



OLYMPIC COAST NATIONAL MARINE SANCTUARY

Navigating the Future

Management Plan Review



PRELIMINARY DRAFT ACTION PLANS



Submitted to the OCNMS Advisory Council for review on March 19, 2010

Table of Contents

1. Refining the List of Strategies and Activities	3
2. Draft Action Plans	5
A. Achieve Effective Collaborative and Coordinated Management	6
A1. <i>Collaborative and Coordinated Sanctuary Management Action Plan</i>	6
A2. <i>Community Involvement in Sanctuary Management Action Plan</i>	11
A3. <i>Sanctuary Operations Action Plans</i>	13
B. Conduct Collaborative Research, Assessments and Monitoring to Inform EBM	18
B1. <i>Habitat Mapping and Classification Action Plan</i>	18
B2. <i>Physical and Chemical Oceanography Action Plan</i>	21
B3. <i>Populations, Communities and Ecosystems Action Plan</i>	24
B4. <i>Data Management, Sharing and Reporting Action Plan</i>	29
C. Improve Ocean Literacy	31
C1. <i>K-12 Education Action Plan</i>	31
C2. <i>Higher Education Action Plan</i>	34
C3. <i>Visitor Services Action Plan</i>	36
C4. <i>Community Outreach Action Plan</i>	39
D. Conserve Natural Resources in the Sanctuary	42
D1. <i>Spills Prevention, Preparedness, Response and Restoration Action Plan</i>	48
D2. <i>Climate Change Action Plan</i>	51
D3. <i>Marine Debris Action Plan</i>	53
D4. <i>Wildlife Disturbance Action Plan</i>	56
D5. <i>Water Quality Protection Action Plan</i>	58
D6. <i>Habitat Protection Action Plan</i>	60
D7. <i>Marine Spatial Planning Action Plan</i>	60
E. Understand the Sanctuary’s Cultural, Historical and Socioeconomic Significance	62
E1. <i>Maritime Heritage Action Plan</i>	62
E2. <i>Socioeconomic Values of Sanctuary Resources Action Plan</i>	65
3. OCNMS Goals and Objectives	67
4. Acronyms	70
5. Summary of Action Plan Implementation Scenarios	72

1. Refining the List of Strategies and Activities

Preliminary, rough cost estimates developed by OCNMS staff for each action plan indicate that OCNMS would need an annual base budget ranging between \$4.4 and \$5.3 million (and a staff of approximately 40 people) in order to accomplish all of the work in the draft action plans. OCNMS's current base budget is approximately \$1.5 million, and we currently have the equivalent of 16 full-time staff (including federal employees and contracted support services). In addition to our base budget, which is made up of Operations, Research, and Facilities (ORF) funds, we also receive support from a number of additional sources. These include in-kind support from partners, NOAA ship time, Procurement, Acquisitions and Construction (PAC) funds, and other programmatic funds from other National Oceanic and Atmospheric Administration (NOAA) agencies, e.g., NOAA Coral Research and Conservation Program and Office of National Marine Sanctuaries (ONMS) National Program Priority funding. This amount of money varies widely from one year to the next and is usually for specific purposes (e.g., we received approximately \$200,000 in 2009, but will receive closer to \$1 million in 2010 due to increased ship time).

It is unlikely that over the course of the new management plan's implementation (expected to be 2012-2016) sufficient resources will be available to implement all of the activities identified in action plans as currently drafted. Prior to the first draft of the management plan, some decisions will need to be made regarding the scope of these action plans. Should they be modified to a more achievable mix of activities, or should they continue as drafted? If they remain as drafted, or with only slight modifications, then an implementation strategy will be essential to prioritize activities based on available funding. At the end of this document we have provided the outline of what such an implementation strategy could look like. A similar approach has been used by other national marine sanctuaries in recent revisions to their management plans.

Given limited resources available to both NOAA and our partners, it will be a challenge to decide which activities OCNMS should prioritize during the next 5 to 10 years. Between March and May, 2010, we would like to hear from AC members and the IPC ideas on what activities are the most important for implementation during the life of this management plan. We would like the focus of the May 2010 AC meeting to be on the implementation strategy, or if necessary narrowing down the list of activities that remain in the draft management plan.

To help you begin thinking about what activities are the most important for OCNMS to undertake, OCNMS staff have noted, with a * in the Implementation Scenario Table, activities that we believe need to occur at some level no matter what our budget. These are activities that would:

- Keep our offices open
- Maintain a functioning boat
- Maintain our current staff
- Maintain our support of the AC and IPC

- Maintain our permit program
- Support some basic programs.

A Note on Performance Measures

Performance evaluation is an integral component of OCNMS (and the Office of National Marine Sanctuaries) efforts to improve sanctuary management. The performance measures proposed in this initial draft of the revised management plan are designed to serve three purposes: 1) to better understand OCNMS's ability to meet Sanctuary objectives; 2) to track OCNMS's success at addressing the issues identified in this management plan; and 3) to identify tangible examples of how OCNMS is contributing to the performance targets developed for the Office of National Marine Sanctuaries and carrying out the mission of the National Marine Sanctuaries Act. Beyond these three principal purposes, performance evaluation has many other benefits, including:

- Highlighting successful or not so successful efforts of OCNMS management;
- Keeping the public, Congress, and other interested parties apprised of OCNMS effectiveness;
- Helping OCNMS management identify resource gaps;
- Improving accountability;
- Improving communication among sites, stakeholders, the general public and partners in plan implementation;
- Fostering the development of clear, concise and, measurable outcomes;
- Providing a means to comprehensively evaluate OCNMS management in both the short and long term;
- Fostering an internal focus on problem solving and improved performance;
- Providing additional support for the resource allocation process; and
- Motivating staff with clear targets and a focused direction.

The performance measures proposed in this draft identify both outcomes (desired results) and outputs (products or tools), and each action plan contains one or more of each type. Once finalized, OCNMS staff will monitor these measures over time, collecting data on progress towards the achievement of outcomes and the production of outputs. It is envisioned that results will be compiled for the AC, IPC, and other interested parties on an annual basis. Accomplishments, as well as inability to achieve outcomes or produce outputs, will be reported, including potential strategies for mitigating shortfalls. This internal review represents one of the primary benefits of the performance evaluation process: the ability to provide feedback about why particular actions are or are not meeting stated targets and how they can be altered to do so. This process will mesh, where appropriate, with other programmatic evaluation tools, such as the OCNMS Condition Report.

2. Preliminary Draft Action Plans

OCNMS staff drafted 20 action plans based upon the sub-topics identified by AC working groups and workshops, along with additional AC and IPC comments and staff input. These action plans are grouped together under the original priority management needs identified in 2009 through the MPR issue prioritization process. Treaty Trust Responsibility is not represented here because the government working group addressing this issue has not completed its work.

Action Plan Structure

We have provided a simple structure for the action plans and have consolidated partners, budget and desired outcome statements from associated activities into one set at the strategy level. We will include background information to provide context for each action plan but have not yet developed this information fully. The basic action plan structure is shown below.

A1. _____ ACTION PLAN

Performance Measure Ideas	
Desired Outcome: _____	Links to Goals
Summary of Changes: • _____ • _____	Links to Other Action Plans
Strategy ABC1: _____	
Activity A: Activity B:	

Budget and Timeline (Costs are represented in 1,000s)

Strategies	Year 1 - 2012	Year 2 - 2013	Year 3 - 2014	Year 4 - 2015	Year 5 - 2016
ABC1	\$8	\$37	\$4		
ABC2	\$165	\$165	\$165	\$165	\$165

A. Achieve Effective Collaborative and Coordinated Management

Collaborative and Coordinated Sanctuary Management Action Plan

Community Involvement in Sanctuary Management Action Plan

Sanctuary Operations Action Plans

A1. COLLABORATIVE AND COORDINATED SANCTUARY MANAGEMENT ACTION PLAN

Performance Measures

Outcome: Improved communication, greater collaboration and stronger relationships between OCNMS and other agencies and governments with jurisdiction in the Sanctuary.

Outputs: 1) Annual update to the AC and IPC on progress in implementing the management plan; 2) Increase in the number and substance of collaborative effort between OCNMS and ____.

Summary of Changes:

- Split original action plan into two action plans, creating a new Community Involvement Action Plan
- Moved the strategies related primarily to non-jurisdictional organizations and put them into a Community Involvement Action Plan
- Eliminated references to an internal review of relationships, deciding to concentrate on the external evaluation
- Removed activities that referenced encouraging AC participation by individual partners, feeling that this was covered in the AC strategies
- Focused county level collaboration at the MRC level and moved it to the Community Involvement Action Plan. We currently do not have a specific county government strategy in this action plan, but can add something if requested by the counties.

Links to Goals

Goal A
Goal B

Links to Other Action Plans

Linked to every other action plan

Strategy CCM1: EXTERNAL EVALUATION

Evaluate the effectiveness of OCNMS's institutional relationships in facilitation of management of resources within OCNMS.

Activity A: Conduct an external evaluation by an independent organization in order to obtain fresh insights, and to assess and support programmatic improvements in management of resources in the Sanctuary.

Activity B: Report to the IPC and AC on the findings of the evaluation, and seek advice on potential improvements.

Strategy CCM2: INTERGOVERNMENTAL POLICY COUNCIL

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

Activity A: Implement the ONMS-IPC Memorandum of Agreement (MOA) by supporting quarterly meetings, including an annual meeting with the ONMS Director and OCNMS staff.

Activity B: The Sanctuary Superintendent will brief the IPC annually on the previous year's progress in implementing the OCNMS management plan and on proposed annual operating plan activities for the coming year.

Activity C: In 2012, a review will be conducted by the respective parties to update the ONMS-IPC MOA with the intent to initiate another five year term.

Strategy CCM3: WASHINGTON STATE

Support implementation of the Washington Ocean Action Plan (OAP), the West Coast Governor's Agreement, and other applicable state initiatives.

Activity A: To the extent practicable, provide staff support and other resources to support Washington Ocean Caucus efforts on the Olympic Peninsula.

Activity B: Meet at least once a year with the Washington state Ocean Caucus and Advisory Council state representatives to discuss implementation of the OAP and sanctuary management plan. Identify how OCNMS research and conservation efforts can complement OAP implementation efforts.

Strategy CCM4: ONP/USFWS

Enhance partnerships with the Olympic National Park (ONP) and the Washington Maritime National Wildlife Refuge Complex managed by the U.S. Fish and Wildlife Service (USFWS).

Activity A: Meet with ONP and Washington Maritime NWR leadership no less than twice a year.

Activity B: On an annual basis document areas of collaboration, i.e., joint research, education, visitor services, resource protection and enforcement programs.

Strategy CCM5: UNITED STATES COAST GUARD

Coordinate with the U.S. Coast Guard (USCG) on the protection and management of the Nation's coastal waters and marine resources within OCNMS.

Activity A: Meet annually with the USCG to discuss collaborative efforts undertaken as part of this strategy; jointly prepare an Annual Report on the previous year's activities; and prepare a work plan for the coming year.

Activity B: Develop in collaboration with the USCG an orientation plan for USCG personnel on joint USCG and OCNMS issues.

Activity C: Review and update Memorandum of Agreement MOA-2002-117, prior to its expiration date of September 30, 2012.

Strategy CCM6: UNITED STATES NAVY

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

Activity A: Coordinate with other NOAA agencies in providing NOAA comments on Navy environmental compliance documents.

Activity B: Periodically meet with the Navy to identify ways to share, combine and maximize resources to conduct mutually beneficial research activities (e.g., habitat mapping).

Activity C: Collaborate with the Navy to establish a mechanism through which the Navy and NOAA can work together on an ongoing basis to ensure that Navy activities within Olympic Coast National Marine Sanctuary continue to be carried out in a manner that avoids to the maximum extent practicable any adverse impacts on resources in the Sanctuary.

Strategy CCM7: NOAA FISHERIES

Enhance OCNMS's partnership with NOAA Fisheries.

Activity A: Meet annually with NOAA Fisheries Northwest Region and Northwest Fisheries Science Center leadership.

Activity B: Work with NOAA Fisheries to ensure that the Pacific Fishery Management Council is informed about relevant projects, events and issues in the Sanctuary.

Activity C: Coordinate with NOAA Fisheries on issues of common interest within OCNMS boundaries, particularly ecosystem and habitat related research, policy and management actions, e.g., essential fish habitat and ecosystem-based fisheries management plans.

Activity D: On an annual basis document areas of collaboration, i.e., joint research, education, resource protection and enforcement programs.

Strategy CCM8: NATIONAL MARINE SANCTUARY SYSTEM

OCNMS will fully participate as a member of the National Marine Sanctuary System (NMSS).

Activity A: Participate in annual national and regional leadership and programmatic meetings.

Activity B: Respond to agency requests for data and information.

Activity C: Locally implement national and regional initiatives.

Activity D: Provide subject matter expertise to regional, national and international initiatives as appropriate.

Activity E: Request and apply national and regional subject matter expertise to OCNMS level issues.

Strategy CCM9: CANADIAN GOVERNMENT

Work with the Canadian government to address transboundary issues.

Activity A: Work with US and Canadian agencies, tribes and First Nations, and conservation organizations to identify opportunities for advancing ecosystem-wide protection, research, education and outreach programs initiatives within the Juan de Fuca Eddy International Marine Ecosystem.

Activity B: Work with Parks Canada and British Columbia Parks to evaluate options for improving transboundary coordination and cooperation on shared objectives with adjoining Canadian marine protected areas (Pacific Rim National Park Preserve and Race Rocks Ecological Reserve/Marine Protected Area), including potential designation as a sister sanctuary through the Office of National Marine Sanctuaries International Program.

Activity C: Work with Fisheries and Oceans Canada on maritime safety and oil spill response issues through the Canada/U.S. Cooperative Vessel Traffic System (CVTS) and the Pacific States/British Columbia Oil Spill Task Force.

Key Partners: Parks Canada, British Columbia Parks, Fisheries and Oceans Canada, Big Eddy International Marine Ecosystem Initiative and member organizations, Hoh, Makah and Quileute tribes, Quinault Indian Nation, Northwest Indian Fisheries Commission, Washington state department of Natural Resources, Fish and Wildlife, Ecology, Governor's Office, Washington Ocean Caucus, Olympic National Park, Washington Maritime NWR Complex, U. S. Coast Guard, U. S. Navy, NOAA Fisheries-Northwest Region, Northwest Fisheries Science Center, Pacific Fishery Management Council, NOAA Office of National Marine Sanctuaries (ONMS) and the ONMS West Coast Regional Office (WCRO)

Budget and Timeline

<i>Strategies</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
CCM1 Evaluation of OCNMS relationships	\$8	\$37	\$4		
CCM2 Olympic Coast Intergovernmental Policy Council Partnership	\$165	\$165	\$165	\$165	\$165
CCM3 State of Washington Partnership	\$9	\$9	\$9	\$9	\$9
CCM4 Olympic National Park and WA Maritime Wildlife Refuge Complex Partnership	\$8	\$8	\$8	\$8	\$8
CCM5 US Coast Guard Partnership	\$9	\$9	\$9	\$9	\$14
CCM6 US Navy Partnership	\$16	\$9	\$9	\$9	\$9
CCM7 NOAA Fisheries Partnership	\$24	\$24	\$24	\$24	\$24

CCM8 Participation in National Marine Sanctuary System	\$107	\$107	\$107	\$107	\$107
CCM9 Canadian Government	\$8	\$8	\$8	\$8	\$8
Total	\$354	\$376	\$343	\$339	\$344

A2. COMMUNITY INVOLVEMENT IN SANCTUARY MANAGEMENT ACTION PLAN

Performance Measure Ideas

Desired Outcome: Increased involvement of communities on the Olympic Peninsula in Sanctuary management issues and ocean conservation

Outputs: 1) Annual Community Open House jointly hosted by OCNMS and AC; 2) Increased public attendance at AC meetings by [X] each year

Summary of Changes:

- This is a new action plan that contains the AC, MRC and grassroots organization partnership strategies.
- Removed reference of a specific goal of 22-seat AC attendance

Strategy COM1: ADVISORY COUNCIL

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

Activity A: Work to ensure that all Advisory Council seats (both voting and non-voting) are filled and improve AC member attendance.

Activity B: Encourage stronger connections between Advisory Council members and local communities by working with Advisory Council members to increase outreach efforts:

- Encourage every AC member to post a link to their organization's activities calendar on the OCNMS events calendar.
- Encourage every AC member to forward the AC meeting announcement to their organization's distribution list.
- Encourage AC members to include articles explaining the value of their involvement in the SAC in their organization's outreach publications.
- Work with AC members and OCNMS to host and attend social events in local communities on the Outer Coast (e.g., an annual open house).

Activity C: Actively involve the Advisory Council in implementation of the management plan:

- Identify strategies in the management plan that particular AC members, due to their skills and interests, could help OCNMS implement. Put these AC members in contact with the staff in charge of these strategies.
- Solicit the AC's assistance in implementing management plan strategies through the establishment of standing subcommittees or working groups, as appropriate under the AC charter.

Links to Goals Goal B

Links to Other Action Plans Community Outreach Marine Debris Data Management, Sharing & Reporting Climate Change Habitat Protection Marine Spatial Planning

- Periodically report to the AC on management plan implementation, including status of performance measures and progress on reaching milestones.
- Encourage the AC to evaluate and provide advice at least annually on the success of management plan implementation efforts.

Strategy COM2: MARINE RESOURCE COMMITTEES

Continue and increase, to the extent practicable, collaborative marine stewardship efforts with Clallam, Jefferson and Grays Harbor counties.

Activity A: Participate in the North Pacific Coast Marine Resources Committee.

Activity B: Participate in the Grays Harbor Marine Resources Committee.

Strategy COM3: COMMUNITY INVOLVEMENT

Continue and increase, to the extent practicable, collaborative efforts with grassroots organizations on the Olympic Peninsula.

Activity A: Continue participation in/sponsorship of the Washington Clean Coast Alliance.

Activity B: Maintain and develop partnerships with environmental NGOs such as Surfrider, the Nature Conservancy, Oceana, the Marine Biology Conservation Institute, Ecotrust and others in order to build support for marine conservation efforts in the Sanctuary and the California Current ecosystem.

Activity C: Increase face-to-face interactions and develop partnerships with organizations representing commercial and recreational fishing industries and the shipping industry.

Key Partners: Marine Conservation Biology Institute, Surfrider, the Nature Conservancy, Oceana, Ecotrust, Olympic Coast Alliance, other non-governmental organizations, Westport Charterboat Association, Marine Exchange of Puget Sound, and other marine shipping and coastal fishing organizations, Olympic Coast National Marine Sanctuary Advisory Council and its members, North Pacific Coast Marine Resources Committee, Grays Harbor Marine Resources Committee, Clallam County, Jefferson County, Grays Harbor County.

Budget and Timeline

<i>Strategies</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
COM1 OCNMS Advisory Council Partnership	\$51	\$51	\$51	\$51	\$51
COM2 Marine Resource Committees	\$13	\$13	\$13	\$13	\$13
COM3 Community Involvement	\$17	\$17	\$17	\$17	\$17
Total	\$81	\$81	\$81	\$81	\$81

A3. SANCTUARY OPERATIONS ACTION PLAN

Performance Measure Ideas

Desired Outcome: Improved efficiency and effectiveness in Sanctuary management capacities and capabilities

Outputs: 1) Long-range facilities plan updated by year two of the management plan; 2) Replace RV Tatoosh with a more capable research platform; 3) Ensure OCNMS presence on Sanctuary waters [X] days per year; 4) Increase retention of OCNMS volunteers to an average of [X] years.

Summary of Changes:

- Infrastructure related to doing a carbon footprint audit is now in the Climate Change Action Plan
- Created a volunteer specific strategy
- Significant consolidation of activities to reduce redundancy and simplify text
- Consolidated enforcement strategies
- Many of the ATBA activities were consolidated in the Spills Action Plan
- Incorporated LRC Cross-Cutting Strategy #1 (Response to Unusual Events) as an activity under OPS10 Management Plan Implementation Reporting

Links to Goals Goal H

Links to Other Action Plans

Community Outreach
Spills
Collaborative & Coordinated
Management

Strategy OPS1: VESSEL INFRASTRUCTURE AND OPERATIONS

Maintain a presence on the waters of the OCNMS to ensure effective and efficient sanctuary operations.

Activity A: Develop annual operational plans for aircraft and vessels (NOAA, charter) to support the revised management plan.

Activity B: Maintain and implement operational guidelines and vessel operator and crew member qualification plan.

Activity C: Implement field operations to address activities identified in Action Plans.

Strategy OPS2: FACILITIES

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

Activity A: Provide office, field station, interpretive, and warehouse facilities.

Activity B: Update and implement OCNMS long-range facilities plan. Evaluate OCNMS's current office, lab and warehouse space and determine if changes need to be made to the plan to meet identified program needs.

- Evaluate current office spaces to determine if they meet future needs as articulated in the revised management plan.
- Evaluate need to refurbish/replace OCNMS's Neah Bay field station
- Evaluate the need for laboratory infrastructure
- Evaluate OCNMS pier space needs
- Evaluate need for public meeting space and support infrastructure
- Evaluate options for a satellite office on the Outer coast and/or a visitor center in the southern part of the Sanctuary.
- Explore opportunities to work with existing facilities on the Outer Coast, such as the University of Washington Olympic Natural Resources Center, in order to maintain an OCNMS staff presence on the Outer Coast.

Activity C: Develop the infrastructure to support and implement OCNMS's interpretive plan.

Activity D: Implement OCNMS requirements of ONMS small boats requirements studies, as amended (including scheduled replacements of *R/V Tatoosh* and rigid hull inflatable boat).

Strategy OPS3: ANNUAL PLANNING

Prepare Annual Operating Plans and Annual budgets in support of Management Plan Activities.

Activity A: Produce an Annual Operating Plan and Budget, per ONMS guidance and timelines.

Activity B: Oversee budget, contracting and acquisitions in compliance with Federal Acquisition Regulations.

Activity C: Submit required reports to ONMS headquarters.

Strategy OPS4: SAFE OPERATIONS

Maintain and, where appropriate, further develop procedures to ensure safe and responsible sanctuary operations.

Activity A: Develop, maintain and periodically test an OCNMS continuity of operations plan

Activity B: Ensure compliance with NOAA directives, safety and workplace regulations, including those related to vessel safety.

Activity C: Ensure compliance with NOAA directives and local, state and federal environmental compliance regulations.

Strategy OPS5: STAFFING

Recruit, retain and support staff in order to support ongoing programs and achieve the goals and objectives presented in the management plan.

Activity A: Support and maintain appropriate staffing to implement the OCNMS management plan.

Activity B: Contract for support services that are needed to implement the OCNMS management plan that cannot be filled by limited federal positions.

Activity C: Improve training opportunities for staff, with a priority for training that will allow the implementation of the management plan.

Activity D: Conduct an internal evaluation of the OCNMS information technology (IT) plan on an annual basis and work to ensure that IT services are adequate to support staff and program needs.

Strategy OPS6: VOLUNTEER PROGRAM

Maintain and increase OCNMS's volunteer programs in order to build connections with the community, and achieve the goals and objectives presented in the management plan.

Activity A: Actively recruit and train volunteers to promote community stewardship and to assist in the implementation of the OCNMS management plan

Activity B: Improve training opportunities for volunteers, with a priority for training that will allow the implementation of the management plan.

Strategy OPS7: PERMITTING

Implement the OCNMS permitting program based on OCNMS and national program regulations, guidance and performance measures; as well as other applicable laws, regulations and agreements.

Activity A: Review permit applications, conduct consultations, draft and issue permits, and maintain records in the national database.

Activity B: Brief the AC and IPC on major permit applications that constitute new or major activities in the sanctuary.

Activity C: Report to the Coastal Treaty Tribes, AC and IPC annually on the status of permit applications to OCNMS and associated tribal consultations.

Activity D: Formally articulate the current tribal consultation process for permits.

Activity E: Work with the state and other interested agencies and/or tribes to develop a programmatic agreement on how OCNMS interprets and meets Section 106 requirements in the context of sanctuary historic resources

Strategy OPS8: VOLUNTARY COMPLIANCE

Promote knowledge and understanding of OCNMS's regulations, along with other regulations and voluntary programs that apply to sanctuary waters.

Activity A: Assess opportunities for educational signage about regulations at access points to the Sanctuary (e.g., Neah Bay and La Push boat ramps)

Activity B: Develop materials to support interpretive enforcement and other efforts to promote public awareness of Sanctuary regulations.

Activity C: Distribute the ATBA flyer to the maritime industry through direct mail and by including in the Vessel Traffic Service Puget Sound (VTSPS) Users Manual.

Activity D: Develop and distribute education materials on OCNMS's overflight regulation to distribute at air shows, etc.

Strategy OPS9: ENFORCEMENT

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

Activity A: Develop training opportunities for law enforcement professionals to promote understanding of cultural and natural resources and the regulations that protect them.

Activity B: Maintain bi-annual meetings with law enforcement staff (as described in the NOAA Fisheries Office of Law Enforcement 2009 report) and encourage increased presence of NOAA OLE and WDFW law enforcement in the Sanctuary.

Activity C: Work with NOAA OLE and the ONMS to clarify OCNMS enforcement needs.

Activity D: Promote active enforcement of the no-discharge regulation as it applies to abandoned vessels.

Activity E: Encourage vessel owners to carry insurance that would cover the salvage of their vessel if it sank in the sanctuary. Discuss sanctuary regulations and concerns with insurance companies to evaluate issues related to the issuance of insurance policies that cover salvaging of sunken vessels.

Activity F: Engage USCG on developing removal strategies at the earliest opportunity on vessel incidents that may potentially result in vessel sinkings within Sanctuary waters through use of the Oil Spill Liability Trust Fund (OSLTF) to prevent or mitigate oil pollution impacts.

Activity G: Work with NOAA Fisheries, Pacific Fishery Management Council, Coastal Treaty Tribes and other partners to monitor compliance with EFH regulations in the Sanctuary.

Strategy OPS10: MANAGEMENT PLAN IMPLEMENTATION REPORTING

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

Activity A: Report annually on the implementation of the management plan, especially on performance measures identified in the management plan.

Activity B: Report annually on OCNMS's response to emerging issues that were not anticipated in the management plan.

Activity C: Annually document any clarifications, lessons learned, enhancements or recommended changes to existing strategies and activities.

Activity D: Develop outreach materials that can be used by OCNMS staff, AC and IPC members to convey information about management plan implementation to partners, stakeholders and constituent groups.

Activity E: Collaborate with regional natural resource management agencies to develop a response strategy and/or plan for unusual natural resource events.

Key Partners: Advisory Council, Olympic Coast Intergovernmental Policy Council, West Coast sanctuaries, Makah, Quileute, Hoh Tribes and Quinault Indian Nation, Office of National Marine Sanctuaries, NOAA Safety and Environmental Compliance Office

(SECO), NOAA Small Boat Program, NOAA Workforce Management Office, NOAA Acquisition and Grants Office, Feiro Marine Life Center, Makah Cultural Museum, Ocean Shores Visitor Center, COASST program, State of WA, ONP, FWS, ACOE, SHPO, NMFS, USCG, WDFW, NOAA Office of Law Enforcement, Aircraft Owners and Pilots Association, Washington Pilots Association and others, WA Department of Ecology, NOAA Fisheries, WA Department of Natural Resources, WA Department of

Budget and Timeline

<i>Strategies</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
OPS1 OCNMS Vessel Infrastructure and Operations	\$148	\$306	\$306	\$306	\$306
OPS2 Infrastructure	\$211	\$165	\$165	\$165	\$165
OPS3 Annual Operating Plan Process	\$40	\$40	\$40	\$40	\$40
OPS4 Safety Programs	\$12	\$12	\$12	\$12	\$12
OPS5 Staffing	\$104	\$104	\$104	\$104	\$104
OPS6 Volunteer Programs	\$92	\$92	\$92	\$92	\$92
OPS7 Permitting Program	\$48	\$30	\$30	\$30	\$30
OPS8 Voluntary Compliance	\$32	\$16	\$16	\$16	\$16
OPS9 Enforcement	\$18	\$25	\$18	\$18	\$18
Total	\$705	\$790	\$783	\$783	\$783

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

Habitat Mapping and Classification Action Plan

Physical and Chemical Oceanography Action Plan

Populations, Communities and Ecosystems Action Plan

Data Management, Sharing and Reporting Action Plan

B1. HABITAT MAPPING AND CLASSIFICATION ACTION PLAN

Performance Measure Ideas

Desired Outcome: Improved understanding of OCNMS habitat

Outputs: 1) Conduct at least one habitat mapping cruise each year. 2) Mapping data available in [X] format and within [Y] days of analysis; 3) Habitat maps and coastal atlas covering 50% of the sanctuary published by year five.

Summary of Changes:

- Activities under MAP2 and MAP4 have been condensed/consolidated

Links to Goals

Goal C

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.

Links to Other Action Plans

Collaborative & Coordinated
Management
Marine Debris
Marine Spatial Planning
Habitat Protection

Activity A: Participate in regional forums to advance alignment and collaboration with broader mapping efforts, including initiatives of the Washington State Seafloor Mapping Committee and the West Coast Governors' Agreement on Ocean Health.

Activity B: Establish standards for the collection, assessment, verification, and application of seafloor mapping data in collaboration with regional forums.

Strategy MAP2: SEAFLOOR HABITAT MAPPING

Continue efforts to map seafloor habitats.

Activity A: Conduct seafloor habitat mapping using the following considerations:

1. collect high quality, high-resolution sonar data in areas where no seafloor data exists
2. map contiguous areas to allow the development of completed habitat maps
3. map hard substrate areas and other areas of probable or known important biogenic habitat

4. map habitats with known or potential use by species of concern (threatened endangered, overfished, and/or vulnerable species)
5. map coastal areas less than 10 m water depth, to provide information on habitats and natural resources that are most likely to be affected by oil spills
6. utilize opportunities to collect partial sonar data types (e.g., sidescan only)
7. re-map areas where inadequate seafloor data exists to meet quality standards for product development
8. utilize opportunities to leverage ship time, equipment, and mobilization expenses

Activity B: Verify/ground truth sonar data through the collection and analysis of video, physical samples, or other methodologies.

Strategy MAP3: HABITAT CLASSIFICATION

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

Activity A: Apply the classification scheme of Greene et al. (1999) and link with NOAA's Coastal and Marine Ecological Classification Structure.

Activity B: Analyze data to generate derivatives of substrate data and geological features (e.g., seafloor morphology, slope, rugosity, stability/disturbance, tectonic features (faults) and submarine landslides).

Activity C: Combine habitat characterization information (as available) with the biological, chemical, and ocean processes information to further our understanding of habitat use.

Strategy MAP4: MAPPING PRODUCTS

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

Activity A: Develop digital mapping products that include fully interpreted, classified and attributed geologic and habitat maps.

Activity B: Provide Federal Geographic Data Committee standard metadata for all maps and map products.

Activity C: Develop GIS products using ESRI software for export to open source GIS and Google Earth software, as well as other formats useful for public use and outreach.

Activity D: Make mapping data available for integration into and use for multiple applications, such as:

- marine spatial planning;
- fisheries management;
- living marine resource management;
- assessing climate change and sea level change impacts;
- improving earthquake and tsunami hazard assessments;
- forecasting storm inundation and coastal erosion; and
- siting of offshore infrastructure (e.g., aquaculture, renewable energy facilities).

Key Partners: NOAA (NOS and NMFS), U.S. Geological Service, USFWS, Washington departments of Fish and Wildlife, Ecology, and Natural Resources, Makah, Quileute, and Hoh tribes, Quinault Indian Nation, Olympic Coast Intergovernmental Policy Council, Northwest Indian Fisheries Commission, Washington State Seafloor Mapping Consortium, West Coast Governors’ Agreement on Ocean Health Seafloor Mapping Action Coordination Team, Washington Coast Sustainable Salmon Partnership, Washington departments of Natural Resources, Ecology, and Fish and Wildlife, other NGOs, universities, international entities, U.S. Navy

Budget and Timeline

<i>Strategies</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
MAP1 A Participation	\$11	\$11	\$11	\$11	\$11
MAP2 A Seafloor Habitat Mapping	\$37	\$218	\$218	\$218	\$218
MAP3 A Classification	\$42	\$68	\$68	\$68	\$68
MAP4 A Habitat Maps	\$30	\$30	\$56	\$56	\$56
Total	\$120	\$327	\$353	\$353	\$353

B2. PHYSICAL AND CHEMICAL OCEANOGRAPHY ACTION PLAN

Performance Measure Ideas

Desired Outcome: Improved understanding of overall water quality in the Sanctuary

Outputs: [annual? monthly?] monitoring for [XYZ] parameters (include hypoxia parameters, specific contaminants (HABs), carbonate (ocean acidification) and water quality parameters)

Summary of Changes:

- More specificity added to activities under OCEO1 (specified continuation of coastal mooring program)
- Removed activity specifying the seeking of funds to hire an oceanographer
- Added activity about expanded hypoxia monitoring
- Integrated original “oceanographic processes” strategy into the other strategies, so now there are 4, not 5, strategies

Links to Goals

Goal C

Links to other Action Plans

Climate Change
Populations, Communities &
Ecosystems
Collaborative & Coordinated
Management
Water Quality Protection

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, expand this monitoring to include additional instrumentation (including acoustic monitoring), parameters, locations, year-round data collection, and real-time data transmission.

Activity A: Monitor coastal waters using seasonally-deployed (spring through fall), instrumented moorings.

- Continue use of established seasonal mooring locations.
- Collect data on temperature, salinity, dissolved oxygen, currents, chlorophyll (via fluorometer).
- Calibrate instrumentation annually, or as necessary.
- Process data and make available via a central, publically accessible web site.

Activity B: Consult with partners to determine research and resource management questions that can be addressed with existing or expanded water quality monitoring efforts.

Activity C: Seek funding for additions and improvements to the OCNMS coastal water quality monitoring program. Program improvements could include:

- additional sensors or parameters,
- expanded spatial coverage,
- expanded seasonal coverage, potentially to year-round data collection, and
- real-time data transmission.

Activity D: Support efforts to expand regional oceanographic monitoring programs (e.g., NANOOS, NDBC, UW), share data, and model oceanographic processes.

- Support the NANOOS coastal sensor array (2 buoys, 1 glider) at La Push.
- Participate as a partner in NANOOS meetings and conference calls.
- Promote NANOOS as a data resource for OCNMS partners and the public.
- Provide a link to NANOOS on the OCNMS website.

Strategy OCEO2: HYPOXIA

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

Activity A: Monitor, assess, and understand spatial and temporal distribution of hypoxic conditions and their impacts on living organisms.

Activity B: As feasible, expand monitoring to include additional locations, year-round data collection, and real-time data transmission, such as will be available with the La Push NANOOS buoy.

Activity C: Promote collaborative efforts with the outer coast trustees and fishermen to collect field observations and conduct additional monitoring in response to identified hypoxic conditions.

Strategy OCEO3: OCEAN ACIDIFICATION

Investigate changing ocean chemistry, acoustics and other physio-chemical changes and impacts to living organisms associated with climate change.

Activity A: Collaborate in regional efforts to monitor and model carbonate system variables to improve understanding of the extent and severity of ocean acidification.

Activity B: Collaborate in research on the effects of climate change on calcifying and non-calcifying organisms including deep sea corals, plankton, intertidal invertebrates, and on trophic relationships between these species.

Strategy OCEO4: HARMFUL ALGAL BLOOMS

Collaborate in regional efforts to research and monitor harmful algal blooms (HABs).

Activity A: Work within the Olympic Region Harmful Algal Blooms (ORHAB) partnership and support efforts to monitor, detect, understand and predict HABs along west coast.

Activity B: Use known HAB events as opportunities to encourage and conduct research and monitoring to characterize the initiation, dynamics and extent of impacts to natural resources and humans.

Key Partners: ORHAB, ECOHAB-PNW, NOAA (NOS, NWFSC, PMEL, NDBC< NCCOS), NANOOS, NASA, Makah, Quileute and Hoh Tribes, Quinault Indian Nation, Washington departments of Ecology, Health and Fish and Wildlife and Natural Resources, U.S. EPA, IPC, West Coast Governors' Agreement on Ocean Health Research Action Coordination Team University of Washington, Oregon State University/PISCO, Olympic National Park, universities, international entities, NGOs

Budget and Timeline

<i>Strategies</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
OCEO1 Coastal Mooring Program	\$286	\$286	\$286	\$286	\$286
OCEO2 Hypoxia	\$31	\$31	\$31	\$31	\$31
OCEO3 Ocean Acidification	\$22	\$22	\$22	\$22	\$22
OCEO4 Harmful Algal Blooms	\$18	\$18	\$18	\$18	\$18
Total	\$357	\$357	\$357	\$357	\$357

B3. POPULATIONS, COMMUNITIES AND ECOSYSTEMS ACTION PLAN

Performance Measure

Desired Outcomes: 1) Improved understanding of health of and changes in Sanctuary ecosystems; 2) More adaptive, ecosystem-based approach to research and management in the Sanctuary

Outputs: 1) Publish formal report of evaluation of indicator species used by OCNMS routine monitoring; 2) Make available in the next OCNMS Condition Report, abundance and health assessment data for all indicator species identified for the Sanctuary; 3) Include output measure here getting at EBM outcome above.

Summary of Changes:

- Consolidated invasive species into one Habitat Protection strategy
- Consolidated ECO1 into one activity
- Deleted activity to support PISCO intertidal surveys – minimal effort, uncertain future
- Consolidated Mammal Stranding Network into two activities based on current network organization
- Consolidated ECO9 activities; moved one activity into a climate change action plan
- Deleted ECO10, Activity G

Links to Goals Goal C

Links to other Action Plans Habitat Mapping & Classification Data Management, Sharing & Reporting Collaborative & Coordinated Management Habitat Protection

Strategy ECO1: WATER COLUMN COMMUNITIES

Collaborate in investigations of water column communities.

Activity A: Encourage and conduct monitoring of pelagic larval phases of species of commercial and ecological significance (e.g., Dungeness crab, razor clams, mussels, euphausiids, copepods).

- Improve characterization of locations in water column, seasonal abundance and distribution of pelagic life phases of key marine species.
- Monitor pelagic zooplankton and forage fish abundance during on-water seabird and marine mammal surveys.
- Extend to year round monitoring, as feasible.

Strategy ECO2: INTERTIDAL

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

Activity A: Coordinate with Olympic National Park (ONP) to evaluate the utility of continued monitoring of sand and rocky intertidal sites on Makah and Quinault reservations following ONP protocols.

- As recommended, conduct monitoring of sand and rocky intertidal sites on Makah and Quinault reservations to complement monitoring of ONP shores.
- Incorporate OCNMS-generated data into a publically available database.
- Collaborate to report the findings of intertidal monitoring efforts. .

Activity B: Monitor rocky intertidal sites on Makah and Quinault reservations following the Multi-Agency Rocky Intertidal Network (MARINe) protocols.

- Incorporate data into the MARINe database.
- Collaborate to report the findings of intertidal monitoring efforts.

Activity C: Expand intertidal monitoring efforts, as feasible, to assess indicator species and parameters for particular stressors (e.g., climate change, competition, functional group/trophic coverage).

- This activity supports adaptive management that is responsive to emerging concerns.
- Expanded monitoring also may be recommended by needs of or findings in an OCNMS Condition Report.

Strategy ECO3: SUBTIDAL

Characterize the habitats and biota of the nearshore subtidal zone.

Activity A: Develop a Subtidal Monitoring Plan based on recommendations of Subtidal Workshop hosted by OCNMS in 2002.

Activity B: Based on the Subtidal Monitoring Plan, implement subtidal habitat characterization and monitoring projects as resources become available.

Activity C: As indicator species and parameters for particular stressors (e.g., climate change, competition, functional group/trophic coverage) are identified, establish subtidal monitoring efforts, as feasible.

Strategy ECO4: BENTHIC

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

Activity A: Collect data on abundance and distribution of benthic organisms, including during conduct of seafloor mapping, coral and sponge surveys, and benthic recovery studies (i.e., from submarine cable installation). Maintain a database for benthic organism distribution, abundance, and other quantifiable measures.

Activity B: Conduct surveys to identify distribution and abundance, characterize ecosystem values, and assess the condition of deep sea biogenic communities, e.g., corals and sponges.

Strategy ECO5: FISH

Improve characterization of spatial and temporal distribution, abundance, and habitat use of fish.

Activity A: Collaborate with tribal, state, federal, and university researchers to assess the distribution, abundance, and productivity of forage fish populations, including documentation of intertidal areas used for spawning.

Activity B: Form an Advisory Council working group to develop recommendations for pilot project (s) to investigate the abundance and distribution of fish.

Activity C: Continue partnership with Reef Environmental Education Foundation (REEF) for monitoring subtidal sites for fish and macroinvertebrate trends.

Strategy ECO6: MARINE BIRDS

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

Activity A: Work with partners to evaluate past efforts for at-sea surveys and to make recommendations for future surveys for temporal and spatial abundance and on-water distribution of marine birds.

- Key partners include WDFW, NMFS, UW, and USFWS.
- Evaluation should include survey methodology (e.g., distance sampling), area coverage, data management and analysis, and reporting.
- Data gaps and information need should be identified. Potential information needs include:
 - ◆ Forage areas used throughout the year
 - ◆ Migration periods
 - ◆ Non-breeding seasons
 - ◆ Parallel monitoring of pelagic zooplankton and forage fish abundance during on-water seabird surveys.
- Conduct a power analysis of existing data to determine the minimum level of effort necessary to meet survey objectives (e.g., every 3-5 years vs. annual).

Activity B: Following recommendations developed through evaluation of past survey efforts, conduct at-sea monitoring of marine bird species.

Activity C: Assist USFWS in monitoring abundance, productivity, and habitat use at coastal seabird colonies.

Activity D: Continue to participate in Coastal Observation and Seabird Survey Team (COASST) as a regional coordinator of volunteers.

Activity E: Collaborate in update of the Catalog of Washington Seabird Breeding Colonies for colonies adjacent to and within OCNMS.

Activity F: Work with partners to establish a small number of coastal viewing sites to produce colony maps and periodic counts of nesting seabirds at easily-viewed coastal colonies.

Strategy ECO7: MARINE MAMMALS

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

Activity A: Participate in annual sea otter census.

Activity B: Collaborate in studies designed to detect the influence of sea otters on the distribution/abundance of prey species and any resulting changes in kelp habitat.

Activity C: Monitor temporal and spatial abundance and distribution of marine mammals, including identification of foraging areas used throughout the year.

Collaborate in assessment of need for expanded efforts to assess migration and non-breeding time periods.

Activity D: Monitor underwater acoustic environment and, as feasible, responses of marine mammals to acoustic disturbance.

Strategy ECO8: STRANDING NETWORKS

Participate in the regional marine mammal incident response networks.

Activity A: Collaborate with other Northwest Marine Mammal Stranding Network participants to share information and resources. Goals of the Network are:

- to promote timely response and investigation of stranding events,
- to minimize direct interactions between stranded marine mammals, humans and domestic animals,
- to maximize collection of biological specimens for examination and other data, and
- to improve the detection of signs of human interactions that may have contributed to stranding events.

Activity B: Participate in the regional sea otter stranding network.

Strategy ECO9: ECOSYSTEM PROCESSES

Collaborate in development and application of a comprehensive ecosystem model that identifies indicator species, trophic networks, and physical-biological coupling.

Activity A: Evaluate indicator species used by OCNMS and regional co-managers (i.e., routine monitoring, 2008 OCNMS Condition Report).

- Base this evaluation on an established or tested framework for selection of indicator species for ecosystem status assessment.
- Consult with co-managers and ecosystem model experts.
- Consider trophic networks and physical-biological coupling.
- Incorporate traditional ecosystem knowledge, as appropriate.
- Develop a formal report to summarize this evaluation.
- Include recommendations for a revised set of indicator or sentinel species for which monitoring can be conducted or encouraged by OCNMS.

Activity B: Based on newly recommended indicator species, evaluate research and monitoring priorities for work conducted and/or encouraged by OCNMS, and recommend changes, if appropriate.

Activity C: Use defined indicators to evaluate ecosystem status and trends, and include this information in the next OCNMS Condition Report.

Activity D: Summarize the removal histories and biological metrics (length, weight, or age compositions) for indicator species.

Key Partners: NOAA (NMFS, NOS, PMEL, NWFSC), USFWS, ONP, USGS, USCG, MMS, U.S. Navy, OSU/PISCO, DFO, MARINe Washington departments of Fish and Wildlife, Ecology, and Natural Resources, Olympic Coast Intergovernmental Policy Council, OCNMS Advisory Council, Makah, Quileute and Hoh tribes, Quinault Indian

Nation, Marine Mammal Stranding Network, West Coast Governors' Agreement on Ocean Health Ecosystem Indicators Action Coordination Team, Washington State Ocean Caucus, Puget Sound Partnership, REEF, COASST, outer coast marine resources committees (Grays Harbor and North Pacific Coast), NGOs, Juan de Fuca International Marine Conservation Initiative, universities and colleges, coastal communities, international entities

Budget and Timeline

<i>Strategies</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
ECO1 Populations, Communities and Ecosystems – Water Column Communities		\$41	\$41	\$41	\$41
ECO2 Populations, Communities and Ecosystems – Intertidal	\$14	\$28	\$28	\$28	\$28
ECO3 Populations, Communities and Ecosystems – Subtidal	\$10	\$70	\$70	\$70	\$70
ECO4 Populations, Communities and Ecosystems – Benthic	\$337	\$34	\$337	\$34	\$337
ECO5 Populations, Communities and Ecosystems – Fish	\$10	\$10	\$10	\$10	\$10
ECO6 Populations, Communities and Ecosystems – Marine Birds	\$50	\$78	\$137	\$82	\$82
ECO7 Populations, Communities and Ecosystems – Marine Mammals	\$13	\$110	\$225	\$110	\$90
ECO8 Populations, Communities and Ecosystems – Stranding Network	\$17	\$17	\$17	\$17	\$17
ECO9 Populations, Communities and Ecosystems – Ecosystem Processes	\$23	\$1	\$71		
Total	\$474	\$389	\$936	\$392	\$675

B4. DATA MANAGEMENT, SHARING AND REPORTING ACTION PLAN

Performance Measure Ideas

Desired Outcome: Improved awareness of the status of OCNMS resources and the Sanctuary's overall ecological health

Outputs: 1) Complete the development of a data management plan by [date]; 2) Publish condition report prior to next MPR; 3) Research and monitoring data collected by OCNMS made publicly available no later than [X months/years] from the collection date.

Summary of Changes:

- Combined DAT1, Activities B and C
- Combined DAT2, Activities B, C and H.
- Removed DAT2, Activity D
- Removed DAT2, Activity G

Links to Goals

Goal C

Strategy DAT1: DATA QUALITY CONTROL AND MANAGEMENT

Develop and promote data management procedures.

Activity A: Develop a data management plan that outlines data process and management protocols. Data management plan should define quality control and metadata development procedures during data collection, processing, and management.

Activity B: Encourage, and when OCNMS has authority ensure, use of federal guidelines for data reporting (e.g., as promoted by the Biological and Chemical Oceanography Data Management Office) for research in the Sanctuary.

Links to other Action Plans

Collaborative & Coordinated Management
Habitat Mapping & Classification
Physical & Chemical Oceanography
Populations, Communities & ecosystems
Climate Change
Marine Spatial Planning

Strategy DAT2: DATA DISTRIBUTION

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

Activity A: For data that is collected and managed by OCNMS, ensure timely and wide distribution of data, as data management procedures allow.

- Emphasis should be placed on release of data collected in the past.
- New data should be made available in a timely manner (i.e., as it is processed).

Activity B: Encourage access to data, data derivatives, and data summaries through widely-used and appropriate web-based data portal(s).

- Collaborate with partners who collect data from the Sanctuary to identify common databases, data fields, etc. to develop standardized database(s) to facilitate data retrieval, when feasible or practical.

- Participate in West Coast Observing System efforts for metadata development and data upload to the NOAA Coastal Data Development Center (NCDDC) web site for public access

Activity C: Provide links on the OCNMS web site to data portals that host OCNMS data and notify regional natural resource managers of these portals.

Activity D: Provide data managed by OCNMS to collaborators for their reports and summaries, and assist collaborators with the development of reporting products.

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.

Activity A: Form an Advisory Council working group and consult with the Olympic Coast Intergovernmental Policy Council to periodically assess OCNMS research priorities and re-align them with management priorities of OCNMS.

Activity B: Continue to periodically hold workshops or other similar forums to engage researchers (academic and otherwise) in discussions of methodologies and research questions best suited to meet the needs of OCNMS and other regional marine resource managers.

Strategy DAT4: - CONDITION REPORT

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

Key Partners: NOAA (NMFS, NOS), USFWS, USGS, ONP, Washington departments of Fish and Wildlife, Ecology, and Natural Resources, IPC, Makah, Quileute and Hoh tribes, Quinault Indian Nation, NANOOS, USFWS, Washington State Seafloor Mapping Consortium, OCNMS Advisory Council, NGOs

Budget and Timeline

<i>Strategies</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
DATA1 Data Sharing – Data Quality Control and Management	\$7	\$2	\$2	\$2	\$2
DATA2 Data Sharing – Data Distribution	\$33	\$33	\$33	\$33	\$33
DATA3 Data Sharing – Adaptive Management		\$13	\$3	\$3	\$3
DATA4 Data Sharing – Condition Report					\$36
Total	\$40	\$48	\$38	\$38	\$74

C. Improve Ocean Literacy

K-12 Education Action Plan

Higher Education Action Plan

Visitor Services Action Plan

Community Outreach Action Plan

C1. K-12 EDUCATION ACTION PLAN

Performance Measure Ideas

Desired Outcomes: 1) Improved understanding by teachers and students of the ocean's importance and Ocean Literacy principles; 2) Students are better prepared to enter careers that require an understanding of Ocean Literacy.

Outputs: 1) By year two of the management plan, all OCNMS-authored Ocean Literacy curricula will be available on the OCNMS website; 2) 100% of districts which use education resources offered by or in collaboration with OCNMS (Port Angeles, Sequim, Crescent, Cape Flattery, Quillayute Valley, Queets / Clearwater, Lake Quinault, Taholah, North Beach, and Ocosta School Districts), will be involved in student or teacher development programs by year five.

Summary of Changes:

- The K-12 strategy in the Ocean Literacy Workshop Report has been turned into its own action plan. Some activities and bullets related to using new technology are now in this action plan.
- Some activities and/or bullets have been consolidated to reduce redundancy.
- Some of the parenthetical examples in the workshop report have been removed to streamline the document.

Links to Goals

Goal D

Links to Other Action Plans

Collaborative & Coordinated Management
Climate Change
Marine Debris
Wildlife Disturbance
Higher Education

Strategy ED1: K-12 PARTNERSHIPS

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

Activity A: Collaborate with recipients of NOAA funding (e.g., B-WET grants) to maximize the effectiveness of NOAA resources and promote the NOAA Strategic Education Plan.

Activity B: Promote education opportunities that bring NOAA science and education resources to educators and students in the region. These opportunities include, but are not limited to: Teacher At Sea, Get to Know NOAA, various data visualization products, distance learning and others.

Activity C: Work directly with classroom teachers to determine ways to integrate OCNMS and other Ocean Literacy programs into existing school curricula.

Activity D: Promote the Ocean Literacy goals and strategies in the West Coast Governors' Agreement on Ocean Health (which include incorporating ocean literacy into Washington State Learning Goals Standards).

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.

Activity A: Consult with school districts, tribal governments, home-school organizations in local communities, non-profit and other education organizations to design and implement program curricula that 1) meet education standards, 2) fulfill needs identified by regional educators and, 3) emphasize place-based and hands-on learning.

Activity B: Work with local area high schools to develop senior culminating projects that involve students in OCNMS programs, and engage the Pacific Education Institute in training OCNMS to be student mentors.

Activity C: Collaborate with local schools to develop student citizen science projects in and adjacent to the Sanctuary (e.g. monitoring, beach clean-ups etc.).

Activity D: Develop summer youth programs and/or curricula to support such programs.

Strategy ED3: REGIONAL INITIATIVES

Participate actively in relevant regional education organizations and initiatives.

Activity A: To the greatest extent feasible, participate in meetings, conferences and projects of the Pacific Education Institute, the Northwest Aquatic and Marine Educators, the Environmental Education Association of Washington and the Washington Science Teachers Association.

Activity B: Work to promote regional environmental education initiatives in the Sanctuary region (e.g., “No child left inside”).

Strategy ED4: USING TECHNOLOGY

Employ current and emerging technologies in order to make Ocean Literacy information and curricula more accessible and provide students with a richer educational experience.

Activity A: Enhance OCNMS website to be a source of Ocean Literacy information such as OCNMS-authored educational/curriculum materials and news articles on ocean issues.

Activity B: Develop the capacity for high-quality video conferencing to enhance collaboration with partners and deliver education programming to geographically remote audiences.

Activity C: Work cooperatively with other sanctuaries and the Office of National Marine Sanctuaries to implement “Sanctuaries Live” and participate with cooperating National Estuarine Research Reserves to link to “Estuaries Live.”

Key Partners: Makah, Quileute and Hoh Tribes and the Quinault Indian Nation, Olympic Coast Intergovernmental Policy Council, Seattle Aquarium, Olympic Park Institute, Olympic National Park, North Pacific Marine Resources Committee, Grays Harbor Marine Resources Committee, Feiro Marine Life Center, Port Townsend Marine Science Center, Port Angeles School District, Quillayute Valley School District, North Beach School District, Cape Flattery School District, Sequim School District, Quileute Tribal School, local home school organizations, University of Washington Olympic Natural Resources Center, West Coast Governors’ Agreement on Ocean Health Ocean Awareness and Literacy Action Coordination Team , Washington State Ocean Caucus, Washington Sea Grant, North Olympic Skills Center, the Pacific Education Institute, the Northwest Aquatic and Marine Educators, the Environmental Education Association of Washington and the Washington Science Teachers Association, Makah Cultural and Research Center, National Park Service Research Learning Centers, Office of National Marine Sanctuaries, other sanctuaries.

Budget and Timeline

<i>Strategies</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
ED1 K-12 Partnerships	\$52	\$52	\$52	\$52	\$52
ED2 Place-Based Education	\$118	\$118	\$118	\$118	\$118
ED3 Regional Initiatives	\$19	\$19	\$19	\$19	\$19
ED4 Technology	\$552	\$52	\$52	\$52	\$52
Total	\$741	\$241	\$241	\$241	\$241

C2. HIGHER EDUCATION ACTION PLAN.

Performance Measure Ideas

Desired Outcomes: 1) OCNMS as a catalyst for higher education opportunities in marine fields; 2) greater access to career-building opportunities in ocean research, education, policy and management for post-secondary students in Sanctuary region

Outputs: 1) Offer an annual professional development/continuing education opportunity for teachers; 2) establish an Americorps position; 3) support at least one college-level intern a year by year [x] of the management plan.

Summary of Changes:

- The Career Building strategy in the Ocean Literacy Workshop Report has been turned into its own Higher Education Action Plan.
- Some activities and bullets related to using new technology are now in this action plan.
- Some consolidation to reduce redundancy.

Links to Goals Goal D

Links to Other Action Plans Collaborative & Coordinated Management Community Involvement in Sanctuary Management Sanctuary Operations

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.

Activity A: Formalize an OCNMS internship coordinator staff role.

Activity B: Develop appropriate guidelines for academic elements of OCNMS internships.

Activity C: Establish an OCNMS summer internship program for undergraduates and Running Start students and advertise this program locally.

Strategy HED2: VOLUNTEER POSITIONS

Develop the necessary agreements and advertising instruments to recruit and utilize Americorps and/or Student Conservation Association volunteer positions at OCNMS.

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.

Activity A: Participate in local career days and job fairs.

Activity B: Develop opportunities with local college classes to provide OCNMS staff and other experts as lecturers, presenters and/or adjunct faculty.

Activity C: Develop continuing education programs on Ocean Literacy and ocean issues.

Activity D: Develop opportunities for students to be involved in marine research – in person or via high-quality video conferencing with research vessels or stations.

Activity E: Provide continuing education opportunities for teachers to receive academic credit and clock hours in order to enhance their understanding of marine science content areas and methods for hands-on science education.

Activity F: Work collaboratively with foundations, local colleges and universities, tribal communities and other agencies to develop college scholarship funds for students from the Coastal Treaty Tribes who are interested in pursuing college degrees in marine policy, science, conservation, education and other related fields.

Key Partners: Peninsula College, WWU Huxley Program on the Peninsula, Grays Harbor College, the University of Washington Olympic Natural Resources Center , North Olympic Skills Center, Olympic National Park, Olympic Park Institute, North Pacific Marine Resources Committee, Grays Harbor Marine Resources Committee, Makah, Quileute and Hoh Tribes and the Quinault Indian Nation, Olympic Coast Intergovernmental Policy Council, Seattle Aquarium, Olympic Park Institute, Feiro Marine Life Center, West Coast Governors’ Agreement on Ocean Health Ocean Awareness and Literacy Action Coordination Team , Washington Sea Grant, Office of National Marine Sanctuaries, AmeriCorps, American Indian College Fund (and other foundations), Makah Cultural and Research Center, National Park Service Research Learning Centers, Office of National Marine Sanctuaries, Seattle Aquarium, other sanctuaries.

Budget and Timeline

<i>Strategies</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
HED1 Internship Development	\$52	\$52	\$52	\$52	\$52
HED2 Volunteer Positions	\$7	\$7	\$7	\$7	\$7
HED3 College Partnerships	\$59	\$59	\$59	\$59	\$59
Total	\$118	\$118	\$118	\$118	\$118

C3. VISITOR SERVICES ACTION PLAN

Performance Measure Ideas

Desired Outcomes: 1) Improved awareness of Sanctuary; 2) increased visitor awareness of ocean issues; 3) an enriched and extended coastal travel experience.

Outputs: 1) Complete long-range interpretive plan by year [X]; 2) increase annual visitation to OCNMS visitor center by [X]; 3) increase annual visitation to the OCNMS website will increase by [X].

Summary of Changes:

- The Visitor Services strategy in the Ocean Literacy Workshop Report has been turned into its own action plan. The activities from the workshop report related to this topic are now strategies in the action plan.
- Some activities and bullets related to using new technology are now in this action plan.
- Some consolidation to reduce redundancy.

Links to Goals

Goal D

Links to Other Action Plans

Climate Change
Marine Debris
Wildlife Disturbance
Maritime Heritage
Collaborative & Coordinated
Management

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.

Activity A: Develop education and outreach materials, in a variety of media, to attract visitors, orient them to the region's visitor amenities, educate them on resources in the Sanctuary and inspire a sense of stewardship for the environment.

Activity B: Participate in regional forums and planning processes that contribute to a strong tourism economy for the Olympic Peninsula.

Activity C: Offer technical assistance and training to partners and businesses that serve and educate visitors.

Activity D: Provide funding, training and support to cooperative interpretation programs with OCNMS partners.

Activity E: Expand efforts to develop interpretation programs on the Makah, Quileute, Hoh and Quinault Indian reservations as a way of developing program capacity, tourism enterprise, and training and job opportunities for tribal members.

Strategy VISIT2: LONG-RANGE INTERPRETIVE PLAN

Develop and implement a Long Range Interpretive Plan for OCNMS.

Activity A: Actively involve partners and stakeholders in Long Range Interpretive Plan development.

Activity B: Work collaboratively to identify opportunities to develop additional visitor centers, wayside exhibits, informational signs, kiosks and aquarium or museum exhibits in the Sanctuary region.

Activity C: Coordinate the Long Range Interpretive planning process with partners in order to reflect the region’s needs and effectively invest in visitor service infrastructure.

Activity D: Coordinate with other sanctuaries in the West Coast Region also developing interpretive plans.

Activity E: Include in the Long Range Interpretive Plan specific strategies to enhance effectiveness of the Olympic Coast Discovery Center (OCDC). These strategies should identify ways to: recruit, train and retain volunteers; coordinate and collaborate with the Feiro Marine Life Center and Olympic National Park as they develop a larger and more expansive coastal visitor and education center in Port Angeles; maintain and update existing exhibits; attract new visitors; and increase development and enrichment activities for staff and volunteers.

Strategy VISIT3: USING TECHNOLOGY

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

Activity A: Complete an update and overhaul of the OlympicCoast.NOAA.gov website.

Activity B: Integrate other appropriate technologies, as feasible, into the website including social networking resources, smartphone applications, podcasts, webcasts of video etc.

Activity C: Update facilities, hardware and software to accommodate telepresence so that visitors to sanctuary and partner facilities can be linked to research vessels, other education centers etc.

Key Partners: Makah, Quileute and Hoh Tribes and the Quinault Indian Nation, Olympic Coast Intergovernmental Policy Council, Makah Cultural and Research Center, Olympic National Park, Feiro Marine Life Center, Port Townsend Marine Science Center, Port Angeles School District, Ocean Shores Interpretive Center, OCDC volunteers, and the communities of Port Angeles, Sequim, Neah Bay, La Push, Forks, Hoh River, Taholah, Ocean Shores, Westport and Pacific Beach, Makah Cultural and Research Center, West Coast Governors’ Agreement on Ocean Health Ocean Awareness and Literacy Action Coordination Team , National Park Service Research Learning Centers, Office of National Marine Sanctuaries, Seattle Aquarium, other sanctuaries.

Budget and Timeline

<i>Strategies</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
VISIT1 Visitor Experience	\$186	\$186	\$186	\$186	\$186

VISIT2 Long-Range Interpretive Plan	\$34	\$34	\$34	\$34	\$34
VISIT 3 Using Technology	\$294	\$294	\$294	\$294	\$294
Total	\$514	\$514	\$514	\$514	\$514

C4. COMMUNITY OUTREACH ACTION PLAN

Performance Measure Ideas

Desired Outcomes: 1) Greater involvement of local communities in OCNMS programs and marine conservation efforts, and 2) a stronger connection between local communities and the Sanctuary

Outputs: 1) Active participation in Outer Coast Marine Resources Committees; OCNMS is represented at [X] community events per year; 2) approximately [X] community members will be involved with OCNMS stewardship programs by year [X].

Summary of Changes:

- The Community Outreach strategy in the Ocean Literacy Workshop Report has been turned into its own action plan.
- Some activities and bullets related to using new technology are now in this action plan.
- Some consolidation to reduce redundancy.
- Desired outcome revised; it still lacks clarity and needs more work.

Strategy OUT1: STEWARDSHIP AND CITIZEN SCIENCE

Actively support marine stewardship and citizen science volunteer programs.

Activity A: Provide training and staff support to OCNMS volunteers involved with Coastal Observation and Seabird Survey Team, Washington CoastSavers, and other volunteer programs in the Sanctuary.

Activity B: Support efforts of the North Pacific Coast and Grays Harbor Marine Resources Committees to develop citizen science and marine stewardship efforts in the Sanctuary.

Activity C: Use traditional media and new technologies to advertise opportunities for community members to volunteer on OCNMS education and research projects.

Strategy OUT2: STAFF PRESENCE ON OUTER COAST

Assess needs and opportunities to develop a stronger OCNMS staff presence on the Outer Coast of the Olympic Peninsula.

Activity A: Work with sanctuary partners who have existing facilities on the Outer Coast to explore office-sharing opportunities.

Activity B: Conduct feasibility and cost analyses of a “South Coast” satellite office in Grays Harbor County and a “West End” satellite office in Forks.

Links to Goals

Goal D
Goal H

Links to Other Action Plans

Community Involvement in
Sanctuary Management
Maritime Heritage
Populations, Communities &
Ecosystems
Marine Debris
Marine Spatial Planning
Collaborative & Coordinated
Management

Activity C: Evaluate opportunities for “storefronts” and/or visitor information centers in coastal communities.

Strategy OUT3: COMMUNITY EVENTS

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

Activity A: Develop an annual outreach plan that includes priorities for community events, staffing and volunteers, as well as priority themes and messages.

Activity B: Attend (as invited) events, festivals and meetings in tribal and non-tribal communities in the Sanctuary region.

Activity C: Provide regular briefings to service clubs, local governments, chambers of commerce, tourism organizations, stakeholder groups and others on matters pertaining to the Sanctuary.

Activity D: Furnish expert 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.

Strategy OUT4: COMMUNITY-BASED EFFORTS

Actively support the efforts of the North Pacific and Grays Harbor Marine Resources Committees (MRCs), regional watershed councils, salmon recovery teams, the Puget Sound Partnership, other community-based NGOs, and local and state governments in areas of research, education, and policy coordination.

Activity A: Participate in relevant meetings of community-based organizations and initiatives in the Sanctuary region.

Activity B: Jointly pursue opportunities for community-based marine education, stewardship and research programs.

Activity C: Use the OCNMS website, e-mail listserv and other media to communicate the efforts of community-based organizations working on ocean issues in the Sanctuary region.

Key Partners: University Coastal Observation and Seabird Survey Team, Washington CoastSavers, Washington Clean Coast Alliance, Makah, Quileute and Hoh Tribes and the Quinault Indian Nation, Olympic Coast Intergovernmental Policy Council, Makah Cultural and Research Center, Feiro Marine Life Center, Olympic National Park, Grays Harbor MRC, North Pacific MRC, Puget Sound Partnership, West Coast Governors’ Agreement on Ocean Health Ocean Awareness and Literacy Action Coordination Team , Washington State Ocean Caucus, Washington Sea Grant, Clallam, Jefferson and Grays Harbor counties, state of Washington, local organizations such as Rotary and Lions Clubs, Surfrider Foundation chapters, local kayaking groups etc.

Budget and Timeline

<i>Strategies</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
OUT1 Stewardship and Citizen Science	\$154	\$154	\$154	\$154	\$154
OUT2 Staff Presence on Outer Coast	\$27	\$27	\$27	\$27	\$27
OUT3 Community Events	\$74	\$74	\$74	\$74	\$74
OUT4 Community-Based Efforts	\$43	\$43	\$43	\$43	\$43
Total	\$298	\$298	\$298	\$298	\$298

D. Conserve Natural Resources in the Sanctuary

Spills Prevention, Preparedness, Response and Restoration Action Plan

Climate Change Action Plan

Marine Debris Action Plan

Wildlife Disturbance Action Plan

Water Quality Protection Action Plan

Habitat Protection Action Plan

Marine Spatial Planning Action Plan

D1. SPILLS PREVENTION, PREPAREDNESS, RESPONSE and RESTORATION ACTION PLAN

Performance Measure Ideas

Desired Outcomes: Increased protection of marine, cultural, and shoreline resources from the impacts of an oil or hazardous materials spill; and improved preparedness and coordination for responding to spills affecting marine resources within OCNMS.

Outputs: 1) Conduct at least two spills response training exercises by year five of management plan implementation; 2) Non-compliant vessels that have received directed correspondence do not re-enter the ATBA on subsequent voyages.

Summary of Changes:

- Changed codes for all to SPILL
- Combined PREV2 and PREV3 (SPILL2)
- Associated activities were consolidated
- Restoration strategies were consolidated and reorganized

Links to Goals

Goal A
Goal B
Goal E
Goal G

Strategy SPILL1: ATBA COMPLIANCE AND MONITORING

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

Activity A: Monitor compliance with the ATBA by conducting monthly processing of radar data from the jointly operated Canada/U. S. Cooperative Vessel Traffic System (CVTS), augmented with Marine Exchange of Puget Sound Automated Identification System (AIS) data. Analyze vessel traffic patterns, track and identify the type and status of vessels that travel within OCNMS and the ATBA. Archive data to be able to identify trends in activity.

Activity B: Improve the OCNMS vessel monitoring program by developing the capability to view, analyze and archive vessel data within the entire sanctuary using AIS data.

Links to other Action Plans

Collaborative & Coordinated Management
Marine Debris
Wildlife Disturbance
Sanctuary Operations
Marine Spatial Planning

Activity C: Conduct directed outreach to non-compliant vessels. Send letters that request ATBA compliance jointly signed by the OCNMS Superintendent and U.S. Coast Guard Captain of the Port.

Activity D: Promote and facilitate reporting of ATBA compliance statistics and analysis to vessel traffic and oil spill prevention interests. This includes providing compliance data to Washington Department of Ecology (WDOE) for inclusion within their annual Vessel Entry and Transit (VEAT) Report.

Activity E: Make ATBA compliance information available to regional Marine Spatial Planning efforts and to the public.

Strategy SPILL2: REGIONAL VESSEL MANAGEMENT FORUMS

Work within regional vessel management forums to analyze and reduce risks and hazards

Activity A: Encourage and collaborate in review and development of Standards of Care (SOC) that identify accepted best marine practices for engaging in coastal towing operations off the Olympic Coast. Actively participate in local public meetings and comment on the USCG's proposed towing vessel inspection regulations with the goal of encouraging the earliest implementation of appropriate final rules.

Activity B: After SOC's are developed, utilize ATBA monitoring information to advise the USCG and industry of apparent non-compliance with developed SOC's.

Activity C: Encourage the USCG, in collaboration with the U.S. Army Corps of Engineers (USACE) vessel traffic risk assessment, to analyze vessel traffic patterns and risks, particularly in the vicinity of Duntze Rock, Tatoosh Island, and Duncan Rock, to determine whether additional protective measures, e.g., additional aids to navigation or new routing schemes, are required for safer navigation.

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.

Activity A: Engage in regional efforts to promote, plan and conduct comprehensive drills and exercises.

- Promote regular testing and coordination of multiple response assets, equipment deployment, wildlife recovery and treatment equipment, Neah Bay emergency response tug, USCG emergency towing resources, communication systems, and natural resource damage assessment in these drills and exercises.
- Integrate OCNMS assets, including staff and vessels, into regional emergency response drills, exercises, and area contingency planning.

Activity B: Develop training/exercises in conjunction with key partners targeting specific issues and concerns relevant to OCNMS and partners to improve planning and overall readiness.

- Training and exercise topics could include roles and responsibilities of various ICS positions; dispersant consultation process; waste management tradeoffs; Shoreline Cleanup Assessment Technology training; shoreline treatment tactics; cleanup endpoints for different shoreline types; Natural Resource

Damage Assessment; liaison function with key stakeholders; lesson learned from recent spills and exercises.

Activity C: Collaborate in planning and conduct, if feasible, of an exercise testing debris removal from remote shoreline locations.

- Test and evaluate issues and methods useful for pre-cleaning beaches and removing oily waste materials during response operations.
- If successful, promote regular exercise of safe and effective methods.
- Partner with USCG and outer Olympic Coast land owners (Olympic National Park, Washington Islands National Wildlife Refuge Complex, Coastal Treaty Tribes).

Activity D: Participate in technical workgroups and task forces of the Regional Response Team (RRT) and Northwest Area Committee (NWAC).

- Support integration of OCNMS priorities, data, and equipment into the Northwest Area Contingency Plan.
- Key workgroups and task forces include Volunteers; Response Science and Technology; Geographical Response Plans; Wildlife; and Communications and Outreach.
- Separate activities for key NWAC workgroups are provided below.

Activity E: Assist in the review, development and improvement of Geographic Response Plans (GRPs) focusing on initial resource protection.

- Potential areas for GRP improvement include protection of cultural resources, equipment appropriate for the operating environment, and additional shoreline protection strategies.

Activity F: Participate in the Response Science and Technology workgroup of the NWAC in development of a Shoreline Operational Guide.

- The Shoreline Operational Guide will address treatment tactics and cleanup endpoints for affected shorelines, proposed monitoring and other requirements for sensitive resources or habitats, and waste management guidelines.
- Promote integration of this Guide and its development into the Area Committee process.

Activity G: Participate in the Response Science and Technology workgroup of the NWAC in development of a dispersant use matrix that summarizes spatial and temporal data related to natural resources in the water column potentially impacted by dispersed oil.

- Provide data held by OCNMS.
- Facilitate assembly and incorporation of data from NOAA Fisheries.

Activity H: Support NWAC efforts to promote a strong non-dedicated vessel program that includes use of local resources, including fishing vessels regularly based in Neah Bay, LaPush, and the Grays Harbor area.

Activity I: Participate in the Places of Refuge workgroup of the NWAC in the evaluation of areas adjacent to OCNMS.

Activity J: Support development of a digital environmental sensitivity index database and maps of Washington's outer Olympic Coast.

Activity K: Participate in US/Canada transboundary spill response planning through the Pacific States/British Columbia Oil Spill Task Force.

Strategy SPILL4: OUTER COAST TRUSTEES WORKING GROUP

Promote improved regional preparedness for spill response through coordination of the Outer Coast Trustees working group as a forum to share information and training opportunities.

Activity A: Maintain a current contact list for natural and cultural resource trustees, natural resource managers, and spill response leads from agencies and organizations on the outer coast of Washington.

- Include multiple means of communication (office and cell phone numbers, emails, agency emergency contact numbers, pagers) on contact list.
- Coordinate with RRT to regularly update the Northwest Area Contingency Plan.

Activity B: Identify opportunities for joint training and information sharing related to regional preparedness for spill response, and promote regional participation through the Outer Coast Trustees.

Strategy SPILL5: OCNMS ORGANIZATIONAL RESPONSE PLAN

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

Activity A: Develop an OCNMS Organizational Response Plan.

- Ensure consistency between the OCNMS Organizational Response Plan and NWACP.
- Integrate OCNMS information, policy and procedures into the Northwest Area Contingency Plan (NWACP), as appropriate.
- Identify OCNMS staff training requirements and needs for emergency response, and maintain appropriate training levels.
- Consider policy on outreach and liaison with key stakeholders, the public, elected officials and co-trustees within their shared boundaries during spill responses as part of the plan.
- Develop a clear process or decision tool to identify steps for dispersant, in-situ burn, or shoreline chemical use decision-making by OCNMS to support consultation with co-trustees, the FOSC, and the RRT consistent with the NWACP.

Activity B: Develop a database that includes natural and cultural resource information useful for evaluation of potential resource impacts from spilled petroleum products and associated response activities.

- Assemble the most current and detailed data available for the region.
- Utilize effective technologies to access, display and analyze resource information.
- Collaborate with regional resource managers, co-trustees, response organizations and the RRT to share data, tools, and products.
- Regularly complete updates and improvements to these data and tools.

Activity C: Work with the Office of National Marine Sanctuaries and NOAA Office of Response and Restoration to regularly update and improve SHIELDS (Sanctuary Hazardous Incident Emergency Logistics Database System).

Strategy SPILL6: DAMAGE SURVEY AND ASSESSMENT PROTOCOLS

Collaborate in regional efforts to develop plans, protocols, capacity and baseline data to support natural resource damage assessment (NRDA) efforts.

Activity A: Collaborate with co-trustees to develop an Outer Coast NRDA Response Plan that includes:

- Notification requirements
- Prioritized objectives
- Supplies and equipment for ephemeral data collection
- Standardized protocols for ephemeral data collection
- Identification of beach access points
- Property access permissions
- Cultural resource considerations
- Lists of response resources (vessels, aircraft, personnel) that could be hired for NRDA purposes (vs. spill response clean-up efforts)
- Data quality objectives
- Training recommendations and requirements.

Activity B: Collaborate with co-trustees to improve response capabilities for NRDA work.

- Integrate NRDA components into local and regional response exercises.
- Seek funding to support participation in NRDA planning and training opportunities.
- Review and revise response plans, as appropriate, following incidents that include NRDA response efforts.
- Inventory, purchase, place, and maintain ephemeral data collection equipment on the outer coast.

Activity C: Collaborate with co-trustees to identify natural and cultural resources most vulnerable to oil spills and prioritize baseline data collection for species and services useful for NRDA.

- Outline needed data and studies.
- Assemble existing data into a database for baseline information on natural and cultural resources.
- Determine who can conduct additional studies and sampling.
- Seek funding to support baseline data collection.

Key Partners: USACE Seattle District; Puget Sound Harbor Safety Committee; Canadian Coast Guard Marine Communications and Traffic Services, Tofino; Marine Exchange of Puget Sound; WA Department of Ecology; Makah Office of Marine Affairs; Makah, Quileute and Hoh Tribes and Quinalt Indian Nation; American Waterways Operators; U.S. Navy (for movement of reactor core by barge); Lower Columbia Region

Harbor Safety Committee; United States Coast Guard Thirteenth District Commander; Sectors Seattle and Portland; Canadian Coast Guard Marine Communications and Traffic Services Tofino; Marine Exchange of Puget Sound; Washington Department of Ecology; Washington Department of Fish and Wildlife; Washington department of Natural Resources, Washington Department of Archaeology and Historic Preservation; Washington State Parks and Recreation Commission; Washington Resource Damage Assessment Committee; Coastal area marine resource committees (MRCs); other natural resource trustees; U.S. Navy; on-scene spill response organizations; NOAA Office of Response and Restoration; NOAA Restoration Center; Department of Interior NRDA staff; Canadian Coast Guard; Canadian First Nations; Transport Canada , Olympic National Park; Washington Islands National Wildlife Refuges/U.S. Fish and Wildlife Service; U.S. Coast Guard; Clallam, Jefferson, and Grays Harbor counties; Parks Canada; Regional Response Team members, NOAA Fisheries; Northwest Area Committee and Regional Response Team members; OCNMS volunteers; academic institutions.

Budget and Timeline

<i>Strategies</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
SPILL1 ATBA Compliance and Monitoring	\$11	\$20	\$72	\$36	\$36
SPILL2 Regional Vessel Management Forums	\$12	\$4	\$4		
SPILL3 Regional Planning and Training Exercises	\$39	\$26	\$21	\$20	\$26
SPILL4 Outer Coast Trustees Working Group	\$5	\$5	\$5	\$5	\$5
SPILL5 OCNMS Organizational Response Plan	\$3	\$2	\$2	\$2	\$2
SPILL6 Damage Survey and Assessment Protocols	\$5	\$9	\$20	\$5	\$5
Total	\$75	\$66	\$124	\$68	\$74

D2. CLIMATE CHANGE ACTION PLAN

Performance Measure Ideas

Desired Outcome: 1) The Sanctuary is a sentinel site in North America for climate change monitoring, and 2) OCNMS is a go-to source for climate change information on Washington's outer coast marine ecosystems.

Outputs: 1) Complete the "Climate-Smart Sanctuary" certification process by year [date]; 2) Hold a workshop on planning for and managing climate change impacts by [date]; 3) OCNMS is designated as a sentinel site and as a result climate change research is increased.

Summary of Changes:

- This is a new action plan that has been formed based upon the climate change strategies presented in the Research, Conservation and Operations working group reports.
- OCNMS staff added several new activities, including CLIM1C, CLIM2B, CLIM3C, and CLIM4B, C, D and E

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.

Links to Goals

Goal C
Goal E
Goal G
Goal H

Links to Other Action Plans

Collaborative & Coordinated
Management
Physical & Chemical
Oceanography
K-12 Education
Higher Education
Visitor Services

Activity A: Conduct an audit of OCNMS's carbon footprint and determine what changes are needed to ensure that OCNMS meets NOAA's carbon footprint standards.

Activity B: Develop a Climate Story/Site Scenario for OCNMS that synthesizes the best available information on climate change impacts to present a picture of what the sanctuary might look like in 50 to 100 years.

Activity C: Brief the OCNMS Advisory Council and Olympic Coast Intergovernmental Council on OCNMS's climate-smart certification process, and that information compiled for the Climate Smart Sanctuaries Program is widely distributed to OCNMS partners and the public.

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.

Activity A: Propose to NOAA leadership that OCNMS be designated as a sentinel site for climate change research and monitoring.

Activity B: Create an Advisory Council Working Group that would develop a climate change research prospectus describing specific climate change research priorities in the Sanctuary. This proposal would be used to generate research activities by the academic and government research communities.

Activity C: Create an Advisory Council Working Group that would identify marine chemical, physical, and biological indicators of climate change that the Sanctuary and partners should consider monitoring.

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.

Activity A: Create an Advisory Council Working Group that would provide recommendations to tribal, federal, state and local governments on potential management responses to climate change impacts.

Activity B: Participate in regional efforts to develop and understand projections for local sea level rise and impacts to natural and cultural resources.

Activity C: Host workshops on planning for and managing climate change impacts for OCNMS staff and local communities on the Outer Coast.

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.

Activity A: Ensure that information and data collected by OCNMS on climate change and its effects on the Sanctuary are readily available to other resource managers and interested parties.

Activity B: Provide local communities and the public with information about potential climate change impacts on the Olympic Coast and efforts to plan for climate change.

Activity C: Work with tribal communities to develop public outreach materials that convey tribal perspectives on climate change and its potential effects on their communities.

Activity D: Consider education and outreach requirements permitting requirements for climate change research projects permitted by OCNMS have an education and outreach component.

Activity E: Develop a Climate Literacy education and outreach plan and incorporate it into OCNMS's Ocean Literacy Action Plan.

Key Partners: Hoh, Makah, and Quileute tribes and Quinault Nation, Washington State Ocean Caucus, UW Climate Impacts Group, West Coast Governors' Agreement on Ocean Health Climate Change Action Coordination Team NOAA/PMEL, OCNMS Advisory Council, West Coast Regional Sanctuaries, Monterey Bay Research Institute, Federal-level climate workgroups?, Outer Coast Marine Resources Committee, Washington Sea Grant, UW Friday Harbor Labs, U.S. Fish and Wildlife Service,

Olympic National Park, NOAA Ocean Services, and non-governmental organizations, AC, NOAA (ONMS, NMFS, PMEL), NGOs, IPC, . West Coast Governors’ Agreement on Ocean Health Climate Change Action Coordination Team

Budget and Timeline

<i>Strategies</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
CLIM1 Climate-Smart Sanctuaries	\$75	\$75	\$75	\$75	\$75
CLIM2 Sanctuary as Sentinel Site	\$36	\$36	\$36	\$36	\$36
CLIM3 Resilient Ecosystems	\$73	\$73	\$73	\$73	\$73
CLIM4 Communicating Climate Change	\$101	\$101	\$101	\$101	\$101
Total	\$285	\$285	\$285	\$285	\$285

D3. MARINE DEBRIS ACTION PLAN

Performance Measure Ideas

Desired Outcomes: 1) Increased identification of the types and locations of abandoned submerged and floating marine debris, and 2) reduced environmental and aesthetic impacts of debris on coastal beaches.

Outputs: 1) Participate in and help organize at least 2 beach clean-up activities per year; 2) [X] amount of marine debris will be removed from the Sanctuary by year five of management plan implementation

Summary of Changes

- Combined MD2 Activities A and B

Strategy MD1: ASSESSMENT AND REMOVAL

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

Activity A: Promote use by tribal and non-tribal fishers of the Washington Department of Fish and Wildlife (WDFW) derelict fishing gear hotline, Northwest Straits Marine Conservation Initiative derelict fishing gear reporting system, or other systems established for reporting locations of lost fishing gear, sunken vessels, and other forms of submerged and floating marine debris.

Activity B: Support programs that focus on the outer Washington Coast to locate abandoned submerged and floating marine debris, develop safe and minimal impact removal techniques, and remove known marine debris.

Activity C: Support local efforts to reduce generation of sea-based marine debris through improvements in opportunities for solid waste and marine debris disposal and recycling programs.

Activity D: Record observations of abandoned submerged and floating marine debris made during OCNMS research and monitoring programs. Report relevant observations to WDFW, Northwest Straits Marine Conservation Initiative, and/or other appropriate reporting systems.

Activity E: Maintain an OCNMS database and geographic information system (GIS) products for marine debris identified through OCNMS and others' efforts. Collaborate in efforts to prioritize removal of submerged and floating marine debris.

Activity F: Collaborate with the U.S. Department of Defense to identify and remove existing marine debris, and to mitigate military use of expendable materials that become marine debris.

Links to Goals Goal E

Links to Other Action Plans Collaborative & Coordinated Management Community Outreach Community Involvement in Sanctuary Management Habitat Protection Spills

Strategy MD2: MITIGATING IMPACTS

Mitigate impacts of marine debris on coastal beaches

Activity A: Engage coastal communities and volunteers in beach cleanups, including expansion of efforts to include multiple volunteer beach cleanup efforts on shores adjacent to the Sanctuary throughout the year. Participate as an active partner in the Washington Clean Coast Alliance (WCCA).

Activity B: Conduct outreach to increase public understanding of the nature and scope of environmental impacts of marine debris, and encourage individual efforts to reduce sources of marine debris.

Activity C: Collaborate with Olympic National Park and Washington Islands National Wildlife Refuge to develop beach cleanup initiatives focused on remote coastal areas of Olympic National Park and Washington Islands National Wildlife Refuge island shores.

Activity D: Promote inventory of marine debris from outer Washington Coast beaches. Use marine debris data in public outreach and to support regional efforts to reduce sea- and land-based sources of marine debris.

Activity E: Support programs in coastal communities to identify potential sources of land-based marine debris, improve garbage management, recycling opportunities and other programs with potential to reduce beach debris.

Activity F: Collaborate with the U.S. Department of Defense to use military manpower and equipment to support beach cleanups and other marine debris removal efforts in the sanctuary.

Key Partners: Hoh, Makah, and Quileute tribes and Quinault Nation, coastal communities, Washington Clean Coast Alliance, NOAA Marine Debris Program, West Coast Governors’ Agreement on Ocean Health Marine Debris Action Coordination Team, Outer Coast Marine Resources Committee, Washington state, Olympic National Park, Washington Islands National Wildlife Refuge, U.S. Department of Defense, North Pacific Coast and Grays Harbor marine resources committees, Northwest Straits Marine Conservation Initiative, and non-governmental organizations, regional port authorities,

Budget and Timeline

<i>Strategies</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
MD1 Marine Debris – Locating and Removing Marine Debris	\$8	\$8	\$8	\$8	\$8
MD2 Marine Debris – Mitigating Impacts	\$27	\$27	\$27	\$27	\$27
Total	\$35	\$35	\$35	\$35	\$35

D4. WILDLIFE DISTURBANCE ACTION PLAN

Performance Measure Ideas

Desired Outcomes: Minimized disturbance to wildlife in the Sanctuary and improved protection for wildlife potentially impacted by human activities

Outputs: 1) Complete the development of wildlife viewing guidelines addressing shore-based and vessel activities by [date]; 2) Demonstrate a reduction of illegal overflights occurring in the Sanctuary.

Summary of Changes:

- Changed sequence of WD1 and WD2
- Consolidated incident database activities
- Consolidated mammal stranding network activities into ECO8
- Consolidated overflight activities in WD2

Strategy WD1: OUTREACH ON WILDLIFE DISTURBANCE

Promote public understanding of wildlife disturbance issues through education and outreach programs.

Activity A: Collaborate with regional wildlife management agencies to develop wildlife viewing guidelines addressing shore-based and vessel activities. Produce and distribute outreach products that address wildlife viewing guidelines.

Activity B: Collaborate to conduct outreach for specific user groups to improve public understanding of the impacts of wildlife disturbance by human behaviors on wildlife activities. Promote best practices, guidelines and regulations that benefit wildlife, reduce disturbance, and enhance human enjoyment of natural resources.

- Model programs include NOAA's Ocean Etiquette and Watchable Wildlife.
- User groups include charter fishing and wildlife viewing operators, kayakers and surfers.
- During outreach efforts, identify legitimate uses of the airspace within the OCNMS wildlife disturbance mitigation (overflight restriction) zone.

Activity C: Collaborate in training for regional interpreters, rangers, enforcement staff and volunteers related to wildlife disturbance.

Activity D: Improve the OCNMS web site content related to visitor appreciation of wildlife and disturbance by human activities.

Activity E: Maintain the OCNMS incident database to record times, locations, and other information for reported wildlife disturbance events.

- Incident database entries will include reported overflight violations, as well as permitted and exempted low altitude flights.
- Include marine mammal ship strikes in the database.

Links to Goals

Goal E

Links to other Action Plans

Sanctuary Operations
Habitat Protection
Populations, Communities & Ecosystems
Visitor Services
Community Outreach
Collaborative & Coordinated Management

- Incident database information will be shared with regional enforcement officers, permitting staff and concerned management entities to reinforce wildlife disturbance concerns.

Strategy WD2: OVERFLIGHT RESTRICTION ZONE

Support and improve recognition of and compliance with the existing OCNMS wildlife disturbance mitigation (overflight restriction) zone.

Activity A: Improve compliance with the OCNMS wildlife disturbance mitigation (overflight restriction) zone through collaboration with Aircraft Owners and Pilots Association (AOPA) and Washington Pilots Association (WPA) to improve outreach products and communication with local pilots.

Activity B: Develop outreach products and orientation materials on the OCNMS wildlife disturbance mitigation (overflight restriction) zone and associated wildlife disturbance issues that are useful for regional enforcement officers. Organize and conduct regular training sessions for regional enforcement officers.

Activity C: Support efforts by the Office of National Marine Sanctuaries to have the OCNMS wildlife disturbance mitigation (overflight restriction) zone posted on Federal Aviation Administration (FAA) aeronautical charts.

Strategy WD3: MARINE MAMMAL DISTURBANCE

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

Activity A: Expand monitoring and characterization of the underwater acoustic environment in the Sanctuary. Establish a baseline for background noise, including military activities and elevated noise levels potentially associated with shipping traffic near the western entrance to the Strait of Juan de Fuca.

Activity B: Conduct a risk analysis for ship strikes of marine mammals, maintain a database of such incidents, and, if warranted, work with shipping industry and others to develop management actions that reduce the risk of ship strikes.

Activity C: Conduct a risk analysis for marine mammal entanglement with in-water gear and other structures (e.g., buoys), maintain a database of such incidents, and, if warranted, work with fishery managers and others to develop management actions that reduce the risk of gear entanglement.

Key Partners: Hoh, Makah, and Quileute tribes and Quinault Nation, Olympic National Park, U.S. Fish and Wildlife Service, Washington State Parks and Recreation Commission, Washington Department of Fish and Wildlife, Coastal Observation and Seabird Survey Team, Washington Clean Coast Alliance; outer coast marine resource committees (Grays Harbor and North Pacific Coast), Surfrider, NOAA Fisheries, Westport Charterboat Association, regional port authorities and marina facilities, Marine Mammal Stranding Network, U.S. Coast Guard, U.S. Navy, Aircraft Owners and Pilots Association (AOPA), Washington Pilots Association (WPA), regional airports, shipping industry, coastal communities.

Budget and Timeline

<i>Strategies</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
WD1 Wildlife Disturbance – Education and Outreach	\$27	\$27	\$27	\$27	\$27
WD2 Wildlife Disturbance – Overflight Restriction Zone Compliance	\$12				
WD3 Wildlife Disturbance – Marine Mammal Disturbance			\$12	\$7	
Total	\$39	\$27	\$39	\$34	\$27

D5. WATER QUALITY PROTECTION ACTION PLAN

Performance Measure Ideas

Desired Outcome: High water quality and protection of natural resources in the Sanctuary

Outcomes: 1) Actively maintained boat sewage pump-out stations are available at all ports adjacent to the Sanctuary; 2) OCNMS regulations revised to prohibit cruise ship discharges in the Sanctuary.

Summary of Changes:

- Consolidated cruise ship activities into Activity B - regulations changes
- Deleted fish offal discharge activity
- Consolidated activities related to contaminant monitoring
- Combined HAB activities into OCEO4
- Deleted WQP4 because covered in various OCEO activities

Links to Goals
Goal E

Links to other Action Plans
Physical & Chemical
Oceanography
Collaborative & Coordinated
Management

Strategy WQP1: VESSEL DISCHARGES

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

Activity A: Work with the shipping industry and others to assess potential impacts of wastewater discharges from large vessels (300 gross tons or greater) and identify measures to prevent or mitigate those impacts.

Activity B: Modify OCNMS regulations to prohibit all discharges from cruise ships into waters of the Sanctuary, except clean vessel engine cooling water, clean vessel generator cooling water, clean bilge water, and anchor wash.

Activity C: Encourage and assist regional port authorities to improve availability of sewage pump-out facilities.

Strategy WQP2: CONTAMINANTS

Support efforts to monitor contaminant levels, understand potential impacts of contaminants, and reduce, eliminate, or mitigate impacts of contaminants to natural resources in the Sanctuary.

Activity A: Support efforts to identify, characterize, and mitigate sources of contaminants within or entering waters of the Sanctuary and accumulating in biota and habitats.

Activity B: Support closure and remediation of the Warmhouse Dump to minimize contaminant release to marine waters.

Key Partners: U.S. Environmental Protection Agency, Washington State Department of Ecology, Hoh, Makah, and Quileute tribes and Quinault Nation, local governments, coastal communities, Outer Coast Marine Resources Committee, Olympic National Park, Washington Islands National Wildlife Refuge, West Coast Governors’ Agreement on Ocean Health Polluted Runoff Action Coordination Team , U.S. Department of Defense, non-governmental organizations, regional port authorities, cruise ship industry, shipping industry, commercial fishing interests.

Budget and Timeline

<i>Strategies</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
WQP1 Water Quality Protection – Vessel Discharges	\$6	\$16			
WQP2 Water Quality Protection – Land and Air Contaminant Sources	\$3	\$2	\$2	\$2	\$2
Total	\$9	\$18	\$2	\$2	\$2

D6. HABITAT PROTECTION ACTION PLAN

Performance Measure Ideas

Desired Outcomes: Human-caused degradation of marine habitats is minimized and mitigated (particularly for those habitats 1) with demonstrated high value to ecosystem functions and productivity and 2) that are most vulnerable to human disturbance)

Outputs: 1) Complete/publish list of potential threats to physical and biogenic marine habitats by [date]; 2) In the next Condition Report, publish estimated average recovery rates from disturbances for critical habitats in the Sanctuary.

Summary of Changes:

- Consolidated HP3 - habitat protection efforts - into HP1 and HP2

Links to Goals
Goal E

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 develop collaboratively appropriate management measures to protect and conserve physical and biological habitats.

Links to Other Action Plans
Water Quality Protection
Populations, Communities & Ecosystems
Habitat Mapping & Classification
Collaborative & Coordinated Management

- Activity A:** Identify in consultation with co-management authorities existing and potential impacts, threats and relative vulnerability of physical and biogenic habitats. Recommend and/or implement monitoring to assess relative vulnerabilities, impacts and threats from natural disturbances and human activities, including cumulative impacts.
- Activity B:** Recommend and/or implement collaboratively with co-managers management measures that minimize and mitigate human-caused impacts to physical and biogenic marine habitats.
- Activity C:** Monitor the recovery rates of habitats, associated biological communities, and habitat-forming biogenic structures following disturbance by human activities.

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.

- Activity A:** Develop criteria in collaboration with natural resource co-managers for habitat types of special importance to ecosystem function or managed species; identify the locations of such habitats.

Activity B: Develop and implement collaboratively with natural resource co-managers potential management strategies for protection of habitats of special ecosystem value.

Activity C: Participate in Pacific Fishery Management Council processes, including identification and review of essential fish habitat (EFH) and habitat areas of particular concern (HAPC) through OCNMS representation on the EFH Review Committee.

Activity D: Collaboratively develop and evaluate potential recommendations for HAPC site and EFH conservation areas.

Activity E: Assist Olympic National Park with designation and management of intertidal reserve areas as identified in the Park's 2008 General Management Plan.

Strategy HP3: INVASIVE SPECIES

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

Activity A: Through resource protection and outreach programs, support the work of Washington State Department of Fish and Wildlife and other agencies to prevent introduction of invasive species.

Activity B: Engage in regional efforts to monitor for the presence and distribution of invasive species. Engage volunteer monitoring in this effort, where appropriate.

Activity C: Support regional efforts to develop a response protocol(s) for non-native invasive species and to reduce ecological and economic impacts of invasive species.

Key Partners: ONP, USFWS, USGS, NOAA (NMFS, NOS), Washington departments of Fish and Wildlife, Ecology, and Natural Resources, Washington Invasive Species Council, Hoh, Makah, and Quileute tribes and Quinault Nation, IPC, North Pacific Coast Marine Resources Committee, NGOs, universities and colleges, coastal communities, Pacific Fishery Management Council, academic organizations, Department of Fisheries and Oceans Canada, local governments, coastal communities

Budget and Timeline

<i>Strategies</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
HP1 Threat Assessment and Mitigation	\$40		\$411	\$16	\$108
HP2 Habitats of Special Importance	\$38	\$26	\$35	\$26	\$35
HP3 Invasive Species	\$11	\$11	\$11	\$11	\$11
Total	\$89	\$37	\$457	\$53	\$154

D7. MARINE SPATIAL PLANNING ACTION PLAN

Performance Measure Ideas

Desired Outcome: Improved integration of best available science into OCNMS decision making

Outputs: 1) Work with the IPC and AC to publish a plan for integrating sanctuary management efforts into regional MSP processes by year three of management plan implementation; 2) OCNMS spatial data made available to MSP entities by year [X] of management plan implementation.

Summary of Changes:

- This is a new action plan developed from the Ocean Development strategy that was originally in the Living Resources Conservation Biodiversity and Cross-Cutting section.
- We have expanded this beyond just ocean development

Strategy MSP1: MARINE SPATIAL

PLANNING – Investigate how recent initiatives in marine spatial planning can improve sanctuary management thorough participation in regional marine spatial planning processes in or immediately adjacent to the sanctuary.

Activity A: Work with the IPC and AC to develop a plan to integrate sanctuary efforts into regional marine spatial planning processes.

Activity B: Make existing OCNMS spatial data available to existing marine spatial tools, such as the Multipurpose Marine Cadastre.

Activity C: Identify, prioritize and collect spatial data of marine uses and resources that contributes to regional marine spatial planning processes and improves OCNMS decision making.

Activity D: Support regional planning processes and site evaluations for proposed development projects in or immediately adjacent to OCNMS through use of natural and cultural resource information to avoid, minimize, and mitigate user conflicts and impacts to habitats and natural and cultural resources.

Activity E: If projects are proposed in OCNMS, participate in scoping the research and monitoring needs, and collaborate in research and monitoring to assess project impacts to habitats, natural and cultural resources, and other area users.

Activity F: Participate in anticipate local, regional and federal Marine Spatial Planning efforts.

Links to Goals

Goal E
Goal G

Links to Other Action Plans

Collaborative & Coordinated
Management
Community Involvement in
Sanctuary Management
Habitat Mapping &
Classification
Habitat Protection
Wildlife Disturbance
Sanctuary Operations

Key Partners: Hoh, Makah, and Quileute tribes and Quinault Nation, Department of Interior (National Parks, U.S. Fish and Wildlife Service), NOAA Fisheries, Washington State department of Fish and Wildlife, Natural Resources, and Ecology, Washington State Ocean Caucus, West Coast Governors’ Agreement on Ocean Health Renewable Ocean Energy Action Coordination Team , local governments, coastal communities and non-governmental organizations

Budget and Timeline

<i>Strategies</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
MSP1 Marine Spatial Planning	\$87	\$95	\$98	\$98	\$98
Total	\$87	\$95	\$98	\$98	\$98

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

Maritime Heritage Action Plan

Socioeconomic Values of Sanctuary Resources Action Plan

E1. MARITIME HERITAGE ACTION PLAN

Performance Measure Ideas

Desired Outcomes: 1) Improved understanding of the cultural and historic resources in the Sanctuary region; 2) Improved communication between OCNMS, the SHPO, the Makah THPO, and the Quileute, Hoh and Quinault cultural resource management representatives.

Outputs: 1) Complete programmatic agreement under Section 106 of the National Historic Preservation Act by year [X] of the management plan; 2) By 2015, 100% of known historical, cultural and archaeological resources will be inventoried with NOAA's ARCH database.

Summary of Changes:

- Some restructuring of MH1 to make the activities more sequential.

Links to Goals

Goal F

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.

Links to Other Action Plans

Collaborative & Coordinated
Management
Community Outreach
K-12 Education
Higher Education
Visitor Services

Activity A: Identify priorities for future cultural resource surveys in the Sanctuary and assess the resources needed to complete those surveys and implement OCNMS's maritime heritage program.

Activity B: Work with partners to develop uniform guidelines/protocols for cultural resource data collection in the Sanctuary.

Activity C: In consultation with the Coastal Treaty Tribes, the state of Washington Historic Preservation Office, the state of Washington Department of Historic Preservation and Archeology, Olympic National Park and others develop a programmatic agreement describing the way in which routine activities in the Sanctuary will comply with Section 106 of the National Historic Preservation Act.

Activity D: Pursue research funding and partnerships with academic institutions and tribal communities to support the study and analysis of existing cultural resource collections (e.g., at the Makah Cultural and Research Center and other tribal centers)

in order to test hypotheses and answer questions about past and future changing ecological conditions on the Olympic Peninsula.

Strategy MH2: LOCAL AND CUSTOMARY KNOWLEDGE

Work with tribal and non-tribal partners to explore ways to gather, share and apply (when appropriate) traditional ecological knowledge, local and customary knowledge, and information obtained from cultural resource analyses.

Activity A: In collaboration with the Coastal Treaty Tribes, develop a program to survey and map “traditional cultural properties” in marine areas of interest to each tribe. [work with individual tribes to develop survey protocols to address the nature of properties surveys, survey methodology, the sensitivity of survey data, disclosure and non-disclosure limitations, disposition of the data, and products derived from the data.]

Activity B: Work with the Coastal Treaty Tribes, non-tribal communities and other partners to host scholarly and educational events that bring together natural science, social science and tribal knowledge experts to discuss pressing sanctuary management issues and ways in which traditional ecological knowledge could help to resolve those issues.

Activity C: Collect, analyze and share (as agreed) historical accounts and oral histories from historic (tribal and non-tribal) user groups of resources in the Sanctuary, including community members, fishermen, divers, and others, in order to improve understanding of the role that maritime heritage played in the Sanctuary’s past and collect information relevant to current/future resource management in the Sanctuary. Ensure that information collected from local communities as part of historical and cultural research projects is shared with these communities in a timely manner once projects are completed.

Strategy MH3: PUBLIC UNDERSTANDING OF TREATY RIGHTS

Work collaboratively with the Coastal Treaty Tribes to improve the public’s understanding of treaty rights and how traditional lifeways form a vital connection between the past, the present and the future, with a focus on marine areas.

Activity A: Work with the Coastal Treaty Tribes to create protocols for developing, reviewing and communicating information about treaty rights and tribal cultures to visitors, volunteers, staff, partners and local communities.

Activity B: Maintain ongoing communications with Coastal Treaty Tribes about opportunities to collaborate on events such as community festivals (Makah Days, Quileute Days, Chief Taholah Days, etc), special events like Tribal Journeys and other commemorations or significant celebrations within tribal communities.

Activity C: Work collaboratively with the Coastal Treaty Tribes, Olympic National Park and other partners in the development of an OCNMS Long Range Interpretive Plan that emphasizes appropriate messages and content relating to treaty rights, traditional and contemporary tribal communities, cultures and cultural values.

- Identify opportunities for projects, facilities and program development with each Coastal Treaty Tribe (e.g., maps with American Indian place names,

wayside exhibits on each of the tribes, new visitor centers, publications) that would be located or distributed on tribal reservations and other locations;

- Identify opportunities for interpreting traditional culture and cultural values at the Olympic Coast Discovery Center;
- Continue to incorporate information about the Coastal Treaty Tribes into the standard training for sanctuary volunteers (including Advisory Council members).

Key Partners: Makah, Quileute and Hoh Tribes and the Quinault Indian Nation, Olympic Coast Intergovernmental Policy Council, Olympic National Park, Olympic Park Institute, OCNMS Advisory Council, Washington State Historic Preservation Office, Washington Department of Archeology and Historic Preservation, Makah Cultural and Research Center, Advisory Council on Historic Preservation, Puget Sound Maritime Historical Society, Washington State Historical Society, Washington Trust for Historic Preservation, Museum of History and Industry, commercial and sport fishermen, divers, local residents, historians and history organizations, Puget Sound Maritime Historical Society, Museum of History and Industry and Westport Maritime Museum.

Budget and Timeline

<i>Strategies</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
MH1 Cultural Resource Conservation	\$92	\$92	\$92	\$92	\$92
MH2 Local and Customary Knowledge	\$90	\$90	\$90	\$90	\$90
MH3 Public Understanding of Treaty Rights	\$28	\$28	\$28	\$28	\$28
Total	\$210	\$210	\$210	\$210	\$210

E2. SOCIOECONOMIC VALUES OF RESOURCES IN THE SANCTUARY ACTION PLAN

Performance Measure Ideas

Desired Outcome: Improve ecological, social, and economic resilience for the Olympic Peninsula.

Outputs: 1) Publish an annotated bibliography of publications relevant to socioeconomic values of sanctuary resources by year [X]; 2) Complete GIS layers of existing socioeconomic data (e.g., ATBA data), as well as make them available for the public and partners by year [X]; 3) Map at least [X] types of human use in the Sanctuary by year [X].

Summary of Changes:

- No major changes

Links to Goals

Goal G

Strategy SV1: EXISTING SOCIOECONOMIC INFORMATION

Foster analysis and dissemination of existing socioeconomic data about Olympic Coast marine resources and human use patterns.

Activity A: Identify key socioeconomic players in the sanctuary region and begin targeted outreach effort to communicate OCNMS goals, and its role as a facilitator, in regional socioeconomic characterization.

Activity B: Further develop the annotated bibliography of references relevant to socioeconomic valuation of marine resources on the Olympic Peninsula, and make this annotated bibliography widely available (post it on OCNMS website).

Activity C: Make existing socioeconomic data widely available in user-friendly formats (such as GIS layers).

Links to Other Action Plans

Marine Spatial Planning
Populations, Communities & Ecosystems
Data Management, Sharing & Reporting
Collaborative & Coordinated Management
Community Involvement in Sanctuary Management
Community Outreach

Strategy SV2: NEW SOCIOECONOMIC INFORMATION

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

Activity A: Submit a formal request to the Coastal Treaty Tribes expressing OCNMS's interest in partnering to address the topic of socioeconomic valuation.

Activity B: Form a working group to prioritize socioeconomic data needs.

Activity C: Encourage working group to initiate a small, joint (partnership driven) human use mapping project in order to develop an initial (general) socioeconomic characterization of the sanctuary region. This should be done using as many

known resources as possible to minimize cost, time, and to build on or create new partnerships in the region.

Activity D: If agreed to by the working group, develop a joint proposal for a more extensive socioeconomic study or expanded (more detailed) human use mapping project and pursue funding for this proposal.

Key Partners: Makah, Quileute, Hoh Tribes and Quinault Indian Nation, state of Washington, Olympic Coast Intergovernmental Policy Council, Ecotrust and other NGOs, Outer Coast Marine Resource Committees, Olympic National Park, county Economic Development Councils, and the Olympic Peninsula Tourism Commission.

Budget and Timeline

<i>Strategies</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
SV1 Existing Socioeconomic Information		\$39			
SV2 Partnerships toward New Socioeconomic Information		\$13	\$21	\$57	
Total		\$22	\$21	\$57	

3. Revised OCNMS Goals and Objectives

As part of the management plan review process, OCNMS worked with its Advisory Council and the Olympic Coast Intergovernmental Policy Council to revise its goals and objectives. The revised goals and objectives presented here were formally adopted by OCNMS in September 2009. They will remain in draft form and subject to change until publication of OCNMS's final management plan.

A. Build and strengthen OCNMS's partnerships with the coastal treaty tribes and the Olympic Coast Intergovernmental Policy Council (IPC), and honor the Sanctuary's treaty trust responsibility.

Objective 1: Promote a transparent, cooperative and coordinated management structure for Olympic Coast marine resources within tribal, state and federal jurisdictions.

Objective 2: Work with the four coastal treaty tribes to improve the government-to-government consultation process.

Objective 3: Work collaboratively with the IPC to identify common goals and reach consensus on management priorities within the boundaries of the OCNMS for the protection, management and sustainable use of natural resources, and the promotion of educational opportunities and scientific research.

Objective 4: Work with the IPC to improve communication and facilitate the exchange of information to foster more effective decision-making.

B. Promote collaborative and coordinated management and stewardship of resources in the Sanctuary.

Objective 1: Actively encourage the State, tribes, interested agencies, coastal communities, and organizations to partner in addressing specific Sanctuary management concerns, joint work on action plans, and marine stewardship and sustainable use opportunities.

Objective 2: Improve intra-agency partnerships within the National Oceanic and Atmospheric Administration.

Objective 3: Create linkages between OCNMS's action plans and ocean initiatives of other entities.

Objective 4: Maintain and support the Sanctuary Advisory Council.

C. Investigate and enhance the understanding of ecosystem processes, and inform ecosystem-based management efforts, through scientific research, monitoring, and characterization.

Objective 1: Understand the effects of changing climate and ocean conditions on Sanctuary ecosystems.

Objective 2: Monitor key resources within the Sanctuary to identify significant changes over time.

Objective 3: Characterize and map the Sanctuary's species and habitats.

Objective 4: Promote more informed management by improving opportunities and mechanisms for sharing scientific data and research results.

Objective 5: Collaborate with the IPC and coastal treaty tribes on research and monitoring activities within the tribes' Usual and Accustomed Areas.

Objective 6: Promote and coordinate scientific research in the Sanctuary in collaboration with others.

D. Enhance ocean literacy, promote awareness of the Sanctuary and foster a sense of ocean stewardship through outreach, education, and interpretation efforts.

Objective 1: Collaborate to enhance K-12 and adult education programs on the Olympic Peninsula related to marine ecology and conservation.

Objective 2: Promote and support community-based conservation and education efforts.

Objective 3: Improve the public's understanding of coastal tribal cultures and awareness of the Sanctuary and its marine ecosystem.

E. Maintain the Sanctuary's natural biological diversity and protect, and where appropriate, restore and enhance Sanctuary ecosystems.

Objective 1: Work collaboratively with strategic partners to conserve natural habitats, populations, and ecological processes by preventing, minimizing and/or mitigating stressors on resources in the Sanctuary.

Objective 2: Actively participate in regional spill prevention, contingency planning, emergency response, damage assessment, and restoration activities.

Objective 3: Develop and maintain permitting and enforcement programs and partnerships to maximize protection of resources in the Sanctuary.

Objective 4: Promote marine debris removal in coordination with federal, state, local, and tribal authorities and volunteer organizations.

F. Enhance understanding and appreciation of the Olympic Coast's maritime heritage (living cultures, traditions, and cultural resources).

Objective 1: Map and interpret cultural resources in the Sanctuary.

Objective 2: Improve understanding of and education about regional tribal cultures.

Objective 3: Incorporate local and customary knowledge into Sanctuary programs.

G. Facilitate wise and sustainable use in sanctuaries to the extent that such uses are compatible with resource protection.

Objective 1: Assess, monitor and manage, as appropriate, levels of human use in the Sanctuary.

Objective 2: Create and support programs and strategies that protect tribal welfare.

Objective 3: Understand the Sanctuary's socioeconomic values.

H. Build, maintain, and enhance an operational capability and infrastructure.

Objective 1: Ensure that OCNMS regulations are consistent with other sanctuaries, where appropriate.

Objective 2: Pursue the infrastructure improvements and staffing increases necessary to achieve the work identified in the management plan.

Objective 3: Identify strategies to minimize the contribution of Sanctuary operations to climate change.

Objective 4: Support and expand volunteer opportunities at the Sanctuary.

Objective 5: Improve communication and collaboration between sanctuaries to share best practices.

4. Acronyms

AC	Olympic Coast National Marine Sanctuary Advisory Council
AIS	Automated Identification System
AOP	Annual Operating Plan
AOPA	Aircraft Owners and Pilots Association
ATBA	Area-to-be-Avoided
AUV	Autonomous Underwater Vehicle
CMECS	Coastal and Marine Ecological Classification Standard
COASST	Coastal Observation and Seabird Survey Team
CSS	Carbon Saturation State
CVTS	Cooperative Vessel Traffic Service
DMP	Draft Management Plan
DO	Dissolved Oxygen
DOC	Department of Commerce
DoD	Department of Defense
DOI	Department of Interior
EFH	Essential Fish Habitat
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FGDC	Federal Geographic Data Committee
GIS	Geographic Information System
GRP	Geographic Response Plans
HAB	Harmful Algal Blooms
HAPC	Habitat Areas of Particular Concern
ICS	Incident Command System
IPC	Olympic Coast Intergovernmental Policy Act
IT	Information Technology
MARINe	Multi-Agency Rocky Intertidal Network
MCBI	Marine Conservation Biology Institute
MCTS	Marine Communications and Traffic Services
MMS	Minerals Management Service
MMSN	Marine Mammal Stranding Network
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MPR	Management Plan Review
MRC	Marine Resource Committees
MSD	Marine Sanitation Device
NANOOS	Northwest Association of Networked Ocean Observing Systems
NBDC	National Buoy Data Center
NCDC	National Climatic Data Center
NCDDC	NOAA Coastal Data Development Center
NEPA	National Environmental Policy Act
NGO	Non-governmental organization
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service

NMSA	National Marine Sanctuaries Act
NOAA	National Oceanic and Atmospheric Administration
NOS	National Ocean Service
NPS	National Park Service
NRDA	Natural Resource Damage Assessment
NWCA	Northwest Cruise Ship Association
NWFSC	NOAA Northwest Fisheries Science Center
NWSC	Northwest Straits Commission
OAP	Washington Ocean Action Plan
OCNMS	Olympic Coast National Marine Sanctuary
OLE	National Marine Fisheries Service Office of Law Enforcement
ONMS	Office of National Marine Sanctuaries
ONMS WCRO	Office of National Marine Sanctuaries West Coast Regional Office
ONP	Olympic National Park
ORHAB	Olympic Region Harmful Algal Bloom Partnership
ORR	NOAA Office of Response and Restoration
OSLTF	Oil Spill Liability Trust Fund
OSU	Oregon State University
PAC	Procurement, Acquisition, Construction
PaCOOS	Pacific Coast Ocean Observing System
PFMC	Pacific Fisheries Management Council
PISCO	Partnership for Interdisciplinary Studies of Coastal Oceans
PMEL	NOAA Pacific Marine Environmental Laboratory
REEF	Reef Environmental Education Foundation
ROV	Remotely Operated Vehicle
SECO	NOAA Safety and Environmental Compliance Office
SHPO	State Historic Preservation Office
SIMoN	Sanctuary Integrated Monitoring Network
SOC	Standards of Care
THPO	Tribal Historic Preservation Office
TNC	The Nature Conservancy
USACE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UW/APL	University of Washington Applied Physics Lab
VTSPS	Vessel Traffic Service Puget Sound
WCCA	Washington Clean Coast Alliance
WCGA	West Coast Governors' Agreement
WDFW	Washington Department of Fish and Wildlife
WDNR	Washington Department of Natural Resources
WDoE	Washington Department of Ecology
WPA	Washington Pilots Association
WSDOT	Washington Department of Transportation
WSPRC	Washington State Parks and Recreation Commission

5. Summary of Action Plan Implementation Scenarios

Action Plan Implementation

The action plans and strategies in this draft management plan comprise a body of work that if fully implemented would require resources well beyond what is currently available to the OCNMS and NMSP. OCNMS staff needs to work with the Sanctuary Advisory Council, the Olympic Coast Intergovernmental Policy Council and NMSP leadership to the issues in order to identify which action plans should be implemented in which order or with the most initial emphasis. Implementation of some action plans will be dependent on a variety of funding scenarios such as grant applications, funding priorities of outside parties, or reliance on partner participation. The implementation of various action plans in the management plan may therefore occur at different stages based on urgency, benefit to Sanctuary resources, and resource availability.

Management Plan Implementation and Funding Scenarios

The following table, when completed, will provide an outline of the how various strategies in the management plan may be implemented. The implementation of the strategies depends on various factors including:

- status of strategy implementation
- priority of strategy implementation,
- interest and capacity of partners, and
- availability of resources required for strategy implementation

Column A

The status of the strategy indicates the amount of work completed or the level of implementation of a strategy at the time of the management plan review. Certain strategies and activities have been partially or wholly implemented prior to or during the management plan review. Many of these represent ongoing initiatives that will continue. Other strategies are new as part of the updated management plan.

Columns B, C, D

Implementation at various budget scenarios indicates the priority of a strategy or action plan and subsequent level of effort based on resources available. As stated previously, full implementation of the management plan exceeds the resources available to the MBNMS therefore requiring some prioritization of the action plan or strategies. As resources become available, a greater level of implementation is possible. This table outlines how much implementation could occur with the existing amount of resources and how increases in resources would affect the amount of implementation possible for each strategy or action plan.

NOTE: In this preliminary draft of the action plans, we have not yet assigned implementation priorities; however, in column B we have placed an asterisk (*) next to strategies that are currently being implemented and that staff feel need to be continued to maintain a base level of effort.

Column E

Implementation of most of the strategies in this management plan will require some input or coordination from partners, particularly tribes, other government agencies, research institutions, and NGO's. The table outlines the level of involvement expected from partners to achieve full implementation of each strategy. Many action plans and strategies are completely dependent on involvement from other agencies or dependent on research conducted by a research institution.

Column F

Funding for implementation of many of the strategies will require a mix of internal NMSP funds as well as funding from external sources such as grants, or in-kind work from partner agencies. It is noted where it is anticipated that the funds would need to be "internal", but where a significant increase to OCNMS's base budget would first be required. The table highlights the probably source of the funding; primarily internal (either at base of increased level) or external or a mix of funding sources.

Table Legend			
Column A	Column B, C, D	Column E	Column F
Strategy Status: ● – Existing w/o significant modification ◐ – Existing w/ significant modification ○ – New or future (Not yet implemented.)	Implementation* (w/ NMSP Funding): H – High M – Medium L – Low * Implementation ranking considers the priority of each strategy as well as the percentage of activities that could be initiated, maintained, and/or completed under differing funding scenarios.	Necessary Partnership Coordination: _ ● – Not possible w/o partners ◐ – Significant reliance on partners ○ – Little reliance on partners	Primary Funding Sources: ● – External (e.g. Grants) ◐ – Internal and External ◑ – Internal (increased budget) ○ – Internal (base budget)

	A	B	C	D	E	F
Action Plans	Strategy Status	Implementation Level Funding: Scenario 1	10% per year Increase: Scenario 2	20% per year Increase: Scenario 3	Partnership Coordination	Internal/external Funding Sources
Collaborative and Coordinated Sanctuary Management						
CCM1 External Evaluation	○				●	●
CCM2 Olympic Coast IPC	●	*			●	○
CCM3 Washington State	◐	*			●	○
CCM4 ONP and USFWS	●	*			●	○

	A	B	C	D	E	F
Action Plans	Strategy Status	Implementation Level Funding: Scenario 1	10% per year Increase: Scenario 2	20% per year Increase: Scenario 3	Partnership Coordination	Internal/external Funding Sources
CCM5 US Coast Guard	●	*			●	○
CCM6 US Navy	○				●	○
CCM7 NOAA Fisheries	◐	*			●	○
CCM8 NMS System	●	*			●	○
CCM9 Canadian Government	◐				●	◐
Community Involvement in Sanctuary Management						
COM1 Advisory Council	●	*			●	○
COM2 Marine Resource Committees	◐				●	○
COM3 Community Involvement	◐				●	●
Sanctuary Operations						
OPS1 Vessel Infrastructure and Operations	●	*			○	○
OPS2 Facilities	●	*			○	○
OPS3 Annual Planning	●	*			○	○
OPS4 Safe Operations	●	*			○	○
OPS5 Staffing	●	*			○	○
OPS6 Volunteer Program	●	*			●	●
OPS7 Permitting	◐	*			○	○
OPS8 Voluntary Compliance	●	*			○	●
OPS9 Enforcement	◐	*			●	◐
OPS10 Implementation Reporting	○				○	○
Habitat Mapping and Classification						
MAP1 Regional Coordination	●	*			●	○
MAP2 Seafloor Habitat Mapping	●	*			◐	◐
MAP3 Habitat Classification	●	*			○	◐
MAP4 Mapping Products	○				●	◐
Physical and Chemical Oceanography						
OCEO1 Coastal Mooring Program	●	*			●	●
OCEO2 Hypoxia	●				●	●
OCEO3 Ocean Acidification	◐				●	●
OCEO4 Harmful Algal Blooms	●				●	●
Populations, Communities and Ecosystems						
ECO1 Water Column Communities	○				●	◐
ECO2 Intertidal	●	*			●	○
ECO3 Subtidal	○				●	◐
ECO4 Benthic	●	*			●	●

	A	B	C	D	E	F
Action Plans	Strategy Status	Implementation Level Funding: Scenario 1	10% per year Increase: Scenario 2	20% per year Increase: Scenario 3	Partnership Coordination	Internal/external Funding Sources
ECO5 Fish	○				●	◐
ECO6 Marine Birds	◐	*			●	◐
ECO7 Marine Mammals	◐	*			●	◐
ECO8 Stranding Network	●				●	◐
ECO9 Ecosystem Processes	○				●	◐
Data Management, Sharing and Reporting						
DATA1 Data Quality Control and Management	◐				○	●
DATA2 Data Distribution	●	*			○	○
DATA3 Adaptive Management	◐	*			●	●
DATA4 Condition Report	●	*			◐	●
K-12 Education						
ED1 K-12 Partnerships	○	*			●	◐
ED2 Place-Based Education	◐				●	◐
ED3 Regional Initiatives	●				●	○
ED4 Using Technology	○				◐	●
Higher Education						
HED1 Internship Development	○				◐	●
HED2 Volunteer Positions	○				●	●
HED3 College Partnerships	○				●	●
Visitor Services						
VISIT1 Visitor Experience	●	*			●	●
VISIT2 Long-Range Interpretive Plan	○				●	●
VISIT 3 Using Technology	○				◐	●
Community Outreach						
OUT1 Stewardship and Citizen Science	◐	*			●	◐
OUT2 Staff Presence on Outer Coast	○				◐	●
OUT3 Community Events	◐				●	○
OUT4 Community-Based Efforts	○				●	◐
Spills Prevention, Preparedness, Response and Restoration						
SPILL1 ATBA Compliance and Monitoring	◐	*			●	●
SPILL2 Regional Vessel Management Forums	○				●	●
SPILL3 Regional Planning and Training Exercises	◐	*			●	◐
SPILL4 Outer Coast Trustees Working Group	●	*			●	○

	A	B	C	D	E	F
Action Plans	Strategy Status	Implementation Level Funding: Scenario 1	10% per year Increase: Scenario 2	20% per year Increase: Scenario 3	Partnership Coordination	Internal/external Funding Sources
SPILL5 OCNMS Organizational Response Plan	○				○	●
SPILL6 Damage Survey and Assessment Protocols	○				●	◐
Climate Change						
CLIM1 Climate Smart Sanctuaries Program	○				◐	●
CLIM2 Sanctuary as Sentinel Site	○				●	●
CLIM3 Resilient Ecosystems	○				●	●
CLIM4 Communicating Climate Change	○				◐	●
Marine Debris						
MD1 Assessment and Removal	◐	*			●	◐
MD2 Mitigating Impacts	◐				●	◐
Wildlife Disturbance						
WD1 Outreach on Wildlife Disturbance	◐				●	●
WD2 Overflight Restriction Zone	◐				●	●
WD3 Marine Mammal Disturbance	○				●	●
Water Quality						
WQP1 Vessel Discharges	○				●	◐
WQP2 Contaminants	◐	*			●	◐
Habitat Protection						
HP1 Threat Assessment and Mitigation	○				●	◐
HP2 Habitats of Special Importance	◐	*			●	◐
HP3 Invasive Species	◐				●	◐
Marine Spatial Planning						
MSP1 Marine Spatial Planning	○				●	◐
Maritime Heritage						
MH1 Cultural Resource Conservation	○				●	◐
MH2 Local and Customary Knowledge	○				●	●
MH3 Public Understanding of Treaty Rights	○				●	●
Socioeconomic Values of Sanctuary Resources						
SV1 Existing Socioeconomic Information	○				●	○
SV2 New Socioeconomic Information	○				●	●