

C. Improve Ocean Literacy

C1. K-12 Education Action Plan

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Introduction

Enhancing the public's awareness and appreciation of natural and cultural resources is a cornerstone of OCNMS' mission, which follows directly from mandates of the NMSA. Over the next five to ten years, OCNMS, in partnership with the Coastal Treaty Tribes, non-tribal coastal communities, National Park Service, Seattle Aquarium, Feiro Marine Life Center, Ocean Shores Interpretive Center, E3 Washington, and others, proposes to continue and expand existing – and develop new – education and outreach programs around the concept of Ocean Literacy.

Ocean Literacy, broadly defined, is an enduring understanding of the ocean's influence on people and people's influence on the ocean in a manner encouraging lifelong attitudes of ocean resource stewardship and personal commitment. In addition to conveying information about the sanctuary's marine organisms, habitats and ecosystems, OCNMS' Ocean Literacy program will work collaboratively to convey information about:

- Tribal culture and traditions, as well as treaty making and implementation
- Climate change and ocean acidification
- Cultural uses and socioeconomic values of sanctuary resources
- Ocean management and policy frameworks, such as ecosystem-based management
- Ocean stewardship

Each action plan in this grouping addresses a different sector of the public served by OCNMS programs: K-12 students, post-secondary students, local communities and visitors (including the general public outside the sanctuary region).

C1. K-12 Education Action Plan

Desired Outcomes: 1) Improved understanding by teachers and students of Ocean Literacy principles and the ocean's importance; and 2) K-12 students in the sanctuary region are better prepared to enter careers that require an understanding of Ocean Literacy.

Links to Goals:

Goal D - Enhance Ocean Literacy, promote awareness of the sanctuary and foster a sense of ocean stewardship through outreach, education, and interpretation efforts.

Background:

Engaging K-12 students and teachers in experiential education programs focused on the Olympic Coast marine environment is key to improving Ocean Literacy and fostering a lifelong respect for and understanding of the Olympic Coast and ocean ecosystems in general. The outer coast of the Olympic Peninsula is a remote and economically depressed region and the K-12 schools in the area do not have access to the resources necessary to provide students with hands-on marine science education.

OCNMS is one of a very few organizations on the Olympic Peninsula with staff expertise in both marine science and environmental education and thus it is crucial that OCNMS maintain and build upon its K-12 Ocean Literacy programs. OCNMS' collaborative K-12 Ocean Literacy programs have been incredibly successful and OCNMS receives more requests for programs than can be accommodated. Local schools are depending upon OCNMS to provide marine science and education programs, and OCNMS has both a strong obligation and interest in providing local students with hands-on opportunities to learn about the sanctuary.

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 partners, including 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, and distance learning.

Activity C: Work directly with classroom teachers 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 adjacent to the sanctuary and within the sanctuary region to develop place-based education opportunities for K-12 students.

Activity A: Work with school districts, tribal partners, home-school organizations in local communities, non-profit and other education organizations to design and implement program curricula to 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 staff to be student mentors.

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

Activity D: Develop summer youth programs and/or curricula to support summer youth 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, E3 Washington, 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: 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 NOAA-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, the Office of National Marine Sanctuaries and the National Estuarine Research Reserves to bring into classrooms live, interactive educational programs that utilize telepresence.

Links to Other Action Plans: Collaborative and Coordinated Sanctuary Management, Climate Change, Marine Debris, Wildlife Disturbance, Higher Education

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 Coast and Grays Harbor marine resources committees, 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, Grays Harbor Historical Seaport Authority, Northwest Aquatic and Marine Educators, Environmental Education Association of Washington, Washington Science Teachers Association, Makah Cultural and Research Center, National Park Service Research Learning Centers, Office of National Marine Sanctuaries, other sanctuaries

C2. Higher Education Action Plan

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

Links to Goals:

Goal D - Enhance Ocean Literacy, promote awareness of the sanctuary and foster a sense of ocean stewardship through outreach, education, and interpretation efforts.

Background:

Coastal rural and American Indian communities face a paradoxical challenge: they depend increasingly on science-based natural resource management in order to sustain resources and economies, yet lack of educational funding, opportunities, expertise and conflicting social problems create overwhelming educational challenges. Opportunities to learn basic and applied science and job skills in these communities are limited, and pathways to careers and success are not evident. In addition, connections between vocational, college and graduate students, and working experts are poorly defined.

OCNMS is in a unique position to show leadership in the region in promoting career-building opportunities in marine sciences, education, management and policy. The aim of this action plan is to identify ways in which OCNMS can collaborate with universities, colleges and community colleges to improve higher educational opportunities for students and encourage students to pursue ocean and marine-related fields.

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 (<http://www.k12.wa.us/runningstart/default.aspx>) 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 colleges to provide OCNMS staff and other experts as lecturers, presenters and/or adjunct faculty.

Activity C: Develop continuing education programs on ocean issues and explore opportunities for developing consortia between local colleges, Coastal Treaty Tribes, agencies and non-profits.

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 gain experience 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.

Links to Other Action Plans: Collaborative and Coordinated Sanctuary Management, Community Involvement in Sanctuary Management, Sanctuary Operations, Climate Change

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

C3. Visitor Services Action Plan

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

Links to Goals:

Goal D - Enhance Ocean Literacy, promote awareness of the sanctuary and foster a sense of ocean stewardship through outreach, education, and interpretation efforts.

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

Background:

Improving the general public's awareness of OCNMS, providing planning assistance and information to Olympic Coast visitors, providing high-quality educational experiences to visitors, encouraging visitors to the sanctuary to become better ocean stewards, and working with local communities to encourage sustainable tourism in the sanctuary region are all important aspects of OCNMS' visitor services program.

OCNMS' current visitor services program is relatively small and the public scoping process made it clear, the public would like to see a more robust OCNMS visitor services program. In recent years, funding for OCNMS visitor services activities has been drastically reduced. Thus, the goal of this action plan is to outline a series of strategies to guide development of OCNMS' visitor services program as resources become available. The action plan focuses on both using new technology (social networking, podcasts, interactive website tools, etc.) to disseminate information about OCNMS to a wider audience and working with partners to leverage limited resources.

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 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/museum exhibits in the sanctuary region.

Activity C: Work collaboratively to ensure the Long-Range Interpretive Plan reflects the region's specific needs as they relate to visitor service infrastructure development.

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: NEW 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 OCNMS 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 visitors to sanctuary and partner facilities can be linked to research vessels, other education centers etc.

Links to Other Action Plans: Climate Change, Marine Debris, Wildlife Disturbance, Maritime Heritage, Collaborative and Coordinated Sanctuary Management

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, Grays Harbor Historical Seaport Authority, OCDC volunteers, 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, Aramark/Kalaloch Lodge, 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

C4. Community Outreach Action Plan

Desired Outcomes: 1) Greater involvement of local communities in OCNMS programs and on-the-ground marine conservation efforts; and 2) a stronger connection between local communities and OCNMS.

Links to Goals:

Goal D - Enhance Ocean Literacy, promote awareness of the sanctuary and foster a sense of ocean stewardship through outreach, education, and interpretation efforts.

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

Background:

Effective community outreach is critical to the success of all OCNMS programs; and the need to improve OCNMS' relationships with local communities on the Olympic Peninsula has repeatedly emerged as a high priority during the MPR process. The Community Involvement in Sanctuary Management action plan, presented earlier in the FMP, addresses ways in which OCNMS can facilitate more community involvement in OCNMS management and decision-making. The Community Outreach action plan focuses more on involving local citizens in specific OCNMS volunteer programs and improving OCNMS staff presence on the outer coast so that local communities develop a stronger connection with staff. While the Community Outreach action plan is housed within the "Improve Ocean Literacy" priority issue, the action plan has been written broadly so it supports action plans related to research, living resources conservation and other program areas.

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 the 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.

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 including 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, regional watershed councils, salmon recovery teams, the Puget Sound Partnership, other community-based NGOs, and local and state governments in areas of marine 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.

Links to Other Action Plans: Community Involvement in Sanctuary Management, Maritime Heritage, Populations, Communities and Ecosystems, Climate Change, Marine Debris, Regional Ocean Planning, Collaborative and Coordinated Sanctuary Management

Key Partners: COASST, Washington CoastSavers, Washington Clean Coast Alliance, Makah, Quileute and Hoh Tribes and the Quinalt Indian Nation, Olympic Coast Intergovernmental Policy Council, Makah Cultural and Research Center, Feiro Marine Life Center, Port Townsend Marine Science Center, Olympic National Park, Grays Harbor and North Pacific Coast marine resources committees, Grays Harbor Historical Seaport Authority, National Coast Trail Association, 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 and others