

Co: Clallam County
Grant Numbers:
G1300045 and 1400085

Clallam MRC
2013 Annual Report

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Annual Report for the Clallam County Marine Resource Committee January 1, 2013 – December 31, 2013

This report summarizes the activities and progress of the Clallam County Marine Resources Committee during the 2013 calendar year.

Activities:

Clallam County MRC activities for 2013 focused on administration; participation in MRC and NWSC meetings; training, outreach, and education; and specific projects related to the goals and objectives of the NWSC.

Prominent among MRC activities were outreach and education activities such as co-sponsoring the Elwha Nearshore Consortium; staffing a booth at the Dungeness River Festival; and sponsoring a community forum on ocean acidification.

The MRC partnered with the Jamestown S’Klallam Tribe to restore Olympia oysters in Sequim Bay; the MRC provided seed and created an educational poster and brochure.

The committee accomplished the following in 2013:

- Conducted 10 regular MRC meetings.
- Participated in the annual NWSC training workshop.
- Attended regularly scheduled NWSC meetings and conference calls.
- Hosted several speakers at MRC meetings.
- Engaged in local symposia and festivals with MRC activities and displays.
- Sponsored and coordinated symposia, workshops, and local events.
- Sponsored college interns to compile workshop and symposium proceedings.
- Provided Olympia oyster seed to restore Olympia oyster populations in Sequim Bay.
- Developed a poster and brochure illustrating the history of Olympia oysters and the restoration efforts underway in Sequim Bay.

Administration – Local: County staff and the MRC coordinator continued to provide support to the MRC. During this year, County staff organized monthly meetings, prepared agendas, meeting materials, minutes, and public notices for the monthly MRC meetings. Contact lists were also updated and maintained.

County staff and the MRC coordinator assisted MRC members in the preparation of the 2013/2014 work plan.

Participation in NWSC meetings and programs – MRC members attended NWSC meetings and conference calls held during the year. MRC members and staff also attended the annual NWSC training conference.

Training and education –During the year the committee invited speakers to regularly scheduled monthly meetings:

Clallam MRC hosted guest speakers;

Speaker	Topic
Anne Shaffer	Elwha Nearshore Consortium
Kris Kaplan	Olympia oysters in Sequim Bay
Greg Ballard	Shoreline permit process
Liz Mack & Jerry Joyce	Seabirds, oil spills, & citizen science
Jon Schmidt	CoastSavers projects
Carolyn Gibson	Forage fish project
Sue Wolf	Marine visioning project in CB-Sekiu
Meg Chadsey	Ocean acidification

Outreach

MRC staff and members participated in festivals and spoke to community groups about topics such as marine debris and the 2011 Tohoku earthquake and tsunami. The MRC also sponsored a forum on ocean acidification.

Community Forum on Ocean Acidification:

The MRC coordinated a County Commissioners’ work session and community forum on ocean acidification:



OCEAN ACIDIFICATION
 Community Forum: Monday, April 15, 2013
Join us to learn about ocean acidification and the strategies and actions to protect marine resources recommended by the state's Blue Ribbon Panel on Ocean Acidification

PROGRAM

Welcome and Introduction
 Clallam County Commissioner Mike Doherty

The Science of Ocean Acidification
 Eric Severson, Global Ocean Health Program

Local Impacts, Local Solutions
 Betty Probst, Puget Sound Restoration Fund, member of the State Blue Ribbon Panel on Ocean Acidification

Recommendations, Partnerships and Actions
 Brad Warren, Global Ocean Health Program, member of the State Blue Ribbon Panel on Ocean Acidification

6:00PM-8:00PM
 Port Angeles Senior Center
 328 East 7th Street
 Contact: Cathy Leir
 cleir@co.clallam.wa.us
 360-417-2561

This event is free and open to the public.







Ocean Acidification Community Forum, Port Angeles, April 15, 2013.



Clallam County Commissioner Mike Doherty welcomes community forum participants

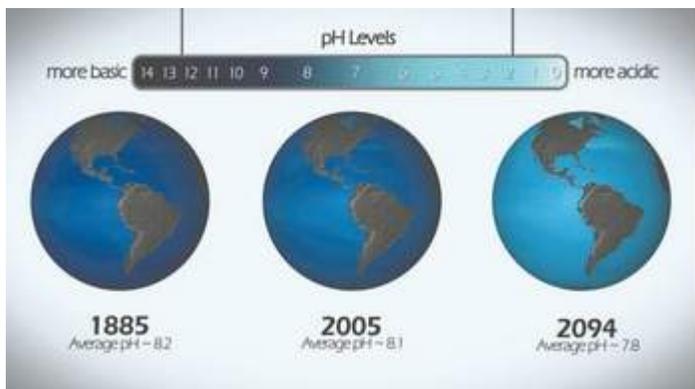


Community forum participants learn about the effects of ocean acidification



Blue Ribbon Panel members share ideas with community forum participants

Panel: Ocean acidification threatening sea life here



State Department of Ecology

By Rob Ollikainen

Peninsula Daily News

PORT ANGELES — Acidification of the world's oceans could have a profound effect on the North Olympic Peninsula, a panel of experts told Clallam County commissioners Monday.

Caused by carbon dioxide from the burning of fossil fuels, ocean acidification can destroy shells of crabs, clams, oysters and scores of creatures at the bottom of the food chain.

The Strait of Juan de Fuca, Puget Sound and outer coast of Washington are particularly vulnerable because acidic water is upwelled off the coast every spring and summer.

The state supports 42,000 jobs in the seafood industry.

“There is no silver bullet,” said panelist Eric Swenson, Seattle-based communications and outreach director for the Global Ocean Health Program. “It's a whole number of lead bullets that are going to make this happen.”

Swenson was joined by members of the Washington State Blue Ribbon Panel on Ocean Acidification, which recently reported that 80 percent of the oyster larvae in some hatcheries were killed by acidification. The Clallam Marine Resources Committee invited the governor-appointed panel to speak at the commissioners' work session. The same panel was scheduled to make a presentation at the Port Angeles Senior Center Monday night.

After the work session, Swenson said that raw sewage from Victoria is not contributing to acidification in the Strait. “There is no real effect on the quality of ocean water that comes out of Victoria,” he said. “If there were 10 Victorias, maybe there would be a problem. But the power of the currents and what comes

through, they've got a good cause for the fact that they're not causing any harm to the ocean.”

Ed Bowlby, a marine resource committee member and research coordinator for the Olympic Coast National Marine Sanctuary, said that “it may be a different story” on the north side of the Strait, adding: “We haven't seen any effects here.”

Brad Warren, director of the Global Ocean Health Program, used his time to summarize the panel's work and present its recommendations.

Swenson said there is little doubt that ocean acidification is being caused by humans. “Just like DNA evidence, there are fingerprints left on the isotopes, and the ratio between carbon 12 and carbon 13 is definitive,” he said. “It shows that this came from burning fuel, and therefore our fingerprints are all over the carbon.”

The water being upwelled off the coast came from the surface of the South China Sea about 40 years ago. “We've got 40 years or so of bad water ahead of us, or increasingly bad water, because of our increasing emissions of CO²,” Swenson said. “We can't do anything about that except strive to protect the resources we have, and try and adapt to what we know is coming our way. What we must do, on the big problem, is reduce our CO² significantly.”

Acidification is measured on a pH scale of 0 to 14, with neutral water being a 7 and battery acid rating 0.

“We're are [at] about 8.1 right now,” Swenson said. “Before they started out with the industrial revolution, they were about 8.2. That seems like a minuscule drop, but this is a logarithmic scale. So that drop of 0.1 percent equals a 30 percent increase in acidity.”

A University of Washington professor began studying the effects of acidification at Tatoosh Island about 30 years ago. In 2000, the work was passed onto researchers from the University of Chicago, who became “alarmed at what they're finding,” Swenson said.

The panel found that more than 30 percent of the marine species in the Strait of Juan de Fuca and Puget Sound are vulnerable to acidification. “The calcifiers are the first to be hit,” Swenson said. “In addition to the disruption of the food chain, there is a direct effect on fin fish.”

Among the vulnerable species is the pteropod, a shelled snail whose demise would cause “important ripple effects on the wider food chain,” said Nina Bednarsek, a National Oceanic and Atmospheric Administration scientist. “This would be one of the first species to be severely affected by the ocean acidification,” Bednarsek said, while showing slides of rapidly deteriorating

pteropod shells.

Other speakers included Betsy Peabody, founder of the Puget Sound Restoration Fund, and John Forster, a Port Angeles consultant who is exploring seaweed aquaculture as a means to “make a meaningful contribution to the food supply” while reducing local carbon levels.

Former Gov. Christine Gregoire appointed the 28-member panel on ocean acidification in February 2012.

To see its findings and 42 recommendations, which were presented in November in Seattle, visit <http://tinyurl.com/oceanacidificationreport>. Reporter Rob Ollikainen can be reached at 360-452-2345, ext. 5072, or at rollikainen@peninsuladailynews.com.

Dungeness River Festival:

MRC members once again staffed a booth at the Dungeness River Festival in September:



Setup was easy with a new canopy and plenty of heavy duty extension cords – thank you, Eric!

2500 people visited the festival, 500 of them on a rainy/windy Saturday



Clallam MRC gave away 550-600 “I kissed a geoduck” stickers, mostly to students. Some adults were into it, though! To get the sticker, a person was required to touch the geoduck, and give it an ‘air kiss’. Several students brought their parents to the booth on Saturday to ‘kiss the geoduck’.



Greig enthralled students with the geoducks



Lyn, Ed, and curious students



Even Smokey came by for a visit



Jeff and Lyn display their geoduck stickers

Olympia oyster restoration:

MRC members and MRC coordinator worked with NWSC staff, Jamestown S’Klallam Tribe shellfish biologists, and Puget Sound Restoration Fund on Olympia oyster restoration in Sequim Bay. A poster and brochure describing the restoration effort were developed:

Sequim Bay Olympia Oyster Project

The Project Goal:
To restore one acre of self-sustaining native Olympia oyster bed in Sequim Bay; and provide structured habitat for a diverse community of organisms.

This is part of a larger goal, underway since 1999, for the entire Puget Sound region:
To restore 100 acres of Olympia oyster habitat in the Puget Sound area by 2020, by utilizing genetically diverse hatchery propagated oyster seed and integrating various restoration materials and methods.
To date, 35 acres of enhanced oyster habitat have been restored by a collaboration of over 100 partners.



Washington's Only Native Oyster
 The Olympia oyster (*Ostrea lurida*) is Washington's only native oyster, once thrived in coves, inlets and other protected tidal areas of the Puget Sound, and further afield from Baja, California north to Alaska. They were an important food source for Native Americans, as evidenced by the massive shell middens built up over thousands of years. George Vancouver's expedition in 1792 reported that the shores of Discovery Bay were "plentiful".

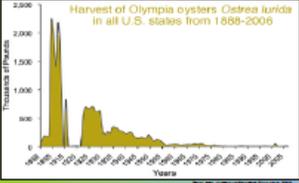
Rebuilding Olympia Oyster Populations in Sequim Bay

- In July 2012, grow-out bags with approximately 6,200 Olympia oyster seeds (broodstock) were planted on Jamestown's Sequim Bay tidelands. Their survival and growth is being monitored. Their genetic data is being studied and compared to the small remnant population of Olympia oysters, to determine whether the Sequim Bay Olympia oyster has different genetic traits than other Olympia oyster populations in Puget Sound.
- In July 2013, 200 seeded cultch bags (Pacific oyster shell with Olympia oyster larvae attached to it) with approximately 500,000 oysters were spread onto one acre of tideland adjacent to the prior year's seeds. Distributing a base layer of shell to the area also creates new habitat for the small existing native population to re-occupy.

Planted for Filtration, Not for Food

The purpose of restoring native oyster habitat in historic locations is to restore the ecosystem services that dense accumulations of living oysters once provided – including complex nearshore habitat, natural filtration and larval production. These oysters are not being planted as a source of food for humans. They are being planted to create important habitat that naturally filters tidal flats and estuaries, helping to create the perfect environment for indigenous species to thrive there, including small fish, invertebrates and sea worms, which in turn feed young salmon and other sea creatures. Olympia oysters are filter feeders:

- Individuals are capable of filtering 8-12 gallons of water per day.
- By removing nutrients from the water, reducing the frequency of algal blooms that are harmful to marine life and have caused recent shellfish closures in Sequim and Dungeness Bays.
- Olympia oyster gills filter food particles (phytoplankton) that are smaller than those taken by Pacific oysters, so they serve a different filtration role in controlling algal blooms.



Harvest of Olympia oysters *Ostrea lurida* in all U.S. states from 1889-2009

Heavy harvesting in the mid-19th century combined with decades of nearshore lumber mill pollution and habitat devastation had a huge detrimental impact on this slow-growing, delicate shellfish. It is estimated that less than 4% of historic core populations of Olympia oysters remain. A tiny remnant population remains in Sequim Bay, making it an excellent candidate for reintroduction of the species.

The Sequim Bay Olympia Oyster Project is a partnership between:



JAMESTOWN SKLALLAM TRIBE



CLALLAM COUNTY MARINE RESOURCES COMMITTEE



PUGET SOUND RESTORATION FUND



NORTHWEST STRAITS



NOAA

This poster was funded through the Clallam County Marine Resources Committee via Northwest Straits Marine Conservation Initiative, through NOAA's Community Based Restoration Program, as part of the Washington shellfish initiative.

Oil Spill preparedness:

Outreach and education continue to be a high priority for the MRC. In addition to its public meetings with invited speakers, in 2013 the MRC also sponsored HAZWOPER for 75 community volunteers:

Photos courtesy of Andrew Acomb



Hazwoper instructors Andy Carlson and Kevin Peterson demonstrate proper taping of Personal Protective Equipment



Hazwoper class participants practice wearing a Personal Floatation Device

Elwha Nearshore Research Consortium:

The MRC co-sponsored the Elwha Nearshore Research Consortium workshop, which highlighted presentations and dialogue for nearshore restoration researchers and the public. The focus of the annual event is Elwha nearshore restoration. Proceedings were compiled, funded by the MRC. Proceedings may be found at:

http://www.clallam.net/ccmrc/documents/ENC_2013_Proceedings.pdf

Beach cleanup:

Highly successful beach cleanups were conducted in celebration of Earth Day, in April. The MRC partnered with the Clallam Bay–Sekiu Lions' Club and Clallam Bay–Sekiu Chamber of Commerce to clean up beaches between Shipwreck Point and Pillar Point. Fifty-one volunteers collected 720 pounds of debris in the Clallam –Bay Sekiu area.



**Clallam Bay/Seki
Community Beach Clean Up
Saturday April 20th**

*Please join us in celebrating Earth Day by helping
remove litter from our local beaches-
Pillar Point to Bullman Beach!*

TRASH BAG & GLOVE HANDOUT: 9AM

Compass Rose in Clallam Bay
Hoko River (in Vista neighborhood by mailboxes)
Seki River (NW corner past bridges)
Ray's Grocery
Shipwreck Point (Pull out with historic marker)

A dumpster will be available at the Clallam Co. Park in Clallam Bay.

*1-4 PM: Refreshments, Music and "Most Unusual Find" display
& contest with prizes to follow at Chito Beach Resort*

*Note: "Unusual finds" can also be entered at the dumpster in Clallam Bay (if you
can't make it to Chito Beach) Entry deadline is 3:00 pm.*



**Dumpster, Bags & Gloves provided by Clallam County Marine Resources Committee
For More Info Call : Roy 963-2442 or Carol 963-2212**