



Applying knowledge to improve water quality

# Pacific Northwest

## Regional Water Program

A Partnership of USDA NIFA  
& Land Grant Colleges and Universities

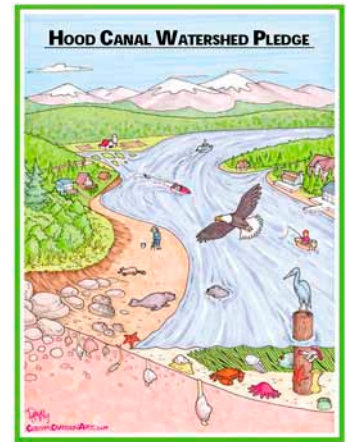
Summer 2006  
PNWWATER 087

### Using Social Marketing Strategies to Address Water Quality in Hood Canal

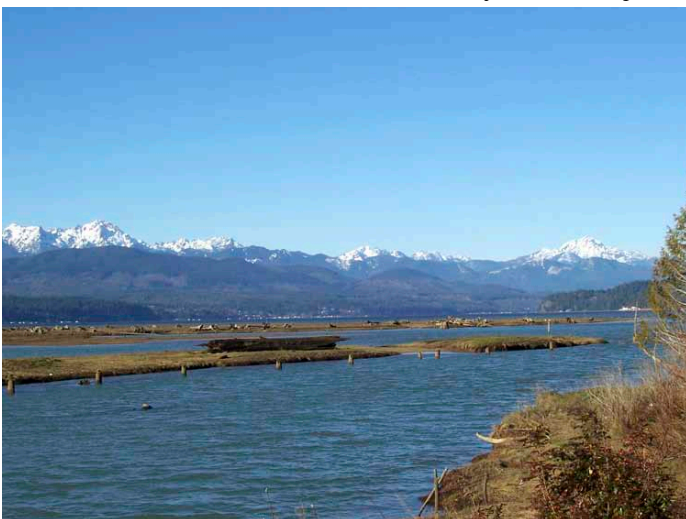
To reduce anthropogenic (human-caused) nutrient loading to Hood Canal, Washington State University Extension implemented two social marketing based campaigns to educate and instill behavior changes among watershed residents. Social Marketing takes the principles of traditional commercial marketing and applies them to a target audience with the goal of influencing actions and behaviors. Beginning in 2005, the “Hood Canal Watershed Pledge Program” targeted all watershed residents and the “Shore Stewards” specifically targeted shoreline homeowner best management practices.

#### Elements of Social Marketing:

- ◆ Identification of target audiences/issues
- ◆ Development of desired behavior objectives (best management practices for the home and property)
- ◆ Development of products to promote program objectives (booklets, signs, sun-catchers, related fact sheets)
- ◆ Making personal contacts and obtaining commitments (at a variety of community events and presentations)
- ◆ Evaluation of program outcomes; measuring the changes in awareness and behavior (phone surveys of program participants)



Hood Canal forms the western most basin of Puget Sound. However unlike the main portions of the Sound, the waters of Hood Canal sit in a fairly isolated fjord-like body, bounded at the North by an underwater sill. A



number of factors including: slow water exchange, the quality of incoming ocean water, changes in weather, changes in the landscape, and loadings of carbon and nitrogen all set Hood Canal up as a very sensitive body of water. The waters of Hood Canal are experiencing the lowest oxygen concentrations in recorded history. The area of low dissolved oxygen is becoming larger (spreading northward) and lasting throughout the year. Hood Canal also suffered significant fish kills during both 2002 and 2003. These conditions have become the focus of a major collaborative 3-year study. The Hood Canal Dissolved Oxygen Program is working to determine the sources of the low dissolved oxygen in Hood Canal and the effect on marine life. The program is also working with local, state, federal, and tribal government policy makers to develop potential corrective actions that will help restore and maintain a



## Pacific Northwest Regional Water Quality Coordination Project Partners

### Land Grant Universities

#### Alaska

Cooperative Extension Service  
Contact Fred Sorensen:  
907-786-6311

<http://www.uaf.edu/ces/water/>

University Publications:

<http://www.alaska.edu/uaf/ces/publications/>

#### Idaho

University of Idaho  
Cooperative Extension System  
Contact Bob Mahler: 208-885-7025

<http://www.uidaho.edu/wq/wqhome.html>

University Publications:

<http://info.ag.uidaho.edu/Catalog/catalog.htm>

#### Oregon

Oregon State University  
Extension Service  
Contact Mike Gamroth: 541-737-3316

<http://extension.oregonstate.edu/>

University Publications:

<http://extension.oregonstate.edu/catalog/>

#### Washington

Washington State University  
WSU Extension  
Contact Bob Simmons:  
360-427-9670 ext. 690

<http://wawater.wsu.edu/>

University Publications:

<http://pubs.wsu.edu/>

Northwest Indian College  
Contact Charlotte Clausing:  
360-392-4319

[cclausing@nwic.edu](mailto:cclausing@nwic.edu) or

<http://www.nwic.edu/>

### Water Resource Research Institutes

Water and Environmental Research  
Center (Alaska)

<http://www.uaf.edu/water/>

Idaho Water Resources  
Research Institute  
<http://www.boise.uidaho.edu/>

Institute for Water and  
Watersheds (Oregon)  
<http://water.oregonstate.edu/>

State of Washington  
Water Research Center  
<http://www.swwrc.wsu.edu/>

### Environmental Protection Agency

EPA, Region 10  
The Pacific Northwest  
<http://www.epa.gov/r10earth/>

Office of Research and Development,  
Corvallis Laboratory  
<http://www.epa.gov/wed/>

For more information contact  
Jan Seago at 206-553-0038 or  
[seago.jan@epa.gov](mailto:seago.jan@epa.gov)

### The Project

Land Grant Universities, Water Research Institutes, and EPA Region 10 have formed a partnership to provide research and education to communities about protecting or restoring the quality of water resources. This partnership is being supported in part by the USDA's National Institute of Food and Agriculture (NIFA).

### Our Goal and Approach

The goal of this Project is to provide leadership for water resources research, education, and outreach to help people, industry, and governments to prevent and solve current and emerging water quality and quantity problems. The approach to achieving this goal is for the Partners to develop a coordinated water quality effort based on, and strengthening, individual state programs.

### Our Strengths

The Project promotes regional collaboration by acknowledging existing programs and successful efforts; assisting program gaps; identifying potential issues for cross-agency and private sector collaboration; and developing a clearinghouse of expertise and programs. In addition, the Project establishes or enhances partnerships with federal, state, and local environmental and water resource management agencies, such as by placing a University Liaison within the offices of EPA Region 10.

level of dissolved oxygen that will not stress the marine life. Washington State University Extension is one of over 30 partners in this process and is engaged in implementing corrective actions utilizing social marketing principles.

Each of the programs (Shore Stewards and the Watershed Pledge) engage residents through outreach efforts at community events and festivals as well as community group presentations. Each program utilizes a booklet specific to their audience that highlights the natural history of Hood Canal, water quality issues, and helps residents identify and commit to taking actions to help maintain Hood Canal's health. The participants who commit to specific actions in the Hood Canal Watershed Pledge Program are provided a recycled glass sun-catcher and the shoreline homeowners are provided a 12-inch round metal "Shore Steward" sign for their home. These incentives provide ongoing reminders to participants of the pledges they made. Contact information is collected for participants in order to provide them with water quality information and for program evaluation.

Survey results indicated that pledge program participants had followed through on 12 out of 16 behaviors at or above the same rate to which they had pledged. Sixty-five percent reported that they were more aware of how their actions can affect water quality in Hood Canal and 88 percent reported that they shared what they learned with their friends, family, or neighbors.



### National Water Quality Program Areas

The four land grant universities in the Pacific Northwest have aligned our water resource Extension and research efforts with eight themes of the USDA's National Institute of Food and Agriculture.

1. Animal Waste Management
2. Drinking Water and Human Health
3. Environmental Restoration
4. Nutrient and Pesticide Management
5. Pollution Assessment and Prevention
6. Watershed Management
7. Water Conservation and Management
8. Water Policy and Economics

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