

DRAFT FISCAL YEAR 2016 OLYMPIC COAST NATIONAL MARINE SANCTUARY MANAGEMENT PLAN IMPLEMENTATION PRIORITIES

NOVEMBER 4, 2015

This draft planning document is provided to Olympic Coast National Marine Sanctuary (OCNMS) Advisory Council (AC) and the Olympic Coast Intergovernmental Council (IPC) to facilitate discussion and inform their advice and guidance on elements of the OCNMS Management Plan to be prioritized in fiscal year (FY) 2016. Select planned activities are included and organized by Action Plan/Strategy and summarized under the following implementation priority issues:

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

The final decision on FY 2016 activities will be based on advice and guidance from the AC and IPC, partnership opportunities, and OCNMS's ongoing evaluation of management needs and staffing, and its 2016 budget allocation.



Priority Issue A: Achieve Effective Collaborative and Coordinated Management

Action Plan A1: Collaborative and Coordinated Sanctuary Management

Strategy CCM1: External Evaluation

Evaluate the contribution of OCNMS' institutional relationships to the management of resources within OCNMS.

- Investigate opportunities for repeating the 2012 survey, possibly in FY 2017.

Strategy CCM2: Coastal Treaty Tribes

Consult with the Coastal Treaty Tribes (Makah, Quileute and Hoh Tribes and Quinault Indian Nation) in accordance with Executive Order 13175, and partner with tribal staff members to address sanctuary projects and management issues that are of interest to the tribes.

- Continue to work with Coastal Treaty Tribes at the staff-to-staff level, with more formal consultation, as needed.
- Continue to improve the frequency and substance of communications.
- Conduct tribal staff briefings and tribal consultations as appropriate.
- Consult with each tribe on the OCNMS permit consultation process and the development of a Maritime Heritage Resource Management Plan.
- Look for opportunities to collaborate on education, research and resource protection initiatives.

Strategy CCM3: Intergovernmental Policy Council

Continue OCNMS' partnership with the Olympic Coast Intergovernmental Policy Council (IPC).

- Provide input to meeting agendas by providing requested information and briefings on important management issues.
- Provide staff support for meetings, including one annual meeting with the ONMS Director and up to three additional meetings as determined by the IPC chair and membership.
- Support work related to the IPC Olympic Coast Habitat Framework initiative and help in identifying internal and external resources to implement a defined workplan.

Strategy CCM4: Washington State

Support implementation of the Washington Ocean Action Plan, the West Coast Governors Agreement on Ocean Health and other applicable state initiatives.

- Consult with Washington State Coastal Caucus and Washington State Advisory Council members on priorities for collaborative efforts, informed by recent marine spatial planning efforts. These could include, but not be limited to, leveraging the efforts of the Washington Marine Atlas and Mapping Prioritization efforts, and developing a common approach to monitoring of key ecosystem indicators.

Strategy CCM5: Department of the Interior

Enhance partnerships with Department of the Interior agencies, particularly the National Park Service, which manages Olympic National Park (ONP), and the U.S. Fish and Wildlife Service (USFWS), which manages the Washington Maritime National Wildlife Refuge Complex.

- Meet with ONP staff to identify opportunities for collaboration in FY16.
- Conduct biannually coordination meeting with ONP and USFWS.

Strategy CCM7: United States Navy

Improve collaboration and coordination with the U.S. Navy.

- Complete consultation on the Northwest Training and Testing EIS.
- Conduct annual meeting to discuss Navy activities and other issues of interest.

Action Plan A2. Community Involvement in Sanctuary Management

Strategy COM1: Advisory Council

Involve local communities in sanctuary management issues through the Advisory Council (AC) process.

- Commit staff resources to support the AC in 2016.
- Provide support to implement the AC 2016 work plan.
- Appoint new AC members as needed; conduct 6 AC meetings as the budget allows.
- Draft revisions for OCNMS AC Charter (expires December 2016).

Strategy COM2: Marine Resource Committees

Continue and expand collaborative marine stewardship efforts with Clallam, Jefferson and Grays Harbor counties.

- Participate in the North Pacific Coast Marine Resources Committee meetings and activities, with a focus on promoting research and educational opportunities on the outer coast and marine debris mitigation.
- Track Grays Harbor Marine Resources Committee meeting agendas and engage on issues of relevance to OCNMS.

Action Plan A3. Sanctuary Operations

Strategy OPS1: Vessel Infrastructure and Operations

Maintain an on-water presence in the sanctuary to ensure effective and efficient sanctuary operations, including research and education activities.

- Address any R/V *Tatoosh* deficiencies identified in the annual inspection and work to increase days at sea through expanded partnerships.
- Conduct preventative maintenance to ensure R/V *Tatoosh* remains in working order.

- Finalize specifications for vessel replacement and further explore funding options.

Strategy OPS2: Facilities

Develop new, and maintain current, infrastructure for sanctuary offices, programs, research vessels, equipment, and field operations.

- Continue to work with the City of Port Angeles and Feiro Marine Life Center on the development of a Port Angeles Marine Education and Visitor's Center on the City Pier.
- Work with NOAA Real Property Division and GSA on a new lease for OCNMS space.

Strategy OPS6: Volunteer Program

Maintain and enhance OCNMS' volunteer programs in order to build connections with the community and achieve the goals and objectives of the management plan.

- Actively recruit and train volunteers for the Olympic Coast Discovery Center, Washington CoastSavers, Coastal Observation and Seabird Survey Team, marine debris monitoring and other volunteer programs.
- Conduct spring volunteer training.
- Support 1,800 volunteers and target of 20,000 volunteer hours.
- Track volunteer hours and submit quarterly summaries to Office of National Marine Sanctuaries (ONMS).

Strategy OPS9: Enforcement and Incident Response

Improve compliance with and enforcement of OCNMS regulations, other regulations, and voluntary programs that apply to sanctuary waters.

- Continue to work with law enforcement staff on the Law Enforcement Technical Advisory Committee (LETAC). Hold LETAC bi-annual meetings.
- Update the OCNMS Incident Database.
- Conduct an analysis of vessels abandoned in OCNMS since designation. Review findings and forward recommendations to the OCNMS Superintendent.
- Identify options for recently documented Cape Flattery submerged marine debris.

Strategy OPS10: Management Plan Implementation Reporting

Establish reporting mechanisms/process for management plan implementation and emerging issues.

- Continue annual reporting on the implementation of the management plan, including established performance measures.
- Draft the FY 2015 Management Plan Implementation Report and a FY 2016 Management Plan Implementation document and present to both the AC and IPC.

Priority Issue B. Conduct Collaborative Research, Assessments and Monitoring to Inform Ecosystem-Based Management

Action Plan B1. Habitat Mapping and Classification

Strategy MAP1: Regional Coordination

Develop and sustain partnerships to maximize and leverage seafloor and habitat mapping resources and to promote the use of established mapping standards.

- Work with partners to develop a Washington State Outer Coast Mapping Partnership and seek support for seafloor mapping as an outgrowth of 2015 Spatial Prioritization Workshop; apply for grants, funding to support seafloor mapping by federal, state, contract, or academic partners.

Strategy MAP2: Seafloor Habitat Mapping

Continue efforts to map seafloor habitats.

- Focus on mapping priority seafloor within 3 miles of shore; survey areas contiguous with existing seafloor atlas; survey areas < 60m depth, create bathymetry, groundtruth, and habitat maps.
- Expand groundtruthing capability off *R/V Tatoosh* using improved hardware and software.

Strategy MAP3: Habitat Classification

Integrate observations from sonar data and ground-truthing to classify habitats and generate derivative maps and GIS products.

- Utilize the Washington State Outer Coast Seafloor Atlas as a foundational component of the Habitat Framework.
- Classify habitats in CMECS for application to Habitat Framework.

Strategy MAP4: Mapping Products

Report and share seafloor habitat characterization data in formats useful for resource managers and the public.

- Develop an OCNMS web page for the Washington State Outer Coast Seafloor Atlas.
- Coordinate with parallel web development efforts with NOAA Fisheries and Washington State.
- Integrate the Seafloor Atlas into the IPC Habitat Framework dataset, utilizing the CMECS marine habitat classification scheme.
- Provide the Seafloor Atlas for public download in GIS or .PDF format
- Provide Habitat Framework spatial data, as available, for public download in GIS and .pdf format.

Action Plan B2. Physical and Chemical Oceanography

Strategy OCEO1: Coastal Mooring Program

Continue the OCNMS water quality monitoring program to monitor key physical and chemical oceanographic parameters in coastal waters. As feasible with additional partners, expand this monitoring to include additional instrumentation (including acoustic monitoring), parameters, locations, year-round data collection, and real-time data transmission.

- Obtain funding to implement the seasonal 10 buoy mooring network if current base budget is not sufficient.
- Consult with the Northwest Association of Networked Ocean Observing Systems (NANOOS) on data processing.
- Work with partners to identify resources allowing continued monitoring in 2016 and beyond.
- Implement enhanced water-sampling protocols if NANOOS-approved funding request is approved.

Strategy OCEO2: Hypoxia

Monitor dissolved oxygen levels and ecological impacts of hypoxic conditions (low oxygen concentration) in coastal waters.

- Continue monitoring through OCNMS moorings program and expanded sampling protocol (if hypoxia found).
- Engage with regional hypoxia collaborations, and expedite communication of OCNMS findings.
- Consult with the Northwest Association of Networked Ocean Observing Systems (NANOOS) on data post processing.

Strategy OCEO3: Ocean Acidification (OA)

Investigate changing ocean chemistry, acoustics and other physio-chemical changes and impacts to living organisms associated with increasing carbon dioxide levels in the atmosphere.

- Support NOAA Pacific Marine Environmental Laboratory (PMEL) algorithm development for saturation horizon modeling, including providing water samples to allow direct measurements of key OA parameters.
- Seek collaborations with the Washington OA Center.
- Continue to engage the Marine Resource Advisory Council (MRAC).
- Work with partners to define an Olympic Coast sentinel site program for OA by hosting a workshop to define a scope of work for an OA sentinel site. The workshop would focus on current OA science, document current and planned response actions, and identify targeted education and outreach efforts.

Action Plan B3. Populations, Communities and Ecosystems

Strategy ECO1: Water Column Communities

Conduct and collaborate in investigations of water column communities.

- Collaborate with NMFS/NWFSC to deploy biodiversity monitoring device (ARMS - autonomous reef monitoring structures) in OCNMS with a planned 2-year deployment period.

Strategy ECO2: Intertidal

Conduct and collaborate in research on the distribution and abundance of intertidal organisms.

- Gain tribal permissions and continue intertidal monitoring of rocky and sand sites on Quinault and Makah reservations.
- Complete data entry into established databases.
- Engage tribal internship programs in this work to the extent possible.

Strategy ECO3: Subtidal

Characterize the habitats and biota of the nearshore subtidal zone.

- Support Year 2 of subtidal dive surveys at established transects in collaboration with NOAA Northwest Fisheries Science Center and collaborate on data analysis and reporting.

Strategy ECO4: Benthic

Investigate the abundance and distribution of benthic organisms, both epifauna and infauna, from subtidal to deeper shelf habitats.

- Complete analysis and reporting on habitat disturbance and recovery surveys on Pacific Crossing submarine cables completed prior to 2007.
- Complete review of 2008 post-remediation video for biological data and draft preliminary report of survey findings.
- If pre-proposal is accepted, pursue full proposal to NOAA Office of Exploration and Research for Quinault Canyon survey in partnership with Northwest Fisheries Science Center, Quinault Nation, and Ocean Exploration Trust/Nautilus.

Strategy ECO6: Marine Birds

Improve characterization of spatial and temporal distribution, abundance, forage behavior and areas used by marine birds.

- Re-institute monthly pelagic seabird surveys as OCNMS/NMFS/Audubon partnership.
- Continue to provide support for COASST seabird monitoring.

Strategy ECO7: Marine Mammals

Improve characterization of spatial and temporal distribution, abundance, forage behavior and areas for marine mammals.

- Provide field support for annual sea otter surveys.
- Update OCNMS web site with focus on acoustic monitoring projects in OCNMS.
- Support NCCOS analysis of marine mammal distribution hotspots.

Strategy ECO8: Stranding Networks

Participate in the regional marine mammal incident response networks.

- Continue support for the Northwest Marine Mammal Stranding Network.

Strategy ECO9: Ecosystem Processes

Collaborate in ongoing efforts by the NOAA Northwest Fisheries Science Center (NWFSC) and others to develop and apply a comprehensive ecosystem model that identifies indicator species, trophic networks, and physical-biological coupling.

- Continue work in collaboration with NWFSC scientists to identify applicability of WA MSP indicators to Condition Reports, OCNMS Science Needs documents, and research priorities.

Action Plan B4. Data Management, Sharing and Reporting

Strategy DAT1: Data Quality Control and Management

Develop and promote data management procedures.

- By the January 2016 Advisory Council meeting, collect, analyze, summarize, compile and share field reports from OCNMS' 2015 work. These reports may include moorings, seafloor mapping, marine mammal and seabird studies, intertidal monitoring, citizen science, and support of OCNMS partner research.
- Post reports from research and monitoring activities on OCNMS web page for public availability.

Strategy DAT2: Data Distribution

Provide easy and timely access to data collected or managed by OCNMS.

- An enhanced OCNMS website will include existing and new information for reference and download:
 - Washington State Outer Coast Seafloor Atlas.
 - Oceanographic Characterization of Washington Outer Coast, with links to partners in marine and atmospheric science.
 - Habitat Framework physical, oceanographic, and biological data, as available.
 - Develop information link for marine mammal acoustic monitoring projects in OCNMS

Strategy DAT3: Adaptive Management

Periodically evaluate data collection efforts by OCNMS to ensure that data are useful to OCNMS and other marine resource managers and that data needs are clear to staff and other researchers.

- Review and update OCNMS Science Needs Assessment documents. NOAA's Office of National Marine Sanctuaries (ONMS) describes science needs assessment as an evaluation of the science and information requirements defined by the management issues facing each sanctuary.

Strategy DAT4: Condition Report

Publish an OCNMS Condition Report at a regular frequency, at a minimum prior to the next management plan review process.

- Evaluate the second-generation condition report guidance, build on the recent work on indicators for the Washington Coast, and develop a preliminary set of economic and ecological indicators that will support the second-generation OCNMS condition report.

Priority Issue C. Improve Ocean Literacy

Action Plan C1. K-12 Education

Strategy ED1: K-12 Partnerships

Work in partnership with regional education organizations in order to leverage resources for K-12 ocean literacy programs.

- Coordinate Pacific Northwest Bay Watershed Education and Training (B-WET) Program, including solicitation, rating, award of projects and program administration for both PNW B-WET and Ocean Guardian programs
- Work in partnership with regional education organizations (Feiro Marine Life Center, Seattle Aquarium, NatureBridge and Pacific Education Institute) to leverage resources for K-12 ocean literacy programs.
- Provide staff support and educational resources to Olympic Coast teachers.
- Support at least three teacher professional development workshops.

Strategy ED2: Place-Based Education

Work collaboratively with rural schools and tribal communities within the region adjacent to the sanctuary to develop place-based education opportunities for K-12 students.

- Reach approximately 1600 students, by providing staff support and educational resources for place-based K-12 education programs, including:
 - Ecosystem Pen Pals;
 - Ocean Science;
 - North Olympic Watershed (N.O.W.) Science;
 - Junior Oceanographer;
 - Hoh Tribal Watershed youth program and other tribal summer programs as requested;
 - Earth Echo Expeditions Pacific Northwest project

Strategy ED3: Regional Initiatives

Participate actively in relevant regional education organizations and initiatives.

- Participate in relevant regional education organizations and initiatives, representing OCNMS and Pacific Northwest B-WET, as funding allows.

Action Plan C2. Higher Education

Strategy HED1: Internship Development

Coordinate internship activities between local colleges, universities, community colleges and OCNMS to create learning opportunities within the areas of sanctuary operations, research, education and management.

- Pursue internship opportunities with the NOAA Hollings Scholar and NOAA Nancy Foster Programs.
- Serve as NOAA mentor for at least two NOAA Hollings Scholars.
- Serve as NOAA mentor for one Washington Service Corps AmeriCorps member.

Strategy HED3: College Partnerships

Build partnerships with regional colleges, universities, foundations and other institutions in order to increase educational opportunities in ocean science, education, policy and management fields.

- Participate in local career days and job fairs as appropriate.
- Develop opportunities for students to be involved in marine science research.
- Provide continuing education opportunities for teachers to receive academic credit and gain experience in order to enhance their understanding of marine science content areas and methods for hands-on science education.

Action Plan C3. Visitor Services

Strategy VISIT1: Visitor Experience

Actively collaborate with other agencies, tribal governments, tourism organizations and the private sector to provide services and products that contribute to high-quality educational experiences for visitors to the Olympic Peninsula.

- Work with local tourism bureaus to attract visitors and inspire stewardship.
- Operate Olympic Coast Discovery Center (OCDC) to educate visitors and visiting school groups. The planned opening from Memorial Day until Labor Day, open daily 10-5, will be dependent on funding.
- Train new volunteers to support OCDC.
- If funded, enhance OCDC with new Ocean Acidification exhibit.
- Improve marketing of OCDC, including development of collaborative brochures to promote downtown Port Angeles local visitor centers.
- Develop updated map for OCNMS.

Strategy VISIT2: Long-Range Interpretive Plan

Develop and implement a Long Range Interpretive Plan for OCNMS.

- Install kiosks at Kalaloch Lodge and Forks Visitor Center and look into funding for additional kiosk for Olympic Coast Discovery Center.
- Investigate funding opportunities for the Sanctuary on Wheels project.
- Produce updated map and brochure for OCNMS.

Strategy VISIT3: Using Technology

Utilize current and emerging technologies in order to educate and inform physical and virtual visitors to the Olympic Coast.

- Maintain and enhance OCNMS's online presence via the OCNMS website, Facebook, Twitter, Google Ocean, YouTube, and other media.

- Evaluate needed enhancements to OCNMS website per the new ONMS website design standards and template.

Action Plan C4. Community Outreach

Strategy OUT1: Stewardship and Citizen Science

Actively support marine stewardship and citizen science volunteer programs.

- Continue support for Washington CoastSavers.
- Continue support for Coastal Observation and Seabird Survey Team (COASST) through provision of office space and collaboration to evaluate COASST marine debris methods under development.
- Continue engagement of volunteers for shoreline debris monitoring.
- Continue development of web content to describe shoreline debris monitoring and preliminary results.

Strategy OUT3: Community Events

Maintain an OCNMS staff presence at community events and meetings in the sanctuary region.

- Support outreach events, including the Beachcombers Fun Fair, Grays Harbor Shorebird Festival, Makah Days, Dungeness Crab and Seafood Festival, and the Ocean and River Resources Fair.
- Furnish speakers for public lecture series, community meetings and other forums in order to provide up-to-date information on sanctuary research, education, policies and management activities, with plans to provide speakers to six community events and staff seven community events.

Strategy OUT4: Community-Based Efforts

Actively support the efforts of the North Pacific and Grays Harbor marine resources committees, regional watershed councils, salmon recovery teams, the Puget Sound Partnership, other community-based non-government organizations, and local and state governments in areas of marine research, education, and policy coordination.

- Support outer coast marine resource committee opportunities for community-based education, stewardship and research programs.
- Use the OCNMS website (Calendar of Events, etc.), e-mail listserv, social media and other media to communicate the efforts of community-based organizations working on ocean issues in the sanctuary region.
- Look into opportunities to work with MRCs to provide community outreach (marine display at Forks Transit Center, etc.).

Priority Issue D. Conserve Natural Resources in the Sanctuary

Action Plan D1. Spills Prevention, Preparedness, Response and Restoration

Strategy SPILL1: Area to be Avoided Compliance and Monitoring

Sustain or improve the maritime industry's compliance with the Area to be Avoided (ATBA).

- Identify vessels in the ATBA that are non-compliant with International Maritime Organization's recommendations and conduct outreach seeking voluntary compliance.
- Report on ATBA compliance for the 2015 calendar year and publish report on the OCNMS website.
- Participate in ONMS initiative to better utilize Automatic Identification System (AIS) vessel data to support resource protection efforts.

Strategy SPILL3: Regional Planning and Training Exercises

Promote improved spill preparedness and response through OCNMS participation in training exercises and regional oil spill planning activities.

- Promote improved spill response preparedness of OCNMS staff through participation in training exercises and regional oil spill planning activities.
- Attend annual Northwest Area Contingency Plan Meeting.

Strategy SPILL5: OCNMS Organizational Response Plan

Develop policies, tools and procedures for OCNMS staff and resource mobilization, OCNMS integration into an Incident Command Structure, and effective consultation on emergency response actions.

- Update the OCNMS incident response plan (IRP), with 2016 training recommendations.
- Plan and conduct IRP training.
- Look for opportunities for staff to participate in an oil spill drill.

Action Plan D2. Climate Change

Strategy CLIM1: Climate Smart Sanctuaries Program

Participate in the Office of National Marine Sanctuaries (ONMS) Climate-Smart Sanctuaries program in order to become certified as a climate-smart sanctuary.

- Engage in Office of National Marine Sanctuary revisions to the Climate Smart Certification process.
- Continue to pursue Climate Smart Certification as the revised standards are finalized.

Strategy CLIM2: Sanctuary as Sentinel Site

Work to establish OCNMS as a sentinel site for long-term climate change research and monitoring in the Pacific Northwest.

- Continue to pursue Sentinel Site designation for ocean acidification and sea level rise per the 2015 recommendation of OCNMS Advisory Council.
- Continue evaluating ecosystem indicators and identify those that could support the sentinel site concept.

Strategy CLIM3: Resilient Ecosystems

Work with natural resource managers and local communities on the Olympic Peninsula to improve the resiliency of ecosystems in the face of climate change impacts.

- Determine what climate-related work (e.g., vulnerability studies, adaptation strategy development, coastal resilience, etc.) has been done, is currently ongoing, or is planned for coastal and marine areas in or near the sanctuary.
- Conduct gap analysis to determine areas where the sanctuary can play an active role, then work with the Advisory Council to prioritize and maximize efficiency of sanctuary efforts

Strategy CLIM4: Communicating Climate Change

Communicate information about climate change and its potential effects on the Sanctuary and Washington's Outer Coast to OCNMS partners and the public.

- Provide local communities and the public with information about potential climate change impacts on the Olympic Coast and efforts to plan for climate change.
- Attend national (NNOCCI) interpretive professional development training to enhance education staff skills at communicating climate change to the public and other educators.

Action Plan D3. Marine Debris

Strategy MD1: Submerged or Floating Debris

Identify, locate and remove lost or abandoned submerged or floating marine debris.

- Support regional efforts to locate and remove submerged or floating debris, primarily through permitting appropriate projects, identification of funding opportunities, reporting by OCNMS field staff, and encouragement of collaborative efforts.
- Based on an updated OCNMS Incident Database, conduct an analysis and evaluate potential management actions that could reduce the number of vessels abandoned in OCNMS and forward recommendations to the Superintendent.
- Assess natural resource impacts from recently documented submerged marine debris off Cape Flattery.

Strategy MD2: Beach Debris

Mitigate impacts of marine debris on coastal beaches.

- Work with federal, state, tribal and other partners to remove, monitor and respond to routine shoreline debris and Japanese tsunami marine debris.
- Support CoastSavers cleanup events with registration site coordination and planning assistance.
- Promote regional efforts to address debris from remote areas.
- Continue shoreline debris monitoring, including entry of data into NOAA's database, analysis of local findings, and outreach (e.g., via web, volunteer messaging).

Action Plan D4. Wildlife Disturbance

Strategy WD3: Marine Mammal Disturbance

Assess the potential for and occurrence of marine mammal disturbance and injury from human activities.

- Support efforts to characterize marine mammal distribution, monitoring of marine traffic and acoustic research.
- Through consultation with US Navy on Northwest Training and Test Range activities, provide recommendations that minimize impacts to marine mammals.

Action Plan D5. Water Quality

Strategy WQP1: Vessel Discharges

Reduce, through regulatory changes, voluntary and outreach measures, or marina facilities improvements, the degradation of water quality caused by vessel wastewater and sewage discharges.

- Attend the Department of Ecology (ECY) hosted Annual Cruise Ship MOU meeting and continue to coordinate on the reporting of sanctuary discharges.
- Consult with EPA on the proposal to issue a general wastewater discharge permit to offshore seafood processors in federal waters off the coast of Washington and Oregon.

Action Plan D6. Habitat Protection

Strategy HP1: Threat Assessment and Mitigation

Assess existing and potential natural and human-caused threats to physical and biogenic marine habitats (e.g., deep sea corals and sponge, kelp and other macroalgae), and collaboratively develop appropriate management measures to protect and conserve physical and biological habitats.

- Complete analysis and reporting on habitat disturbance and recovery surveys on Pacific Crossing submarine cables completed prior to 2007.
- Complete review of 2008 post-remediation video for biological data and draft preliminary report of survey findings.

Strategy HP2: Habitats of Special Importance

Develop criteria to identify habitats of special importance. Collaborate with co-managers to identify and implement management measures necessary for protection of habitats of special importance.

- Continue support for the IPC Habitat Framework, which is a broad geographical application of Coastal and Marine Ecosystem Classification System to the outer coast of Washington using existing data.

Strategy HP3: Invasive Species

Reduce the potential for introduction of invasive species in the sanctuary region, monitor distributions of known invasive species, and support programs to mitigate impacts of invasive species to natural and cultural resources.

- Support WDFW Aquatic Invasive Species program in sampling biofouling and mitigating potential introductions from Japan tsunami marine debris.
- Relay essential information on invasive species identification and risks to citizen science volunteers and other partners.

Action Plan D7. Regional Ocean Planning

Strategy ROP1: Regional Ocean Planning

Investigate how recent initiatives in marine spatial planning can improve sanctuary management by participating in regional ocean planning processes.

- Support Washington State marine spatial planning efforts by assisting in the completion of the seafloor atlas.
- Work with Washington State on a draft marine spatial plan for the outer coast.

Priority Issue E. Understand the Sanctuary's Cultural, Historical and Socioeconomic Significance

Action Plan E1. Maritime Heritage

Strategy MH1: Cultural Resource Conservation

Work collaboratively to locate, inventory, assess, interpret and protect cultural resources in the sanctuary, and develop further the cultural resource components of OCNMS's permitting and compliance program.

- Consult with the Washington Department of Archaeology and Historic Preservation (DAHP), Tribal Historic Preservation Officers, Tribal Cultural Resource staff and the National Park Service on the development of an OCNMS Cultural Resource Management Plan.

Action Plan E2. Socioeconomic Values of Resources in the Sanctuary

Strategy SV2: New Socioeconomic Information

Develop partnerships in order to collect, assemble, and analyze new information about human uses or activities occurring in the sanctuary and their socioeconomic values.

- Work with ONMS and NCCOS to produce products from the 2015 research on coastal recreation, such as socioeconomic profiles of recreational users; summary of importance-satisfaction ratings; economic impact/contribution to local area economies; and non-market economic value of natural resource attributes.
- OCNMS will make these products available to partners and conduct briefings as appropriate.