



**Final Recommendations on Ocean Literacy
Hawaiian Islands Humpback Whale National Marine
Sanctuary Advisory Council
January 18, 2012**

The Hawaiian Islands Humpback Whale National Marine Sanctuary (sanctuary) Advisory Council (council) forwarded these final recommendations to sanctuary management at the January council meeting for consideration in the management plan review. This report is based on the work of a working group that was formed by the council in December 2010 to address one of the priority topics brought up during the 2010 public comment period. The working group met over the course of 12 months in 2011. A digital copy of this report can be downloaded at http://hawaiihumpbackwhale.noaa.gov/management/pdfs/oceanliteracy_rec_report.pdf.

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Need for Action

The Hawaiian Islands Humpback Whale National Marine Sanctuary (sanctuary) states in its current management plan that a “well informed public and user community will not only cultivate a greater appreciation of the need to protect sanctuary resources, but also enhance voluntary regulatory compliance” (page 253). In reviewing the Hawaiian Islands Humpback Whale National Marine Sanctuary management plan, the sanctuary sought feedback from the community through a 90-day period scoping period.

The public “face” of the sanctuary is through the entanglement response program and the sanctuary’s education and outreach efforts. In addition to the Kiheī Learning Center on Maui, the sanctuary offers a variety of programs to the communities of O‘ahu, Kaua‘i, Maui, and Hawai‘i Island. During the last five years, the sanctuary participated in over 150 community events, educating over 100,000 people with important messages about NOAA and the sanctuary through naturalist trainings, public lecture series, trainings for different user groups, citizen scientist projects, teacher workshops, student presentations and community outreach events (see appendix III).

These sanctuary education and outreach programs are viewed throughout the state as very highly successful. However, public comments continue to ask for more education, increased outlets for distributing information, including the cultural perspective and using education to create buy-in. Some comments illustrated gaps in public knowledge; misunderstandings that could be avoided through access to existing research / information.

To cultivate an ocean literate public, defined by the working group as one which has an “understanding of the ocean’s influence on you and your influence on the ocean, with an emphasis on the physical, biological and cultural resources of the sanctuary”, education and outreach must be incorporated into the very foundation of the future management plan.

There is a need to retain ocean literacy as a high priority within the sanctuary’s management strategies to ensure educational goals and specific education and outreach initiatives are both comprehensive and collaborative.

Desired Outcome:

The sanctuary needs an informed, involved constituency who care about protecting, conserving, and restoring our precious ocean resources and national marine sanctuaries, and are empowered and equipped with the tools and resources to meet their responsibility to leave these islands in better shape for future generations.

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Recommendations

Ocean literacy / Education / Outreach should be a discrete action plan in the upcoming management to perpetuate the role of the sanctuary as a one of the primary resources for marine conservation. All of the Sanctuary Advisory Council working groups who were tasked to review the scoping comments have identified important concepts in marine management of specific issues that affect Hawai'i. It is well established that education and outreach are key tools to communicating sanctuary messages, but Ocean Literacy is also a goal, which will be most effectively achieved if it maintains its status as a distinct category, creating consistency between messaging and making connections between topics so that audiences understand the bigger picture of the broader impact and influence in their relationship with the ocean.

The Ocean Literacy group has developed five specific recommendations (numbered below in bold followed by a paragraph of explanation and short term steps to achieve the desired outcome) of how the Hawaiian Islands Humpback Whale National Marine Sanctuary should address Ocean Literacy going forward. In all cases, the working group recommends that the sanctuary reassess and expand implementation over the mid and long-term, adopting a dynamic assessment program that continually accrues information, including the Hawai'i Ocean Resources Management Plan, to improve future programs.

1. Develop a comprehensive communication plan to raise the level of awareness about the sanctuary with both the education and outreach audiences.

Utilize various methods of dissemination (websites, exhibits, printed materials, and the media) to a wide variety of audiences, from visitors and the general public to ocean user groups (boaters; subsistence, recreational and commercial fishers; surfers; divers; etc), educators and decision makers.

- Short-term (1-2 years) goals: Assess existing communication strategies, identify appropriate audiences, and develop and implement a comprehensive communication plan with emphasis on better utilization of technology.

2. Provide opportunities for the public to become engaged in sanctuary stewardship activities.

This would include volunteer opportunities, citizen scientist programs, naturalist trainings, user group workshops and lectures. The goal is to develop a personal sense of ownership and responsibility to inspire conservation and empower people to become involved in marine and coastal issues.

- Short-term (1-2 years) goals: Assess successes of established programs (see appendix), identify challenges and obstacles, and map out how they can be overcome in future efforts. Identify complementary programs / efforts with existing partners and place-based community groups on neighboring islands to help identify and achieve their complementary ocean literacy goals.

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Recommendations continued:

3. Build capacity for the future.

Provide opportunities of formal and informal education of all ages to help develop an ocean literate society and to prepare future decision makers to make choices that promote ocean and coastal stewardship.

- Short-term (1-2 years) goals: Assess current programs (appendix III). Tie in content of the thematic areas of the new management plan. Continue successful ongoing programs and initiate age and audience appropriate programs (pending support availability).

4. Foster a “Sense of Place”.

Enhance the understanding of the unique natural history and ecological and cultural systems of Hawai‘i and the Pacific islands. Provide a deeper understanding and appreciation to encourage stewardship for the future by developing and disseminating factual information about many of the resources of Hawai‘i; this information is not currently available to all those who are invested, interested or have responsibility for the management of these resources.

- Short-term (1-2 years) goals: Review and assess current resources. Collaborate with place-based stewardship organizations and appropriate experts to adapt current strategies and identify new opportunities to connect to the place. Find sources that can teach traditional ecological knowledge and present status of the natural, cultural and economic resources. Incorporate traditional ecological knowledge, and an equitable understanding and utilization of Hawaii’s resources into all education / outreach programs and materials.

5. Collaborate with partners.

Leverage collaboration (funding, program support, donation, volunteer, travel, etc) with like-minded partners to enhance and improve efficacy of education and outreach recommendations (see above), programs, facilities and products.

- Short-term (1-2 years) goals: Review and assess present current in-kind partner relationships (see appendix IV). Identify new in-kind partnerships, funding opportunities, and contributions that align with sanctuary objectives.



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Process

As part of the Hawaiian Islands Humpback Whale National Marine Sanctuary management plan review process, the Sanctuary Advisory Council (SAC) established an Ocean Literacy working group (OLWG) to provide recommendations to the full council on the future direction of sanctuary education and outreach efforts to identify influences of Hawaii's society on the ocean and the influence of the ocean on Hawaii's society.

Education is defined here as working with formal (classroom) and informal (visitor center, beach or in-the-field experience) groups, whereas the term, Outreach refers to disseminating information to the general public through outreach events, lectures, web material, and printed materials.

Working group membership was solicited to Hawai'i education and outreach professionals and interested SAC members in order to encompass expertise and interest in many facets and target audiences of ocean literacy. Response came from all corners of the state, as members represent the Hawai'i Department of Education, university faculty, the Sanctuary Advisory Council's Youth Representative, charter schools, the sanctuary's sister site Papahānaumokuākea and numerous other informal education programs. The team size of 15-20 members was targeted to maintain a smaller and logistically manageable team (see Appendix I).

The OLWG began with a review of education and outreach comments gathered during public scoping meetings in communities across the island and online during an 90-day period scoping period run by the sanctuary as well as comments and input from the considerable experience and knowledge of the OLWG members.

The OLWG members identified specific information needs, adding to its document review: A) examples of other sanctuary education and outreach management plans; B) a draft of the statewide Hawai'i Environmental Literacy Plan; and C) an inventory of the current sanctuary education and outreach programs and partners. A smaller core team made up of the Sanctuary Advisory Council primary and alternate education representatives who served as the Chair and Vice-Chair of the group facilitated these meetings. They created ground rules, clarified expectations, and initiated document and other conversations between working group members. This core group also took charge of compiling and summarizing the information from the larger group and sent it back out to verify the accuracy of the input with sanctuary staff assistance. This allowed a more efficient process for busy Ocean Literacy working group members to respond, criticize, and support; rather than spend meetings on "brainstorming" which was done by email. Agendas and minutes for the monthly working group calls were posted online.

The core group reviewed this feedback and suggested five apparent theme areas of focus. All comments of team OLWG members submitted to date were recognized, with an emphasis that recommendations were still in draft form and that further comments (individual or off-line of conference call) were not only welcomed and encouraged to strengthen the draft document. After a review of a draft of this template with the entire group, the core group met with individual working OLWG members to tailor document and obtain approval. This, the resulting document, is the

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completion of the working group’s task to provide management plan recommendations to the full council on the issue of Ocean Literacy.

Appendices

I. Contributing Members

Chair: Liz Kumabe, University of Hawai‘i Sea Grant College Program
Vice Chair: Judy Lemus, Hawai‘i Institute of Marine Biology

Staff Leads: Patty Miller, Micki Ream

- Diane Abraham-* Kualapu‘u Public Charter Conversion School
- Jen Barrett-* SAC member, University of Hawai‘i Sea Grant College Program
- Donna Brown-* University of Hawai‘i Maui College
- Barbara Bruno-* School of Ocean and Earth Science and Technology, University of Hawai‘i
- Liz Foote-* Coral Reef Alliance (CORAL) & Project S.E.A. Link
- Becky Hommon-* SAC member, United States Navy
- Pohai Kirkland-* Community Liaison for Hawaiian Monk Seal Recovery Action (Kaua‘i)
- Gina McGuire-* SAC member, Youth Representative, Kamehameha Schools
- Colleen Murakami-* Hawai‘i Department of Education Student Support Branch
- Phyllis Nakasuji-* Hawai‘i Department of Education Student Support Branch
- Linda Schubert-* The Nature Conservancy
- Cheryl Shintani-* retired, Hawai‘i Department of Education Environmental Education Resources
- Joana Varawa-* Project Jonah International
- Yumi Yasutake-* NOAA / Papahānaumokuākea Marine National Monument

II. Definition of Terms

- Education:** working with formal (classroom) and informal (visitor center, beach or in-the-field experience) groups
- NOAA:** National Oceanic and Atmospheric Administration
- Outreach:** disseminating information to the general public through outreach events, lectures, web material, and printed materials.
- SAC:** Sanctuary Advisory Council
- TEK:** Traditional Ecological Knowledge & define

III. Listing of current education and outreach programs

Program	Purpose
Hi‘ialakai and Oscar Sette Education Cruises	Provide opportunities for secondary students and teachers to spend a day on a NOAA research vessel to expose students to “real-time” science methods that is undertaken in the Hawaiian waters. Students are exposed to careers in marine biology and oceanography as they participate in hands-on activities on the ship.

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School programs	Conduct classroom based programs to increase student and teacher knowledge about the humpback whales, and the local marine ecosystems. Programs delivered both in the schools and at the Maui Education Center.
Student Field Experiences	Provide opportunities for students to participate in field monitoring / investigative activities.
Teacher Workshops	Offer teacher workshops that focus on environmental topics, with emphasis on in-the-field experiences.
Community Outreach Events (Organized by others)	Participation in community sponsored events. Sanctuary sponsors an informational booth, and student activities.
Sanctuary Outreach Events	Major sanctuary-sponsored events designed to provide high-visibility venues to feature sanctuary messages, programs, resources, capabilities, and current topics. Strengthens partnerships for education with exhibitors, co-sponsors, and volunteers. Different outreach categories: Weekly outreach tables run by volunteers: - Maui: Maui Ocean Center, Grand Wailea, Whaler's Village - Big Island: Pu'ukoholā Heiau National Historic Site Sanctuary organized outreach events where partners are invited to participate
Lecture Series	Sanctuary sponsored lecture series. <ul style="list-style-type: none"> • Once a month lecture series • Bi-weekly 45 Ton talks at the Kihei Site
Humpback Whale Awareness Month	Increase awareness of the sanctuary and invite the public to get involved in the protection of humpback whales. Messages focus on threats to humpback whales, how you can help, and responsible wildlife viewing.
Sanctuary Ocean Count	Conduct a shore-based census and monitoring of humpback whale behavior at 60 sites on 4 islands three times annually during the peak breeding season. Collect data on the relative approximation of numbers and local distribution patterns over the years. Build a broad constituency of informed volunteers.
Ocean Awareness Training	Naturalist training for sanctuary volunteers, aquarium naturalists and boat naturalists related content used as they interact with the public. Certification cards are issued
OPACA Training	Naturalist training for commercial ocean operators and all their employees in Maui county. Participants attend a 6-hour training to update them on marine related content used as they interact with the public. Course is required by Maui county for commercial operators holding county permits
Sanctuary Volunteer Training	Orientation, training, recognition and appreciation opportunities for sanctuary volunteers assist in outreach, education, response, and office support activities.
Student Internships and Mentorships	Provide students with personal interactions with staff to promote greater understanding of program, career options, and conservation ethics.
Protected Resources, Emergency Response Outreach Program	Assist NOAA Fisheries PIRO and HI State DLNR by educating the public and volunteers during responses to marine mammal and turtle strandings in Hawai'i. Collaborate with NOAA Fisheries Protected Resources, NMMHSRP and International, as well as appropriate state and foreign agencies to provide education and training for professionals and the public for emergency response to distressed (esp. entangled) large whales at sea.

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Visitor Center	Provide a place for tourists, students, teachers, and locals to come and learn about the humpback whale and its habitat, protected resources, and conservation. Showcase for sanctuary program and activities.
Creating a Sense of Place	Provide interpretive information about sanctuary resources and conservation at selected indoor and outdoor locations

IV. List of Community Education and Outreach Partners (DRAFT list)

- UH Sea Grant Hawai'i
- UH Sea Grant Hanauma Bay Education Program
- Reef Watch Waikiki
- Waikiki Aquarium
- UH Hawai'i Institute of Marine Biology
- UH Marine Option Program (Maui and Oahu)
- The Dolphin Institute
- Reef Check Hawai'i
- Malama Pupukeya Waimea
- Surfrider Foundation Oahu and Maui Chapters
- Friends of Hanauma Bay
- Malama na honu
- Malama Maunalua
- UH Kewalo Marine Laboratory
- NOAA Marine Debris
- NOAA Pacific Islands Region
- NOAA Law Enforcement
- State of Hawaii - Dept.of Land and Natural Resources
- Hanauma Bay Nature Preserve
- Maui Ocean Center
- Maui County Parks and Recreation
- Community Work Day Program
- Digital Bus Program
- Reef Check Hawaii
- Ke Kula Niihau O Kekaha
- Kihei Charter School
- Kihei Canoe Club
- Kula Nai'a
- Project Sea Link
- Aoao O Na Loko I'a O Maui Fishpond Association
- Hawaii Ocean Safety Team
- Kilauea Point Natural History Association
- Watchable Wildlife, Inc.
- South Maui Watershed Association
- Hawaii Wildlife Fund
- Coral Reef Alliance

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