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NOAA Support for Puget Sound Shellfish: Native Oysters, Abalone & a Healthy Marine Habitat

NOAA promotes sustainable shellfish aquaculture and conservation in Puget Sound as part of NOAA's comprehensive strategy for maintaining healthy and productive marine populations and ecosystems, and vibrant coastal communities. A viable shellfish industry and restoration efforts will also create employment and business opportunities in coastal communities and provide safe, sustainable seafood to consumers.

NOAA Contributes $200,000 to Rebuild Native Oysters in Puget Sound

Photo: Puget Sound Restoration Fund

According to The Nature Conservancy, "shellfish reefs are the most imperiled marine habitat on earth," with a reported 85 percent loss worldwide. The dramatic reduction of historic core populations in Puget Sound makes a compelling case for local action.

NOAA, along with regional Tribes, the State of Washington, the shellfish industry and non-governmental organizations, is a contributing partner to a 10-year endeavor to rebuild dense, breeding populations of Olympia oysters in Puget Sound. The proposed goal of the project is to restore 100 acres of native oyster habitat in Puget Sound by 2020.

Though Olympia oysters currently are found throughout their historic distribution, less than 4 percent of historic core populations remain in Puget Sound. Approximately 155 acres remain, compared to 4,000-5,000 acres that historically supported dense assemblages of oysters.

Restoring native oyster habitat in historic locations will benefit the ecosystem by providing complex nearshore habitat, natural filtration, and larval production. The proposed project will enhance structured native oyster habitat in the lower intertidal zone, providing three dimensional, complex habitat attractive to fish—

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Partners in Olympia Oyster Restoration:

- Puget Sound Restoration Fund
- Washington Department of Fish & Wildlife
- Squaxin Island, Suquamish, Skokomish, Port Gamble S'Klallam, Swinomish, Samish, Jamestown S'Klallam, Lummi, Nisqually Tribes
- National Fish & Wildlife Foundation
- The Nature Conservancy
- Commercial shellfish growers
- Washington Department of Natural Resources

Learn more:
www.psp.wa.gov/shellfish.php
and
http://aquaculture.noaa.gov

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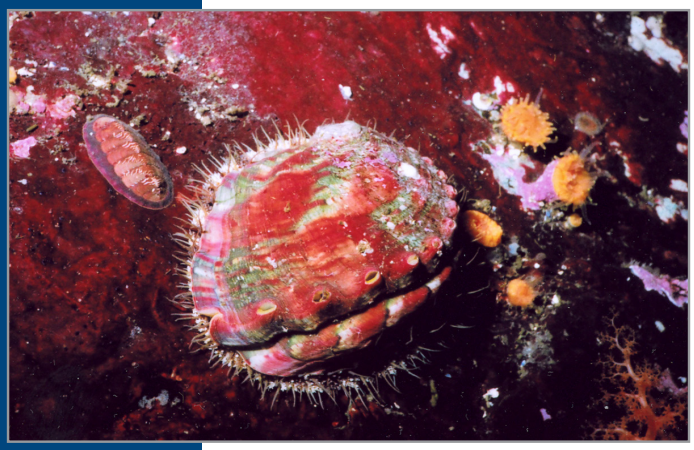
including salmon—invertebrates, and other marine organisms. Restored oyster populations and a viable commercial oyster industry will also benefit local communities and seafood lovers throughout the region.

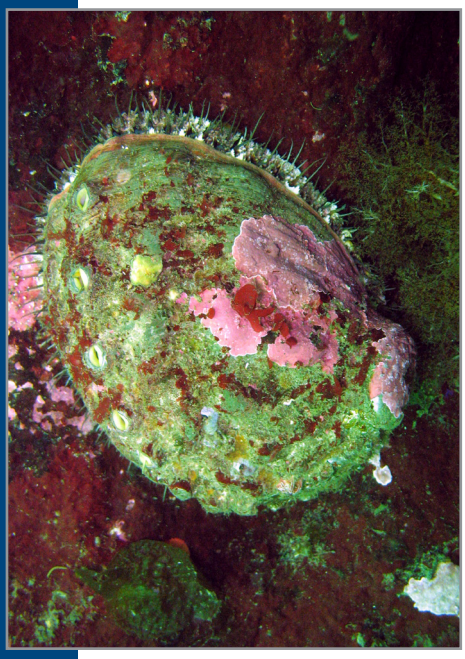
In their current, low density aggregations, Olympia oysters do not provide significant habitat structure or nutrient mitigation benefits. When restored in specific areas, however, Olympia oyster beds can provide critical ecological services currently reduced in those areas. We are working with our partners to lay the groundwork for more strategic, larger-scale rebuilding efforts in Puget Sound.

Techniques that combine habitat enhancement with seed production have been tested and proven effective. Genetic protocols co-developed by Puget Sound Restoration Fund, Washington Department of Fish & Wildlife and conservation geneticists at the University of Washington ensure that hatchery propagation results in restoration-grade, genetically diverse seed. And longstanding partnerships with Tribes, growers and resource managers provide the essential framework for public, Tribal, and private collaboration.

NOAA Supports Abalone, too

In September 2011, NOAA Fisheries provided a $560,000 grant to help restore the declining population of pinto abalone, an edible marine mollusk that lives in Washington's shallow, near-shore waters. The grant is part of the federal agency's Species of Concern Program, aimed at reversing declines of marine life and forestalling the need to list them under the Endangered Species Act. Abalone plays an important role in the health of marine ecosystems—they are "ecosystem engineers," meaning they inhabit subtidal rocky habitat and, via grazing behaviors, condition the habitat for colonization by other species.





Pinto Abalone photo courtesy of Janna Nichols

NOAA's Restoration Center

The NOAA Restoration Center has contributed nearly $1.5 million and provided technical assistance to Olympia oyster restoration efforts throughout the West Coast, including work in Puget Sound. In addition, NOAA and partners have hosted several restoration workshops to bring the West Coast community together to further restoration science and strategic planning.

One highlight of this funded work in Puget Sound is restoration in Liberty Bay. In 2006, NOAA's Restoration Center, in partnership with The Nature Conservancy, funded the Puget Sound Restoration Fund to create a one-acre pilot project, re-creating a functional, self-sustaining native oyster bed in the lower intertidal zone. An additional seven acres of native oyster habitat was restored in later phases. Monitoring results to date show that the enhancements have been successful. We have seen increases in Olympia oyster recruitment and the biodiversity at the site. Of particular interest, marine organisms known to be eaten by salmon increased in both numbers and diversity.

Learn more:

www.psp.wa.gov/shellfish.php

and **http://aquaculture.noaa.gov**