achieve effective collaborative and coordinated management
- Conduct collaborative research, assessments and monitoring to inform ecosystem-based management
- Improve ocean literacy
- Conserve natural resources in the sanctuary
- Understand the Sanctuary's cultural, historical and socioeconomic significance

A sixth priority issue, treaty trust responsibility is a standalone chapter in the final management plan. Each action plan contains strategies, which identify a specific subject area and related activities. For example, the Sanctuary Operations Action Plan contains an enforcement strategy with eight activities, one of which states "Develop training opportunities for law enforcement professionals to promote and enhance their understanding of cultural and natural resources in the sanctuary and the regulations that protect them." The management plan also identifies eight outcomes with associated performance measures, which are the focus of this report.

II. Implementation Progress Summary

FY 2011 was “Year Zero” for implementation of OCNMS’ new management plan, as the revised plan had been developed but was undergoing final reviews during this period. Important progress was made on plan implementation, with several notable accomplishments throughout the year. At the same time, progress was constrained due largely to resource limitations. Significant implementation accomplishments and challenges are discussed below, while the table “**Implementation by Action Plan**” outlines progress made on all action plans and strategies. The following activity summaries highlight some of our more significant accomplishments.

Completion of the Management Plan Review Process

The most significant accomplishment of FY 2011 was the completion of the Management Plan Review process. By September 2011 the Final Management Plan/Environmental Assessment and the associated Finding of no significant impact (FONSI) had been completed and cleared by NOAA. The document was not released until the final rule was also cleared and published in the Federal Register on November 1, 2011.

Sanctuary begins Implementation of the Revised Management Plan

Another significant milestone occurred in late FY 2010/early FY 2011, when OCNMS staff restructured their internal Annual Operating Plan (AOP) to reflect the structure of the, then draft, recommended action plans. This internal restructuring allowed program leads to begin aligning their programs to the action plans. This also allowed OCNMS to begin early implementation of the management plan and to begin the development of this implementation report.

Sanctuary makes advances in Habitat Mapping

Despite not being able to obtain NOAA ship time, as it has in past years, OCNMS was able to make substantial progress in our habitat mapping efforts. Prior the beginning of the field season a multibeam echosounder was mounted on the *R/V Tatoosh*. This unit was made available to OCNMS due to upgrades to the *NOAA Ship Rainier's* survey launches. This multibeam echosounder represents a significant improvement of the sanctuary's capabilities and will allow the sanctuary to conduct habitat mapping with some of the most advanced equipment available. The 2011 field season included a successful test of this unit. In addition to the mapping on the *R/V Tatoosh*, NOAA’s Coral Reef Conservation Program funded a mapping cruise on Oregon State University’s *R/V Pacific Storm*. This cruise was one of two cruises supporting deep sea coral investigations.

OCNMS staff supports PFMC process on Essential Fish Habitat

OCNMS staff participated on the Pacific Fishery Management Council’s (PFMC) Essential Fish Habitat (EFH) Review Committee. This committee provides support to a five year review process for Pacific groundfish EFH. In addition to serving on the committee OCNMS staff have been busy processing ROV video data to characterize deep sea coral in OCNMS. This information will be provided to PFMC for their review.

Nancy Foster Scholar at Olympic Coast National Marine Sanctuary

Olympic Coast National Marine Sanctuary was fortunate to have hosted Jessica Lopez, a 2010 Nancy Foster Scholar. Ms Lopez spent six weeks processing and analyzing seabird data collected

during offshore surveys between 1995 and 2007. Using GIS and database software, Ms. Lopez created an analysis protocol and the initial products for the sanctuary's first biogeographic analysis of these historic seabird transect data sets. Species abundance was correlated with oceanographic and geographic variables to analyze for influences on seabird distribution. Seabirds chosen for initial analysis are protected under the Endangered Species Act, Migratory Bird Treaty Act or Washington state law. Preliminary results identified correlations between individual species and variables such as latitude, distance from shore and water depth, findings that have implications for long-term studies of birds throughout the broader California Current. The Nancy Foster Scholarship provided a professional development opportunity for a graduate student and also assisted sanctuary research by supporting analysis of a long-term data set collected during NOAA scientific surveys.

NOAA Climate Program Office support OCNMS work on Climate Change

The NOAA Climate Program Office has provided support to OCNMS to begin implementation of its Climate Change Action Plan. The sanctuary reached an agreement with Washington Sea Grant and the UW Climate Impact Group to assist the sanctuary in developing a climate change impact scenario.

IMO approves Changes to Olympic Coast Area-To-Be-Avoided

The 57th Session of the International Maritime Organization (IMO) Sub-Committee on Safety of Navigation (NAV) approved amendments to the Area to be Avoided (ATBA) off the Washington Coast as proposed by the U.S. delegation to IMO. The proposal called for an expansion of the ship categories which would be subject to the existing ATBA, which was created to afford protection to the sanctuary. Currently, the ATBA applies to all ships and barges carrying cargoes of oil or hazardous materials, and all ships 1600 gross tons and above solely in transit. The proposal will expand the types of ships covered to include all ships 400 gross tons and above. Thus, the change will expand the coverage to ships from 1600 gross tons down to 400 gross tons. The proposal will now go to the IMO Maritime Safety Committee (MSC) in May 2012. If the MSC approves the proposal it will become effective November 2012.

Sanctuary staff support the Northwest Aquatic and Marine Educators Conference

Sanctuary education staff as well as Pacific Northwest Bay-Watershed Education and Training (B-WET) grantees made a strong showing at the 36th annual conference of Northwest Aquatic and Marine Educators (NAME), at Lake Crescent, Washington. The conference was sponsored in part by B-WET and showcased many place-based and experience-based education programs throughout the Pacific Northwest. Sanctuary staff coordinated five field trips, provided introductory and closing remarks and assisted with conference details including registration and logistics. NAME is a regional affiliate of the National Marine Educators Association and represents marine, watershed and water educators from Alaska, British Columbia, Washington and Oregon.

Olympic Coast National Marine Sanctuary completed its fifth year of Ocean Science

Approximately 400 third, fourth and fifth grade students participated in classroom activities, field trips to Feiro Marine Life Center and Seattle Aquarium, and beach field investigations. Data collected by students during beach trips are submitted to Washington [NatureMapping](#) citizen science program. Twenty teachers and nearly 100 parents also participated in 2010-2011

Ocean Science trainings and activities. Schools include Ocosta, Simpson, Ocean Shores, Pacific Beach, Taholah, Lake Quinault, Forks, Quileute, Neah Bay, Clallam Bay, and Crescent. Ocean Science is a five-year program designed to integrate NOAA ocean literacy concepts and principles into western Washington formal and informal educational programs. Ocean Science is a collaborative effort between Seattle Aquarium and Olympic Coast National Marine Sanctuary, funded by a NOAA Ocean Literacy grant.

Sanctuary improves Data Management

With the assistance of an Advisory Council Data Management Working Group (DMWG) the sanctuary has made improvements in data management and distribution. The DMWG was established to advise OCNMS on the priorities for data management, sharing and reporting. The DMWG prioritized research areas and apprised the full AC of progress on the data management initiative. A data life-cycle tracking and reporting system has been developed to link annual research and monitoring activities to performance measures identified in the OCNMS management plan and report their results on the OCNMS web site. This database program was designed to track current and historic OCNMS raw and processed data, field notes, forms, reports, publications, and presentations for 17 research areas: marine mammals, seabirds, seafloor mapping, trawl research, COASST, kelp, intertidal monitoring, turtles, mooring deployment, HABs and bird wrecks, deep sea invertebrates, hypoxia, coral & sponge communities, fiber optic monitoring, oceanographic characterizations, sea otter strandings, and buried cultural resources. These data are being prepared for download via the OCNMS web page.

FY 2011 Challenges

The major challenge in FY 2011 was the uncertainty related to a year-long continuing resolution. The sanctuary did not receive a final budget until June 2011, which was late in the 3rd quarter of FY 2011 and well into the major operating period for many sanctuary programs. While OCNMS did receive level funding for FY 2011, in reality there were less discretionary funds, due to increased overhead. Due to agency cuts the NOAA fleet had many vessels tied up in 2011. The sanctuary has in the past depended on access to the fleet to conduct many of their programs. While not directly related to the OCNMS budget this does represent a major decrease in the resources that the sanctuary program can contribute to collaborative and coordinate research efforts.

III. Performance Measures

Performance evaluation is an integral component of Office of National Marine Sanctuaries (ONMS) efforts to improve sanctuary management. Performance measures identified in the 2011 OCNMS management plan are designed to serve three purposes: 1) to better understand OCNMS' ability to meet its objectives; 2) to track OCNMS' success in addressing the issues identified in the 2011 management plan; and 3) to identify tangible examples of how OCNMS is contributing to both the performance targets developed for the ONMS and achievement of the purposes of the National Marine Sanctuaries Act.

As the 2011 management plan is implemented, OCNMS staff will monitor these performance

measures over time and collect data on progress towards their achievement. One management plan strategy, OPS 10 addresses management plan implementation reporting and includes activities that call for:

- Reporting on implementation of the management plan on an annual basis, particularly on performance measure achievement
- Annual reporting on OCNMS' response to emerging issues
- Annual documentation of clarifications, enhancements or recommended changes to existing strategies and activities

Eight outcomes and associated performance measures identified in the 2011 OCNMS management plan are listed below, and a status summary table is provided to address progress during FY 2011.

OUTCOME 1: OCNMS is recognized by its partners and constituents as an organization that effectively seeks and considers information and opinions from external sources in its management and decision making.

Performance Measure 1: Maintain undiminished or improve ratings of OCNMS' effectiveness as evaluated by key partners and constituents through a brief annual survey (e.g., using a web survey tool) designed to assess their involvement in sanctuary management processes and the perceived effectiveness of this involvement in sanctuary management processes over the past year. This survey should use the same survey questions each year so that results can be compared over time.

Status: OCNMS has not yet developed a web survey tool for this effectiveness evaluation. OCNMS has agreed to support a University of Michigan School of Natural Resources and Environment Masters Project, the goal of which is to evaluate the contribution of OCNMS' institutional relationships to the management of the resources within OCNMS, including the ability to adapt and respond to climate change.

OUTCOME 2: Increased involvement of communities on the Olympic Peninsula in sanctuary management issues and ocean conservation.

Performance Measure 2: Demonstrate an increase in 1) individual public attendance at OCNMS-hosted public meetings and events (e.g., open houses, Advisory Council meetings), and 2) volunteer hours in OCNMS-led education, stewardship and research efforts (e.g., Discovery Center, COASST, intertidal monitoring). This measure will be evaluated on an annual basis.

Status: As Year Zero of implementation for the revised management plan, data for FY 2011 establishes a baseline against which future years can be compared.

1) In FY 2011 Olympic Coast National Marine Sanctuary hosted a total of six Advisory Council meetings and two public hearings on the draft management plan/proposed rule

with twenty-eight individuals from the public participating in one or more meetings. Meeting locations were Forks, Ocean Shores, Neah Bay, Taholah, and Port Angeles. Advisory Council members contributed an estimated cumulative total of 1,233 hours in support of OCNMS in FY 2011. No other public meetings or events were sponsored by OCNMS in FY 2011.

2) Volunteers contributed 16,370 hours towards Olympic Coast National Marine Sanctuary programs for Education and Outreach, Research, and Resource Protection. The estimated dollar value of OCNMS volunteer activity is \$286,083 (calculated at \$17.10/hour). See below for volunteer hours for each program and estimated value of volunteer activity:

- Olympic Coast Discovery Center/Education and Community Outreach – 1,193 hours. Estimated value of \$20,400
- COASST (dead seabird surveys) - 5,395 hours. Estimated value \$92,2545
- *R/V Tatoosh* Field Operations - 282 hours. Estimated value \$4,822
- Washington Coastal Cleanup – 9,264 hours. Estimated value \$158,414
- OCNMS Clerical Assistance – 122 hours. Estimated value \$2,086
- Research – 474 hours. Estimated value \$8,105

Outcome 2 was also supported by active OCNMS participation as an ex-officio representative on outer coast marine resources committees meetings, planning sessions, and community forums. A primary goal of these marine resources committees is to engage local citizens in marine stewardship, education, and science efforts.

OUTCOME 3: Increase the area of sanctuary seafloor where efforts to map, groundtruth, characterize, and/or analyze habitats have been completed.

Performance Measure 3: Map, groundtruth, characterize, and/or analyze 300 square nautical miles of sanctuary seafloor each year.

Status: Four major seafloor mapping and characterization activities were completed by OCNMS in 2011:

1. Multibeam mapping of potential essential fish habitat (EFH) expansion areas: 127 square nautical miles
2. ROV characterization of one potential expansion area for the Olympic 2 EFH Conservation Area
3. Mapping 3 shipwrecks: 1 square nautical mile
4. Mapping areas around 13 oceanographic mooring sites: 2 square nautical miles

The FY 2011 areal coverage of habitat mapping efforts was 130 square nautical miles, 43% of the OCNMS annual performance goal of 300 square nautical miles.

The following circumstances limited the OCNMS seafloor mapping and ROV team from reaching its goal in FY 2011.

- OCNMS requested but was not awarded NOAA ship time for habitat mapping.

- OCNMS requested but was not awarded NOAA ship time for ROV surveys, thereby necessitating charter of a smaller vessel with a less capable ROV. Equipment and weather problems further limited accomplished survey hours.
- OCNMS expanded its internal capacity to conduct habitat mapping work when it acquired a multibeam sonar system and invested considerable resources to fitting the equipment to the *R/V Tatoosh*, configuring hardware and software, developing protocols, and assessing system capabilities. Because the vessel had several mechanical problems toward the end of the field season, much of the planned habitat groundtruth surveys could not be conducted.
- OCNMS geographer was assigned to development of a Data Management Working Group under the AC. Commitments to preparation of data sharing structures left insufficient staff time to complete additional seafloor data analysis and reporting.

OUTCOME 4: OCNMS will support collaborative and coordinated management through timely sharing of data collected by OCNMS.

Performance Measure 4: On an annual basis, track the progress made analyzing and distributing each data set that OCNMS collects. For each data set, report on 1) the date(s) the data were collected, 2) the expected annual and ultimate end product(s), 3) data sharing methods, 4) the time taken to analyze the data, 5) the time to disseminate the data, and 6) if necessary, when OCNMS anticipates completing a final analysis, report and dissemination.

Status: OCNMS collected data or performed field support services in six research areas in 2011: seafloor mapping, oceanographic moorings, intertidal monitoring coral and sponge communities, seabirds, and marine mammals. In addition, significant effort was expended organizing data from historic research and monitoring activities.

Seafloor Mapping: Multibeam mapping of the potential EFH expansion area, 13 mooring sites, and the areas of three shipwrecks were conducted. Data were processed and are available for download from the OCNMS web page. Additional groundtruthing, classification, and reporting is required, so this work is considered 90% complete.

Oceanographic Moorings: Oceanographic moorings from 2011 were deployed and monitored, however the data have not been processed. This project is considered 75% complete.

Intertidal Monitoring: Annual surveys of biota at rocky and sand intertidal sites on the Makah and Quinault Indian Reservations were completed by OCNMS. During winter months, data will be entered in the MARINE data base (Multi-agency Rocky Intertidal Network) and OCNMS data base.

Coral and Sponge Communities: The coral survey for 2011 met with equipment failure and limited video data was collected, however the data that was produced has been

reviewed and reports are being prepared for EFH review followed by posting on the OCNMS web site. Coral data review, processing, and reporting for 2011 can be considered 100% complete.

Seabirds: Two projects supported OCNMS seabird data in 2011: 1) analysis and summary of historic (nine years) seabird survey data from NOAA ships (accomplished through a Nancy Foster scholarship), and 2) seasonal pelagic seabird surveys from the *R/V Tatoosh*. Both surveys are available for public download on the OCNMS web, making these projects 100% complete.

Marine Mammals: Two sea otter projects were conducted in 2011 – an annual sea otter census and a USGS-led sea otter capture project. OCNMS staff participated as land observers for the sea otter census. OCNMS staff helped plan the capture project, and the *R/V Tatoosh* served as the operations platform. Both field projects were completed successfully. These data are not managed by OCNMS. Project descriptions are on the OCNMS website. Projects are 100% complete.

Data Management: The end goal is to make all data collected by OCNMS available for public download. Efforts in FY 2011 were focused on identifying, organizing and analysis of existing data, and establishing a system for tracking this performance measure. The database was established and populated. While additional data has not yet been processed, this task is 100% complete.

Performance Measure 4 Reporting	Data Collection Dates	Product	Data Sharing Places	Time to Analyze Data	Time to Disseminate Data	Final analysis, report and dissemination
MAP2 Shipwreck Locations	July 7, 14, 20, 2011	Location and bathymetry for the <i>Vicious Fisher</i> , <i>Milky Way</i> , <i>Temple Bar</i> shipwrecks	OCNMS web, GIS library	60 days	30 days	October 30, 2011
MAP2 Imagery and bathymetry for 13 OCNMS mooring sites	June 20 - July 14, 2011	Seafloor area and characterization .5 km ² around mooring sites	OCNMS web, GIS library	60 days	30 days	pending
MAP2 Multibeam bathymetry and backscatter for 435 km ² near EFH	July 13-26, 2011	Data processed and reports to EFH committee and CRCP has been completed	OCNMS web	60 days	30 days	December 1, 2011
OCEO1 Oceanographic Mooring Data	April-October, 2011	Data from 13 seasonal oceanographic moorings	OCNMS web	pending	pending	pending

Performance Measure 4 Reporting	Data Collection Dates	Product	Data Sharing Places	Time to Analyze Data	Time to Disseminate Data	Final analysis, report and dissemination
ECO2 Intertidal Monitoring	May 21 and July 30 - Aug 2, 2011	Data from the Kydikabbit Point, Sooes Beach, Pt. Grenville and Grenville Beach entered in the MARINE database.	Data is kept on MARINE database; project is reported on OCNMS web	pending	pending	pending
ECO3 Coral and Sponge Communities	2006, 2008, 2010, 2011 surveys	Site Characterizations from post-processed ROV video	Site Characterizations submitted to IPC, CRCP and PFMC EFH Review Committee & OCNMS Web	multiyear	multiyear	Peer reviewed comprehensive report planned in 1-2 years
ECO5 Pelagic Seabird Survey Trip Results	June 13, 2011 and July 25, 2011	Seabird observation counts	OCNMS web	10 days	30 days	September 30, 2011
ECO5 Seabird density synthesis and oceanography analysis	1995-2007	Biogeographic assessment completed using 4 bird species; GIS data, maps, analysis protocols.	OCNMS web	8 weeks from the beginning of analysis (multiyear data)	14 days	September 30, 2011
ECO6 OCNMS support of USGS Sea Otter Expedition Project	August 1-30, 2011	Vessel and technical survey support for Sea Otter Expedition project	No data came to OCNMS; project activity reported on OCNMS web	No analysis by OCNMS	30 days till activity reported on web	September 30, 2011
ECO6 Annual multi-agency Sea Otter Census of WA coast	July 12-14, 2011	Annual ground census data for sea otters at Norwegian Point	OCNMS web for local data (OCNMS web has link to 2011 WA data)	10 days (local monitoring)	30 days (local monitoring)	September 30, 2011
DAT1 Report on data sharing for seafloor mapping, oceanography, seabirds, and marine mammals	October 1, 2010 - September 30, 2011	Completion of data organization and reporting on four elements of OCNMS staff research and monitoring	OCNMS web	12 months	12 months	September 30, 2011

OUTCOME 5: Determine the effectiveness of sanctuary Ocean Literacy programs whose audiences include sanctuary users, students, teachers, volunteers and partner organizations.

Performance Measure 5: Track progress made during each year toward improving the quality of Ocean Literacy programs and their impacts on participants in improving their understanding of ocean processes and resources and enhancing their commitment to act as stewards.

Status: Evaluations for key programs will be completed in early 2012, and results will be used to track progress of the quality of OCNMS Ocean Literacy programs. The following is a summary of program output data.

Program Outputs:

OCNMS staff supported regional *professional development workshops*, including:

- OCNMS, in partnership with Seattle Aquarium, presented “Ocean Change” teacher professional development workshops in Forks and Ocean Shores, WA. 30 coastal elementary school teachers participated in hands-on, place-based Ocean Science activities related to our changing ocean. Highlights included the new West Coast OA Resource Kit, rocky intertidal field investigations, guest lecturers on Traditional Ecological Knowledge and coastal geology, a visit to OCNMS aboard *R/V Tatoosh*, and a canoe journey to Copalis River ghost forest to explore evidence Cascadia tsunami of 1700.
- OCNMS staff, partnering with Pacific Education Institute, Grays Harbor College, and AmeriCorps, conducted a full-day NOAA B-WET Ocean Literacy Workshop for 24 middle and high school teachers from Grays Harbor and Pacific counties. Teachers learned methods to apply science process skills to studies of our ocean. A panel board with representatives from Grays Harbor fisheries, shellfish industry, Tribal natural resources, businesses and non-profits discussed the state of our local marine resources in context to global issues.
- OCNMS staff worked with 25 secondary teachers from Grays Harbor and Pacific counties during “GIS AND GPS: Utilizing Spatial Technologies in the Field and Classroom” professional development workshop sponsored by Pacific Education Institute, funded by NOAA B-WET.
- OCNMS hosted NOAA Teacher at Sea, Ocean Shores Elementary School teacher Karen Rasmussen. Ms. Rasmussen was selected due to her outstanding work with the Ocean Science program and her involvement in OCNMS Management Plan Review Ocean Literacy Workshop. She assisted aboard *R/V Tatoosh* Seafloor Habitat Mapping Cruise.
- OCNMS and Seattle Aquarium education staff presented “Ocean Change in the Classroom and in the Field” at 2011 N.A.M.E. (Northwest Aquatic and Marine Educators) Conference. Twenty educators participated in a 3-hour workshop that used hands on activities to explore the use of ocean science in teaching about ocean changes, field investigations, and conservation in a formal education setting.
- OCNMS staff hosted eight Olympic National Park seasonal interpretive rangers for two days during the ranger’s annual training program. One day was spent orienting them to the sanctuary and the Olympic Coast Discovery Center. The second day, rangers were hosted aboard the sanctuary *R/V Tatoosh*, for an on the water experience.

- OCNMS, in coordination with Olympic National Park, conducted Washington Coast Cleanup Beach Coordinator Training for 14 Clallam County AmeriCorps members. Beach Coordinators assist with the Earth Day cleanup event by providing direction, general information, encouraging trash removal, and serving as point of contact at beach locations.

OCNMS staff provided hands-on place-based education to over three-thousand ***K-12 students*** including:

- OCNMS and Seattle Aquarium completed the fifth year of Ocean Science along Washington's outer coast. Approximately 400 third, fourth and fifth grade students participated in classroom activities, field trips to Feiro Marine Life Center and Seattle Aquarium, and beach field investigations. Data collected by students during beach trips are submitted to Washington NatureMapping citizen science program. Twenty teachers and nearly 100 parents also participated in 2010-2011 Ocean Science trainings and activities. Schools include Ocosta, Simpson, Ocean Shores, Pacific Beach, Taholah, Lake Quinault, Forks, Quileute, Neah Bay, Clallam Bay, and Crescent.
- A total of 2,047 students visited the Olympic Coast Discovery Center and Feiro Marine Life Center during the 2010-2011 school year. Classroom instruction focused on the issues of marine debris and ocean acidification, their impact on marine wildlife, and steps that can be taken to address these problems. The majority of students were from Port Angeles, Sequim, and Outer Coast communities.
- OCNMS staff conducted hands-on activities at 3rd Annual Franklin Elementary Science Night with over 500 children and parents of the Port Angeles community.
- OCNMS staff mentored Port Angeles High School students with their Senior Culminating Projects. Three students completed projects on marine debris, ocean acidification, and the way in which kelp and ocean currents move rocks onto beaches.
- OCNMS staff in partnership with Feiro Marine Life Center conducted four sessions of Jr. Oceanographer for a total of 79 students ages 5-12. Participants studied marine life and ocean exploration through hands-on activities.

OCNMS staff provided supervision and support to regional ***higher education*** initiatives, including:

- OCNMS staff supervised new Natural Resources Internship for Port Angeles high school student in partnership with North Olympic Peninsula Skills Center and AmeriCorps.
- OCNMS hosted a 2010 Nancy Foster Scholar who spent 6 weeks processing and analyzing seabird data collected during offshore surveys between 1995 and 2007.
- OCNMS staff gave presentations at Olympic Peninsula Institute, Huxley College, and Peninsula College.
- OCNMS staff provided support for Feiro Marine Life Center marine science lecture series and Peninsula College "Ocean Inquiries" continuing education class.
- OCNMS staff trained eleven new volunteers to be docents at Olympic Coast Discovery Center.
- Olympic Coast Discovery Center volunteers and staff traveled to Thunder Bay National Marine Sanctuary, hosted by their local volunteers, staff and SAC members. This was the second half of a volunteer exchange program, as OCNMS hosted volunteers last year.

OUTCOME 6: Communicate the importance of the sanctuary and its unique resources, and the unique role of NOAA and Olympic Coast National Marine Sanctuary as a marine resource manager using a wide variety of media and methods to reach broad audiences.

Performance Measure 6: Track effort and outputs of outreach programs, using tools appropriate for the media, communication methods and audiences.

Status: OCNMS staff expands community awareness of the sanctuary, sanctuary resources, volunteer programs and other community involvement activities using multiple communication techniques.

OCNMS uses the following **media and social networking tools:**

- Website - OCNMS completed a major overhaul of its website. In FY2011, there were 194,308 visits to OCNMS website.
- Facebook – the NOAA OCNMS Facebook page was created in September 2010. By end of FY 2011, the page had accumulated 356 fans from 25 different countries.
- Google Ocean, NOAA Media Library and YouTube accounts contain OCNMS provided resources.
- OCNMS staff provides media information (interviews, releases and advisories) for review and distribution for emerging issues, critical events, research and education activities and other newsworthy developments.

OCNMS uses the following tools for **outreach:**

- Olympic Coast Discovery Center - OCDC served 7,015 visitors in 2011, an increase of more than 450 from 2010. The center was open daily Memorial Day weekend through Labor Day weekend, and at other times by appointment.
- Cape Flattery Wildlife Cards – Wildlife cards were developed in partnership with Makah Cultural and Research Center/Museum for interpretation at Cape Flattery.
- Festivals and Events – OCNMS staff participated in Makah Days, National Public Lands Day at Kalaloch, Dungeness Crab and Seafood Festival, Seattle Aquarium’s Family Science Weekend, Ocean Shores Beachcomber’s Fun Fair, Grays Harbor Vision 2020 Town Hall Meeting and Open House, and North Pacific Coast Marine Resource Committee Annual Meeting. Public attendance at these events totaled nearly 25,000.
- Beach Cleanups - Over 1,100 volunteers celebrated Earth Day this year by turning out for the annual Washington Coast Cleanup. Volunteers hauled away an estimated 23 tons of plastic water bottles, household trash, lost fishing gear, and other marine debris from Washington’s outer coast. OCNMS staff and family members, with assistance from Clallam County AmeriCorps, organized registration stations and coordinated volunteers at the Makah and Hoh tribal reservations and Olympic National Park coastal areas. In addition, eleven volunteers and friends from the Olympic Coast Discover Center picked up marine debris on Port Angeles beaches in support of the first annual Klallam Earth Day.

OUTCOME 7: OCNMS is prepared for an oil or hazardous spill in or near the sanctuary.

Performance Measure 7: On an annual basis, 1) summarize and evaluate OCNMS participation in regional response planning efforts and spill drills, and 2) confirm that all OCNMS staff that have completed their assigned oil spill response training plan on an annual basis.

Status: *Participation in regional response planning efforts and spill drills* - Regional Response Team (RRT): OCNMS participated in one conference call of the Response Technology Work Group, which works to improve dispersant use decision making, shoreline treatment alternatives, environmental sensitivity index mapping (October 2010). This work group was inactive for the remainder of the year and has been disbanded. In September 2011, OCNMS staff attended the annual RRT/NW Area Contingency Plan scoping meeting at which work group priorities were redefined for FY 2012 and areas for Plan improvement were identified. OCNMS staff volunteered to participate in new priority planning activities similar to those of the disbanded work group.

Strait of Juan de Fuca Ecosystem Recover Network Oil Spill Working Group (a Puget Sound Partnership-supported group): OCNMS attended one meeting (October 2010) and provided editorial comments on several documents generated by the working group.

Pacific States/British Columbia Oil Spill Task Force: OCNMS provided review comments on the draft report (March 2011). OCNMS was not able to attend a meeting in Vancouver, Canada, to finalize the draft report (March 2011) nor attend the annual meeting in Anchorage, Alaska.

OCNMS reviewed the RRT drills calendar to identify one or more drills useful for staff training. One large scale drill occurred in Washington State (Whatcom County) but OCNMS staff were not able to attend. During FY 2011, OCNMS was short on staff, particularly in the Resource Protection program, which decreased staff availability for training opportunities.

OCNMS staff training - The assigned training for spill response preparedness is an 8-hour refresher HAZWOPER class. Work demands in the field and office (understaffed for much of FY 2011 concurrent with finalization of the management plan) led to lowered priority for this training, as a result not all staff maintained their HAZWOPER certifications in FY 2011. The appropriate HAZWOPER certifications will be part of the OCNMS 2012 training plan.

OUTCOME 8: The condition of water quality, habitat and living resources in the sanctuary is maintained or improved.

Performance Measure 8: Every five years, evaluate if the condition of sanctuary resources has been maintained or improved, as assessed through an OCNMS Condition

Report.

Status: If a 5-year cycle for condition reports is maintained, the next OCNMS condition report is due in 2013. Assessing and monitoring of natural resources in the sanctuary is an ongoing effort of sanctuary staff and numerous partners and organizations. In particular, OCNMS conducted surveys, data analysis, and dive site characterizations to support the groundfish EFH Review Committee and additional monitoring of deep sea coral habitat.

IV: Year Zero Management Plan Implementation Status by Action Plan/Strategy

Whereas the outcomes and performance measures provide assessment of progress on specific and, in some cases, quantifiable aspects of Olympic Coast National Marine Sanctuary accomplishments, many strategies identified in the management plan are not addressed by performance measures. The table below presents an assessment of progress made in year zero (2011) OCNMS management plan strategies and activities. The original plan for this section was to show both progress made on FY 2011 planned activities, but to also indicate the overall progress on the implementation on the entire action plan. This proved problematic and early attempts to show progress by both metrics (annual and overall) were confusing. For this first report it was decided that we would concentrate on reporting on those activities that were specifically identified in the FY 2011 Annual Operating Plan. In future reports we may investigate ways to report the overall progress made in implementing the 5-year plan.

Table Explanation

Action Plans/Strategies – The titles and numbering scheme relate to the structure of the 2011 Olympic Coast National Marine Sanctuary Final Management Plan and Environmental Assessment.

MP Priorities – Level Funding: Scenario 1 – Implementation ratings are assigned as “high” (H), “medium” (M) and “low” (L) to indicate expected progress. These ratings are taken from the Final Management Plan Implementation Table. This table was created by taking combined input from both OCNMS staff and the Advisory Council. The table included three different funding scenarios (level funding, moderate increase, and substantial increase). The implementation rankings shown below represent the level funding scenario.

FY11 AOP Status – The FY 11 AOP Status column shows the annual progress for the reporting year’s Annual Operating Plan (AOP) activities. The symbols used to describe the implementation status are: Not initiated or planned (○); Initiated and 1-25% completed (◉); Initiated and 26-50%; completed (◐); Initiated and 51-75% completed (◑); or Completed (●).

In several cases an additional explanation of the meaning of these scores may be needed.

Example 1: In the case that an activity was not specifically mentioned in the AOP, it would be given a score of “Not initiated or planned (○)” even if work did occur. However, that work would be summarized under status.

Example 2: Many strategies could be considered ongoing and will never be completed. There are many examples in the Collaborative and Coordinated Management Action Plan. Many of the strategies have to do with partnerships, which hopefully will be ongoing. As an example strategy “CCM3 Olympic Coast Intergovernmental Policy Council”, the status of “Completed (●)” refers to the completion of activities planned in FY 2011 and not the completion of the overall strategy, which will be ongoing.

Status – A brief summary of the activities that took place in the reporting period.

Implementation by Action Plan

Action Plans/Strategies	MP Priorities - Level Funding: Scenario 1	FY11 AOP Status	Table Legend	
			Implementation Ranking: H – High M – Medium L – Low	Reporting Status for FY 2011 Activities: ○ – Not initiated or planned ◉ – Initiated 1-25% ◐ – Initiated 26-50% ◑ – Initiated 51-75% ● – Completed
			Status	
A1. Collaborative and Coordinated Sanctuary Management Action Plan				
CCM1 External Evaluation	L	○	The status "○" represents that no activities were originally planned for FY11. However, OCNMS took advantage of an opportunity through a University Of Michigan Masters Project to begin work on this activity.	
CCM2 Coastal Treaty Tribes	H	○	No activities were specifically planned for FY11; however, this is an ongoing priority for the sanctuary and the following activities did occur. Collaborated with Coastal Treaty Tribes on the Treaty Trust Responsibility chapter in the OCNMS Management Plan. Held a government-to-government meeting with the Makah Tribe and responded to their concerns related to OCNMS' proposed regulatory changes. Discussed the possibility of developing a MOA. Consulted with tribal staff on permitting requests.	
CCM3 Olympic Coast Intergovernmental Policy Council	H	●	Supported 4 IPC meetings, one joint with OCNMS Advisory Council, and one with the ONMS Director. Briefed IPC on OCNMS management plan finalization and implementation, and annual OCNMS operating plan. Processed 4 cooperative agreements with Coastal Treaty Tribes to support IPC.	
CCM4 Washington State	H	●	Attended a Washington State Ocean Caucus meeting on June 28, 2011, discussed potential models for receiving input and coordinating Washington State Ocean Policy. Participated in Washington State Ocean Caucus Human Use Data Workshop on July 27, 2011 in Aberdeen and a meeting on Coastal and Marine Spatial Planning. Consulted with WA State staff on a number of issues, including marine incidents, permitting, Copalis Airport, cultural resources, and beach mining regulations. Received a federal consistency determination on the management plan. Participated as ex-officio member of North Pacific Coast Marine Resources Committee; attended annual outer coast MRC Summit.	
CCM5 Department of Interior	H	◉	Participated in Olympic National Park seasonal interpretive training. Coordinated with ONP and others on annual April beach cleanup. Technical staff consultation and collaboration on several issues, including intertidal monitoring, Quillayute River dredge spoils management. Not all planned meetings occurred.	
CCM6 US Coast Guard	H	◐	Meet with USCG Captain of the Port and briefed him on USCG-OCNMS related issues. Worked with USCG on ATBA monitoring and IMO proposal for ATBA modification. Worked with USCG on four vessel incidents. Collaborated with USCG on a number of OCNMS enforcement patrols. Not all planned meetings occurred.	
CCM7 US Navy	H	●	Provided reasonable and prudent recommendations to the USN PFEIS for the Northwest Training Range Complex. Hosted annual meeting with USN to identify ways to collaborate (e.g., habitat mapping) and USN activities within OCNMS. Shared information on acoustic recording moorings and seismic sensors permitted in OCNMS. Responded to USN comments on the OCNMS DMP/EA.	
CCM8 NMFS	M	◐	Consulted on the OCNMS DMP/EA, including EFH and ESA issues. Worked with NMFS and PFMC to establish a mutually agreeable schedule that allowed PFMC time to review the OCNMS DMP/EA and proposed rule. Consulted with NMFS on briefing the PFMC on the OCNMS DMP/EA and proposed rule. Hosted NMFS presentation on Integrated Ecosystem Assessment efforts in the California current.	
CCM9 Office of National Marine Sanctuaries	H	●	Participated in national and regional meetings and conference calls. Responded to agency requests for data and information. Locally implemented national and regional initiatives. Worked with regional and national program offices and climate office to obtain level funding for IPC grants. Worked with ONMS Small Boat Program to design a new OCNMS/SBNMS research vessel.	

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			Status	
CCM10 Canadian Government	L	○	While no AOP activities were identified, OCNMS did work with the Canadian Coast Guard to identify a new data retrieval mechanism for ATBA data.	
A2. Community Involvement in Sanctuary Management Action Plan				
COM1 Advisory Council	H	●	Prepared for, coordinated and conducted 6 Advisory Council meetings, one a joint meeting with IPC; meeting minutes drafted, approved by AC and posted on website. Provided updates on MPR and included AC in all phases of MPR process. Finalized AC Charter Review Subcommittee edits, forwarded with AC-approved revised charter to Sanctuary Superintendent. Participated in quarterly National Advisory Council Coordinator's conference calls. Provided staff support for AC working group on data management and subcommittee on AC Charter revision. Coordinated travel to ONMS SAC Summit. Initiated an OCNMS office report to AC for each meeting.	
COM2 Marine Resource Committees	M	●	Attended 6 North Pacific Coast Marine Resources Committee (NPC MRC) meetings. Provided review comments on various draft NPC MRC documents, and ratings on grant applicants. Through revision of Advisory Council Charter, added MRC seat to Advisory Council. Facilitated presentation to AC by Surfrider Foundation representatives addressing citizen science, outer coast MRCs, and development of a coastal partnership. Attended Grays Harbor E3 Collaborative Workshop. Attended annual NPC MRC meeting with marine debris display.	
COM3 Non-government Organizations	H	●	Participated in numerous planning meetings and implementation of the Washington Clean Coast Alliance volunteer beach cleanups on the outer coast. Coordinated logistics, materials distribution, recruitment and conducted trainings for volunteers. Over 1,100 volunteers participated, hauling away an estimated 23 tons of plastic water bottles, household trash, lost fishing gear, and other marine debris.	
A3. Sanctuary Operations Action Plan				
OPS1 Vessel Infrastructure and Operations	H	●	Completed routine end of field season maintenance. Servicing of <i>R/V Tatoosh</i> engines: 250hr servicing, tune up on port engine with injector replacement. Replaced section of hull that showed pitting. Acquired and installed multibeam echosounder from NOAA surplus. Completed annual small boat evaluation for R-2201 and the annual trailer evaluation. Projects supported in FY11 included mooring program, volunteer cruise, habitat mapping, sea otter capture project with USGS, pelagic sea bird survey, UW harmful algal bloom research. Total days at sea in FY11: 50- <i>Tatoosh</i> , 2-RHIB.	
OPS2 Facilities	H	●	Completed a joint design for an Olympic Coast and Stellwagen Bank NMS replacement vessel. Reviewed and commented on SOW for Facilities Planning effort, gathered and packaged materials for contractor and HQ.	
OPS3 Annual Planning	H	●	FY11 AOP submitted and approved, quarterly reports submitted; oversaw budget, contracting and acquisitions.	
OPS4 Safe Operations	H	●	Updated and drilled the continuity of operations call-down procedure. Conducted monthly safety inspections of facilities and vessels. Staff completed required training and drills.	
OPS5 Staffing	H	◉	Recruitment package for resource protection specialist submitted to WFMO. Resource protection specialist hired, oriented and in training. Additional FTE intentionally left unfilled for budget purposes. Implemented ERT contract for non-federal support services.	
OPS6 Volunteer Program	M	●	Coordinated volunteer activities, resulting in approximately 16,700 volunteer hours contributed to OCNMS programs. Organized volunteer enrichment programs and hosted volunteer appreciation event. Planned and hosted spring volunteer training for 11 new volunteers. Volunteers traveled to Thunder Bay National Marine Sanctuary to participate in exchange program and assist with	

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			Status	
			Maritime Festival. Supervised a Port Angeles High School student, a Natural Resource Internship with AmeriCorps and North Olympic Peninsula Skills Center, who completed 300 hours supporting OCNMS programs.	
OPS7 Permitting and Consultation	H	●	Fielded inquiry for a multi-sanctuary permit for submarine cable salvage (metals recycling) and hosted a West Coast region conference call of permit coordinators to discuss request. Issued 7 OCNMS permits, 1 permit request is under review. Participated in the national Permit Coordinator's quarterly calls. Participated in conference calls to discuss revisions to ONMS permitting regulations. Staff completed on-line training for accessing secure Washington State historic resources data base. Initiated planning for a National Historic Preservation Act Section 106 Programmatic Agreement, to be developed in FY2012.	
OPS8 Voluntary Compliance	M	○	Voluntary compliance activities were considered for FY11, but were not implemented other than ATBA monitoring (see SPILL1).	
OPS9 Enforcement	L	◉	TAC met in February and discussed plans for 2011. Worked with USCG to schedule C-130 enforcement flights. Consulted with NOAA Office of Law Enforcement on <i>F/V Vicious Fisher</i> sinking. Using the <i>R/V Tatoosh</i> multibeam the <i>F/V Vicious Fisher</i> was located and the coordinates were provided to OLE and the Office of Coast Survey.	
OPS10 Implementation Reporting	H	○	This is the first Management Plan Implementation Report; it was completed outside the reporting period.	
B1. Habitat Mapping and Classification Action Plan				
MAP1 Regional Coordination	H	○	No activities identified for FY11.	
MAP2 Seafloor Habitat Mapping	H	●	FY11 Survey season included 1) surveying and ground-truthing 13 mooring sites; 2) surveying and ground-truthing sites for 3 sunken ships; 3) surveying 435 km ² of an unmapped area of the proposed EFH expansion area; and 4) ROV surveys to characterize and ground-truth an area for potential EFH consideration.	
MAP3 Habitat Classification	H	●	OCNMS' habitat classification scheme has been simplified to six categories and applied across the mapped regions in preparation for a draft seafloor atlas. An additional area of 435 km ² was mapped under contract with Oregon State University using a Reson 8101 multibeam. One area of potential biogenic habitat was surveyed by ROV. These surveys supported NOAA's Coral Reef Conservation Program mapping initiative and its habitat classification will be provided to the PFMC EFH review process.	
MAP4 Mapping Products	H	●	OCNMS was not allocated seafloor mapping time on the NOAA's <i>Fairweather</i> or <i>Rainier</i> and as a result we did not meet our FY11 objective of mapping 10% (approximately 250 nm ²) of the sanctuary. However, 127 nm ² were mapped from the <i>R/V Pacific Storm</i> to identify hard substrate conducive to coral and sponge development. Bathymetry and backscatter data were produced from this survey and a report was generated. Another 3 nm ² were mapped from the <i>R/V Tatoosh</i> to identify substrate around oceanographic mooring sites and shipwrecks. Bathymetry and GIS data were produced for distribution from these surveys. USGS did not groundtruth the 2010 area of NOAA's <i>Fairweather</i> mapping due to budget restraints. Without adequate groundtruthing of the <i>Fairweather</i> area, habitat classification, mapping and reporting were not complete in FY11. Collection and processing of 150 sediment grabs validated the McArthur II survey; completion of a report is pending.	
B2. Physical and Chemical Oceanography Action Plan				
OCEO1 Coastal Mooring Program	H	◉	Inventoried, replaced and calibrated moorings sensors. Prepared hardware and sensors for deployment, conducted servicing and data downloads with the <i>R/V Tatoosh</i> . Moorings retrieval and data compilation will occur early in FY 2012. Support for the NANOOS/APL mooring continues, which has included deployment of the UW glider, which is linked to the NANOOS array, from the <i>R/V Tatoosh</i> . Participated on NANOOS governing council, attended annual meeting and supplied letter of support for NANOOS	

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			Status	
			marine mammal acoustical monitoring proposal. Continued discussion for having NANOOS serve as OCNMS data portal for scientific mooring data.	
OCEO2 Hypoxia	M	◐	Although low oxygen events were recorded, hypoxic conditions were not found and no intensified sampling effort was initiated.	
OCEO3 Ocean Acidification	H	◐	Participated in planning efforts for 2011 monitoring effort and continued participation on the West Coast Ocean Acidification Task Force to develop draft research and monitoring plans. Continued collection of nearshore oceanographic data that will be used with PMEL's algorithm for general OA trends. Recommended OCNMS be considered as an example for the sentinel site program for OA. Conducted OA educational activities with K-12 teachers and middle/high school students.	
OCEO4 Harmful Algal Blooms	M	◐	Continued participation in Olympic Region Harmful Algal Bloom (ORHAB), which has included providing OCNMS collected data and assisting a new UW research project collect information to assess if climate change has influenced plankton populations in OCNMS.	
B3. Populations, Communities and Ecosystems Action Plan				
ECO1 Water Column Communities	L	○	No activities identified for FY11	
ECO2 Intertidal	M	●	Conducted intertidal monitoring at Grenville (Quinault reservation) and Kydikabbit and Sooes (Makah reservation). Completed entry of 2008-2010 data into MARINE database. Completed 2010 sand grain size analysis.	
ECO3 Subtidal	L	○	No activities identified for FY11	
ECO4 Benthic	M	●	Intensive planning efforts for CRCP funded deep-sea coral surveys and sonar mapping were completed and field surveys were conducted in July (multibeam surveys) and August (ROV surveys). Data are processed and will be submitted for the EFH review process in December.	
ECO5 Fish	L	○	No activities identified for FY11	
ECO6 Marine Birds	M	◑	June and July pelagic seabird surveys off the <i>R/V Tatoosh</i> were completed with assistance of experienced volunteers. Sea conditions and vessel repairs precluded surveys in August and September. Continued working with WDFW for their spring-summer nearshore surveys for marbled murrelets and discussion on conducting aerial surveys. Continued planning efforts with SW Fishery Science Center for aerial surveys of seabirds, marine mammals and sea turtles. Surveys were flown with NOAA's Twin Otter aircraft in September. Data are being processed. Continued coordination of COASST citizen scientists along the outer coast. Hosted a Nancy Foster scholar (Jesse Lopez) for analysis of seabird sighting data collected off NOAA ships since 1995.	
ECO7 Marine Mammals	M	●	Participated in the annual sea otter census and USGS-led sea otter capture operations for a status evaluation of Pacific nearshore ecosystems. See SW Fishery Science Center aerial surveys reported under ECO6.	
ECO8 Stranding Network	L	●	Continued involvement with the Northwest Marine Mammal Stranding Network. Co-led with NMFS and USFWS a June stranding network training attended by OCNMS Resource Protection staff. Served as interim lead (during the absence of the USFWS coordinator) for state-wide sea otter stranding hotline monitoring.	

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ECO9 Ecosystem Processes	M	◉	OCNMS participated in a meeting on the Integrated Ecosystem Assessment of the California Current with NMFS colleagues.	
B4. Data Management, Sharing and Reporting Action Plan				
DATA1 Data Quality Control and Management	H	●	In support of performance measure 4 a database has been developed to track annual research and monitoring activities. This database tracks OCNMS data, field notes, forms, reports, publications, and presentations for 17 research areas. These data are being prepared for download via the OCNMS web page. A Data Management Working Group (DMWG) including members of the Advisory Committee, academia, and the Intergovernmental Policy Council was established to advise OCNMS on the priorities for data management, sharing and reporting. The DMWG prioritized research areas and apprised the full AC of progress on the data management initiative.	
DATA2 Data Distribution	H	◉	As a result of the data management protocols, FY11 data distribution included: 1) summarizing all of the research and/or monitoring activities for FY11; 2) collecting preliminary data from each activity and posting it on the web site; 3) identifying delayed processing or reporting for larger projects.	
DATA3 Adaptive Management	L	○	No activities identified for FY11	
DATA4 Condition Report	M	○	No activities identified for FY11	
C1. K-12 Education Action Plan				
ED1 K-12 Partnerships	H	●	OCNMS worked with regional education organizations to leverage resources for K-12 Ocean Literacy Programs. OCNMS was key partner with Seattle Aquarium in an Environmental Literacy Grant proposal, Ocean Change, which was not funded. OCNMS and Seattle Aquarium completed the fifth year of Ocean Science (see ED2 – Place Based Education). Staff also conducted field trips at OCDC in partnership with Feiro for 4-5 grade students. OCNMS Geographer made a presentation on seafloor mapping at the Olympic Peninsula Institute to 75 6th graders from Spokane, WA schools. Delivered teacher workshops for 79 teachers from Clallam, Jefferson, Grays Harbor and Pacific counties in partnership with the Seattle Aquarium, PEI, NANOOS, and Grays Harbor Community College. Hosted NOAA Teacher at Sea, Karen Rasmussen, an Ocean Shores Elementary School teacher, during seafloor habitat mapping surveys.	
ED2 Place-Based Education	M	●	OCNMS worked collaboratively with rural schools and tribal communities within the region adjacent to the Sanctuary to develop place-based education opportunities for K-12 students. Through a partnership with OCNMS and Seattle Aquarium, approximately 400 third, fourth and fifth grade students participated in Ocean Science classroom activities, field trips and field investigations. Twenty teachers and nearly 100 parents participated in 2010-2011 Ocean Science trainings and activities. Schools include Ocosta, Simpson, Ocean Shores, Pacific Beach, Taholah, Lake Quinalt, Forks, Quileute, Neah Bay, Clallam Bay, and Crescent. Conducted field trips at OCDC in partnership with Feiro Marine Life Center for 2,047 4th-5th grade students, and summer "Jr. Oceanographer" programming for 79 students ages 5-12. OCNMS staff collaborated with the Feiro Marine Life Center and the Olympic Park Institute to guide students in the NSF funded Elwha Science Education Project. OCNMS AmeriCorps Student Member partnered with Feiro Marine Life Center to develop "Tracking Hollywood Beach" sandy beach intertidal monitoring program piloted by thirty 5th grade students from Jefferson Elementary. Staffed the 3rd Annual Franklin Elementary Science Night (20 exhibits and hands on science activities served over 500 children and parents of the Port Angeles community). Mentored Port Angeles High School students with their Senior Culminating Projects. Three students completed projects on marine debris, ocean	

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			Status	
			acidification, and the way in which kelp and ocean currents move rocks onto beaches. Developed mapping curriculum based on "at sea" experience, which is undergoing peer review.	
ED3 Regional Initiatives	L	●	Participated in the planning and implementation of the Northwest Aquatic and Marine Educators conference at OPI. Delivered opening and closing remarks and offered workshops. OCNMS staff participated in marine technology workshop and NOAA Science on Sphere training. OCNMS staff, partnering with Pacific Education Institute, Grays Harbor College, and AmeriCorps, conducted a full-day NOAA B-WET Ocean Literacy Workshop for 24 middle and high school teachers from Grays Harbor and Pacific Beach counties. Staff worked with 25 secondary teachers from Grays Harbor and Pacific counties during "GIS AND GPS: Utilizing Spatial Technologies in the Field and Classroom" professional development workshop sponsored by Pacific Education Institute, funded by NOAA B-WET. OCNMS staff supported Pacific Education Institute in the development of a new curriculum, based on an oil spill response scenario off WA coast to introduce GIS software for natural history studies Staff also supported several (NOAA B-WET funded) PEI teacher workshops. Staff participated in Grays Harbor E3 planning meeting.	
ED4 Using Technology	L	◑	OCNMS staff initiated work on an updated website and maintained current Facebook postings.	
C2. Higher Education Action Plan				
HED1 Internship Development	L	○	No activities were originally planned for FY11; however, work was done in developing future internship opportunities for research and education.	
HED2 Volunteer Positions	L	●	OCNMS staff supervised new Natural Resources Internship for Port Angeles high school student in partnership with North Olympic Peninsula Skills Center and Clallam County AmeriCorps	
HED3 College Partnerships	L	●	OCNMS staff provides ongoing support of Feiro Marine Life Center marine science lecture series. OCNMS staff worked closely with Peninsula College and Feiro Marine Life Center to offer the joint continuing education class "Ocean Inquiries." As a result to this partnership, Peninsula College Introduction to Environmental Sciences is also implementing "Oil Spill Simulation- An Introduction to GIS" curriculum that was developed by Pacific Education Institute with support from OCNMS. OCNMS staff provided Peninsula College with images of various marine life to have on file and use in related presentations. Resource Protection staff gave a presentation on derelict fishing gear to a Research in Puget Sound class for the Huxley College Environmental Studies Program. Staff gave a presentation on managing a marine protected area in the Pacific Northwest, to a Huxley College of the Environment class on Parks and Protected Areas Management Class. A group of graduate students from the University of Michigan's School of Natural Resources and Environment are conducting a study involving an evaluation of the institutional relationships OCNMS has with its Advisory Council and Intergovernmental Policy Council. The group's goal is to evaluate the contribution of OCNMS' institutional relationships to the management of the resources within the sanctuary, including the sanctuary's ability to adapt and respond to climate change. OCNMS hosted Jessica Lopez, a 2010 Nancy Foster Scholar. Ms Lopez spent 6 weeks processing and analyzing seabird data collected during offshore surveys between 1995 and 2007. Using GIS and database software, Ms Lopez created an analysis protocol and the initial products for the sanctuary's first biogeographic analysis of these historic seabird transect data sets.	
C3. Visitor Services Action Plan				
VISIT1 Visitor Experience	L	●	OCNMS operated the Olympic Coast Discovery Center (OCDC) to educate visitors and visiting school groups. Eleven new volunteers participated in OCDC Volunteer Training. OCDC opened Memorial Day Weekend and was open daily 10-5 until Labor	

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			Status	
			Day. A total of 2,047 students visited the OCDC and Feiro Marine Life Center during the 2010-2011 school year. OCDC had a total of 7,015 visitors in 2011, an increase of more than 450 from 2010. OCNMS hosted 8 ONP seasonal interpretive rangers for two days as part of the ranger's annual training program. OCNMS staff developed Cape Flattery Wildlife cards in partnership with Makah Museum for Makah Interpretive Program. OCNMS funded a grant to the Makah Cultural and Research Center to provide interpretive services at the Cape Flattery overlook on the Makah Reservation.	
VISIT2 Long-Range Interpretive Plan	M	◐	OCNMS staff met with State Parks headquarters and field staff and representatives of Alchemy of Design, to discuss opportunities in cooperative interpretive facilities. OCNMS staff met with consultants for City of Port Angeles to discuss facility and signage needs relative to the city's assessment of improvements being discussed for the downtown waterfront area. OCNMS submitted three FY11 PAC requests related to facilities, signage and exhibits. OCNMS staff participated in Olympic National Park First Annual Interpretation and Education Partner Meeting.	
VISIT 3 New Technology	L	◒	OCNMS has implemented its web overhaul and has the structure and content identified, and staff assigned to development. NOAA OCNMS Facebook page was created in September 2010, and by the end of FY 2011 had 356 fans from 25 different countries.	
C4. Community Outreach Action Plan				
OUT1 Stewardship and Citizen Science	L	●	OCNMS provided training and staff support to Coastal Observation and Seabird Survey Team (COASST), Washington CoastSavers, and other volunteer programs in the Sanctuary. Participated in planning for the Washington Clean Coast Alliance volunteer beach cleanups on the outer coast of Washington. Staff provided regular COASST trainings at Hobuck Beach. COASST volunteer time is tracked and reported. Attended annual North Pacific Coast Marine Resources Committee meeting in June and presented a marine debris display.	
OUT2 Staff Presence on Outer Coast	L	○	No activities identified for FY11	
OUT3 Community Events	M	●	OCNMS staff maintained a presence at community events and meetings in the Sanctuary region. Major public events included Makah Days, National Public Lands Day event at Kalaloch hosted by ONP and OCNMS, Dungeness Crab and Seafood Festival in Port Angeles, Seattle Aquarium's Family Science Weekend, the 24th Annual Ocean Shores Beachcomber's Fun Fair, and the Grays Harbor Vision 2020 Town Hall Meeting. Supported Feiro Marine Life Center speaker series. OCNMS staff was keynote speaker for <i>Storming the Sound</i> , a conference at OPI attended by approximately 70 environmental educators from the Olympic Peninsula and Puget Sound area. Presented deep-sea coral research at Peninsula College's Studium Generale series attended by approximately 70 students and community members. Presented how research and monitoring programs are conducted at OCNMS for OPI education staff. Gave a deep-sea coral research presentation to the Road Scholar Hiking Group at OPI. Presented an overview of OCNMS to New Horizons widow and widower's group. The meeting was attended by ten members from Sequim, Port Angeles, and Neah Bay. Invited speaker for a deep-sea coral presentation at the Klahhane Hiking Club meeting.	

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OUT4 Community-Based Efforts	L	●	OCNMS staff participated in numerous MRC meetings (see COM2). Seeking funding opportunities to continue Ocean Science Program activities through partnerships with WSU (Seagrant proposal) and Earthquake and Tsunami Education Program for Coastal Cascadia. OPI, OCNMS, Feiro and ONP, submitted a proposal for NOAA B-WET to continue programs, but no funding available. Joined partnership for the regional "Whale Trail". Supported coastal cleanups including Washington Clean Coast Alliance events and the first annual Clallam County Earth Day beach cleanup.	
D1. Spills Prevention, Preparedness, Response and Restoration Action Plan				
SPILL1 ATBA Management, Compliance and Monitoring	H	◑	Sent out ATBA outreach package for the period from April 2010 through April 2011. Completed the 2010 ATBA compliance analysis and submitted to WDE for inclusion in their annual VEAT report. OCNMS provided subject matter expertise to the OCNMS ATBA IMO proposal to expand the applicability of the ATBA from vessels 1600 gross tons down to 400 gross tons.. The proposal was approved by the IMO Sub-committee on Safety of Navigation.	
SPILL2 Regional Vessel Management Forums	L	○	No activities identified for FY11	
SPILL3 Regional Planning and Training Exercises	H	◑	Analyzed US Coast Guard bill and presented elements of significance to Advisory Council. Participated in a Strait Ecosystem Recovery Network meeting to discuss support for state response initiatives. Participated in NW Area Committee meeting to review the Area Contingency Plan and re-organize working groups. Participated in response planning and incident management for two fishing vessels in distress in sanctuary waters.	
SPILL4 Outer Coast Trustees Working Group	M	●	OCNMS server and key computers updated with recent Northwest Area Contingency Plan documents. Hosted presentation to the OCNMS Advisory Council by the Makah Office of Marine Affairs on integration of tribal interests into contingency planning. Distributed announcement of training opportunities for outer coast communities.	
SPILL5 OCNMS Organizational Response Plan	H	◉	Met with Gulf of the Farallones NMS staff to review a new organizational response plan format, and initiate development of a cultural and natural resource database tool for OCNMS.	
SPILL6 Damage Survey and Assessment Protocols	H	○	No activities identified for FY11	
D2. Climate Change Action Plan				
CLIM1 Climate Smart Sanctuary Program	L	●	Contracted with University of Washington Sea Grant to initiate the OCNMS climate change site scenario analysis.	
CLIM2 Sanctuary as Sentinel Site	M	○	Staff participated on the ONMS Sentinel Site Concept Team and submitted an example to use OCNMS as a sentinel site highlighting monitoring ocean acidification and hypoxia. Briefed the AC on ONMS Sentinel Site efforts.	
CLIM3 Resilient Ecosystems	L	○	No activities identified for FY11	
CLIM4 Communicating Climate Change	L	◉	OCNMS, along with the NW Straits Commission, Sustainable Fisheries Partnership, Port Townsend Marine Science Center, and WSU Beach Waters, co-sponsored an education seminar on ocean acidification and impacts to marine resources. Over 150 participants attended the event. Staff worked on the West Coast Ocean Acidification Task Force which incorporated education/outreach issues into the final OA Report. Education team received Understanding Ocean Acidification Resource Kit from Channel Islands NMS and has incorporated multiple activities into education programs. OCNMS and Seattle Aquarium delivered	

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			Status	
			Ocean Change Teacher Professional Development Workshop in August in Forks, WA. Working with ONMS and IPC on the planning for the 2012 Climate Symposium in Washington DC.	
D3. Marine Debris Action Plan				
MD1 Submerged or Floating Debris	H	○	No activities identified for FY11	
MD2 Beach Debris	H	●	With partners, planned and implemented April 2011 beach cleanup; drafted site plans for coordination of activities and staffed registration stations at Neah Bay, Three Rivers, Hoh Reservation, and Kalaloch. Worked on team to facilitate recycling of waste materials collected during the beach cleanup. Facilitated a NOAA Marine Debris Program staff as keynote speaker for Port Angeles beach cleanup event. OCNMS staff hosted a marine debris display at North Pacific Coast Marine Resources Committee's annual community meeting in Forks.	
D4. Wildlife Disturbance Action Plan				
WD1 Outreach on Wildlife Disturbance	L	○	Some activities were identified in FY2011, but were not implemented due to lack of resources.	
WD2 Overflight Restriction Zone	L	●	Supported Office of National Marine Sanctuaries efforts to modify overflight regulations and get regulations posted on FAA aeronautical charts. Discussed overflight monitoring with Olympic National Park ranger staff.	
WD3 Marine Mammal Disturbance	M	○	No activities identified for FY11	
D5. Water Quality Action Plan				
WQP1 Vessel Discharges	H	◑	Efforts focused on management plan and regulations finalization. The revised management plan includes activities in support of water quality protection. Revised regulations to prohibit cruise ship discharges were released for public comment. Completed significant revisions to the environmental assessment associated with the proposed prohibition of cruise ship discharges.	
WQP2 Contaminants	L	○	No activities identified for FY11	
D6. Habitat Protection Action Plan				
HP1 Threat Assessment and Mitigation	M	○	No activities identified for FY11	
HP2 Habitats of Special Importance	H	◐	Continued participation on the Pacific Fishery Management Council's (PFMC) Essential Fish Habitat (EFH) Review Committee. Conducted post-processing of deep-sea habitat, coral and sponge community video survey data and reporting for submission to PFMC's groundfish EFH review cycle.	
HP3 Invasive Species	M	○	No activities identified for FY11	
D7. Regional Ocean Planning Action Plan				
MSP1 Marine Spatial Planning	L	●	Staffed regional NOAA listening session on Marine Spatial Planning held in Ocean Shores, WA. Attended WA State sponsored Coastal and Marine Spatial Planning data workshop. Briefed state on CMSP plans represented in revised OCNMS management plan.	
E1. Maritime Heritage Action Plan				
MH1 Cultural Resource Conservation	L	◐	Participated in ONMS coordination calls, and responded to misc. data calls. Conducted one shipwreck reconnaissance to Skagway for photo documentation. Advised habitat mapping specialist on location of <i>Temple Bar</i> , which was located and mapped during a multibeam survey.	

Action Plans/Strategies	MP Priorities - Level Funding: Scenario 1	FY11 AOP Status	Table Legend	
			Implementation Ranking: H – High M – Medium L – Low	Reporting Status for FY 2011 Activities: ○ – Not initiated or planned ◉ – Initiated 1-25% ◐ – Initiated 26-50% ◑ – Initiated 51-75% ● – Completed
			Status	
MH2 Local and Customary Knowledge	L	○	While no activities were originally identified in FY11, as part of the Ocean Science Teacher Professional Development Workshops OCNMS invited tribal guest speakers to discuss the importance of TEK in regards to better understanding modern science.	
MH3 Public Understanding of Treaty Rights	L	○	No activities identified for FY11	
E2. Socioeconomic Values of Sanctuary Resources Action Plan				
SV1 Existing Socioeconomic Information	L	○	While no activities identified for FY11, OCNMS staff did meet with ONMS' lead economist to discuss future potential projects.	
SV2 New Socioeconomic Information	L	○	No activities identified for FY11	
Activities Outside of Management Plan				
Management Plan Review Process	H	●	Completed and cleared the Draft Management Plan/Draft Environmental Assessment and Proposed Rule; Completed the public review process; Following the close of the public comment period for draft documents (March), completed revisions to management plan and distributed final draft management plan/environmental assessment for internal NOAA review. Drafted Responses to Comments document and submitted for internal NOAA review. Completed revisions to OCNMS regulations and submitted Final Rule document for internal NOAA review. Provided updates on MPR process to the OCNMS Advisory Council and Intergovernmental Policy Council.	