Puget Sound Water Quality Action Team

Volume 17 No. 1
Winter 2002

Sound WAVES

Marine Nearshore Habitats Get Big Federal Boost

Throughout Puget Sound, dredging and filling have removed or destroyed nearshore habitats. Shoreline armoring—such as bulkheads—has led to increased erosion of unarmored neighboring properties, disrupted upland drainage, and the loss of vegetation and fish and wildlife habitat. As the human population grows and more modifications occur along Puget Sound shorelines, further damage to the nearshore ecosystem is expected.

The U.S. Army Corps of Engineers and a number of state and local partners have developed a plan for a Soundwide nearshore assessment and restoration project. The Washington Department of Fish and Wildlife, acting as lead non-federal sponsor, entered into a cost-sharing agreement with the Corps for a six-year feasibility study. The plan was approved by the Corps in late September 2001, initiating the Puget Sound Nearshore and Ecosystem Restoration Project (The Nearshore Project).

The study will assess the historic and existing conditions of the Puget Sound nearshore, develop criteria for selecting good restoration and protection projects, develop a conceptual model, and develop a list of projects for early action.

Federal, state, tribal and local governments, along with academics and non-governmental organizations have been conducting inventories of nearshore habitat conditions and resources as part of salmon recovery efforts. The groups are developing methods to slow the trend of habitat loss, and restoring critical nearshore processes. However, the scope of what these efforts can accomplish has been limited and methods of prioritizing nearshore restoration projects differ from methods for restoring habitat within watersheds. Recognizing this, the Salmon Recovery Funding Board made a sizable contribution to develop The Nearshore Project.

The many faces of the nearshore. *Upper left:* Good shoreline habitat has riparian vegetation and large woody debris. *Upper right:* Shoreline modifications can adversely affect habitat. *Lower right:* It is possible to restore and improve habitat on some beaches after removing hard structures.

Why the Nearshore Project?

Planning nearshore restoration Soundwide is an opportunity to coordinate existing nearshore projects and to identify new projects where significant functions can be restored. Throughout the planning phases of the project, Corps involvement will increase by 100 percent the amount of money available for habitat analysis. As inventory data become available, local governments can use the information to update their Shoreline Master Programs and critical areas ordinances to further protect nearshore resources. Once restoration projects are identified, the Corps will pay up to 65 percent of the construction costs of a project.

Help needed at the local level

Local residents and local governments have information that can be very useful to the project. For information on this exciting new project, and to learn how you might be involved, please contact Lori Morris at the Corps of Engineers (206) 764-3604 or Tim Smith at Washington Department of Fish and Wildlife (360) 902-2223.

Puget Sound Water Quality Action Team

(800) 54-SOUND • (360) 407-7300
http://www.wa.gov/puget_sound
e-mail: tdroscher@psat.wa.gov

Inside This Issue

The Puget Sound Water Quality Action Team and its advisory arm, the Puget Sound Council, were created by the Washington State Legislature to lead efforts to protect Puget Sound.

Chair: Nancy McKay

Action Team Members

Department of Agriculture
Bill Brookreson, Acting Director

Office of Community Development
Busse Nutley, Director

Department of Ecology
Tom Fitzsimmons, Director

Department of Fish & Wildlife
Jeffrey Koenings, Director

Department of Health
Mary Selecky, Secretary

Department of Natural Resources
Francea McNair, Aquatics Steward

Department of Transportation
Sid Morrison, Secretary

Interagency Committee for Outdoor Recreation
Laura Eckert Johnson, Director

State Parks & Recreation Commission
Cleve Pinnix, Director

Wash. State Conservation Commission
Steve Meyer, Executive Director

Tulalip Tribes
Daryl Williams, Director, Department of the Environment

Environmental Protection Agency
John Iani, Regional Administrator

National Marine Fisheries Service
Bob Lohn, Regional Administrator

U.S. Fish & Wildlife Service
Ken Berg, Manager

Puget Sound Council Members

Agriculture
Jerry Van der Veen, dairy farmer

Business
Kirk Anderson, Fisher Communications, Inc.

Environmental Community
Tom Putnam, Puget Soundkeeper Alliance

Shellfish Industry
Bill Dewey, Taylor Shellfish Co.

Cities
Jackie Aitchison, Poulsbo City Council

Counties
Rhea Miller, San Juan County Board of Commissioners

Tribes
Fran Wilshusen, Northwest Indian Fisheries Commission

State Senate
Senator Tracey Eide (D-Federal Way)
Senator Pam Roach (R-Auburn)

State House of Representatives
Phil Rockefeller (D-Kitsap)

LEGISLATIVE NEWS: Grant Program Fixes On-sites, Helps Shellfish Beds

Few urban areas remain where one can travel only a short distance from home to find wholesome, edible foods produced in the surrounding natural environment. Despite its recent growth, Puget Sound is one such area. The region's shellfish beds supply a variety of species for harvest and safe consumption. Northwest shellfish growers want to keep it that way.

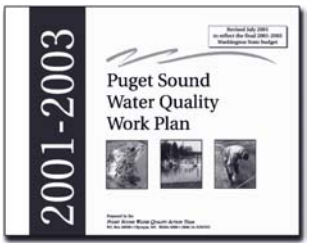
However, shellfish beds are increasingly threatened by pollution. As land is developed, the number of potential sources grows. A significant threat—one that can stop shellfish harvesting—comes from on-site sewage systems. Shellfish growers, with Action Team support, recently won legislative approval of a new approach for keeping on-site sewage contamination from shellfish beds.

Engrossed Second Substitute House Bill 1658 makes possible a partnership among growers, state agencies and local health jurisdictions to help homeowners fix failing on-site sewage systems. The bill, enacted during the last session, makes available to growers certain previously unused state tidelands. Tideland leases and the sale of shellfish grown on them will generate funds earmarked to fix on-site systems that drain to shellfish growing areas. The Action Team will work with local health jurisdictions to make repair grants available to homeowners.

The bill encourages local officials to focus their operation and maintenance management programs for on-site sewage systems by allowing initial use of these funds to identify and establish "areas of special concern" and shellfish protection districts. The Action Team will solicit participation by local health jurisdictions in the 12 counties of the Puget Sound region, as well as those serving Pacific and Grays Harbor Counties. Funds should become available during the summer of 2002.

Formal agreements will be developed between the Action Team and each local health jurisdiction to establish requirements for participation. These will include income eligibility and the requirement that homeowners provide regular maintenance to ensure that the repaired systems continue to function properly. For additional information, contact Terry Hull at (360) 407-6314 or thull@psat.wa.gov.

Action Team Steps Up Efforts to Implement Puget Sound Work Plan



The Puget Sound Water Quality Action Team support staff has begun an outreach project to local governments to encourage implementation the *2001-2003 Puget Sound Water Quality Work Plan,* the biennial plan for the *Puget Sound Water Quality Management Plan.* Local governments in the Puget Sound basin will be encouraged to incorporate work plan priorities in the updates to their comprehensive plans and shoreline master programs. Action Team local liaisons will offer specific recommendations and resources for local plans and ordinances that would protect the Sound. By advising planners early in the plan revision and program development processes, the Action Team hopes that recommendations will be considered and discussed by elected officials, planning commissions, and the public throughout these planning processes.

Puget Sound Water Quality Management Plan programs that are implemented in large part through local land use regulations include the stormwater, on-site septic, shellfish, and marine and freshwater habitat programs. The stormwater and habitat programs were revised in 2000 to reflect new information and new challenges, such as declining species.

The Action Team has prepared a packet for local planners that includes a list of recommendations for comprehensive plans, critical areas ordinances, zoning regulations, and shoreline master programs. The packet also includes fact sheets with information on the revised stormwater and habitat programs, land use options to protect shellfish, funding resources, best available science to protect wetlands, and links to state environmental databases and websites. The packet was developed with the Office of Community Development, the Department of Ecology and other state agencies that have roles in environmental assistance and regulation.

While state agencies can provide resources, the difficult decisions on future land uses in communities that surround Puget Sound are made at the local level. In support of this effort, all Puget Sound jurisdictions have been mailed the Action Team packet of resource materials, and Action Team local liaisons will meet with a number of jurisdictions to discuss how to apply the recommendations to local conditions. The update packet is available on our website at www.wa.gov/puget_sound or call (800) 54-SOUND to request a copy.

News From Around Puget Sound

San Juan County

In November, San Juan County's Board of County Commissioners approved new language to their Comprehensive Plan that provides goals, policies and definitions for marine protected areas. It was added as a "Marine Protected Area Environment" under the Shoreline Master Program and states, "the purpose of the Marine Protected Area environment is to preserve and restore critical marine habitat areas and may be applied as an overlay to another shoreline environment designation. It is designed to be applied to specific aquatic, intertidal and/or terrestrial shoreline areas." Designation criteria and management policies are also provided in the amendment. For additional information or full text of the amendment, please contact Ginny Broadhurst at (360) 738-6122.

Snohomish County

Water quality enforcement staff from jurisdictions in the Snohomish County portion of the Snohomish River Basin gathered in Monroe on Nov. 8 to share information and discuss challenges of their work. The forum was organized by the Department of Ecology and the Puget Sound Water Quality Action Team and hosted by the Quilceda-Allen Implementation Committee. The forum is a first step in responding to the recent emphasis on enforcement in a number of local and state documents. The local Quilceda-Allen watershed plan and draft French Creek watershed plan both call for better enforcement of existing regulations, as does the Puget Sound Shared Strategy for Salmon Recovery. Enforcement staff agreed to meet again to explore specific issues identified at their first meeting. Contact Ralph Svrjcek, Department of Ecology, at (425) 649-7165.

Clallam County

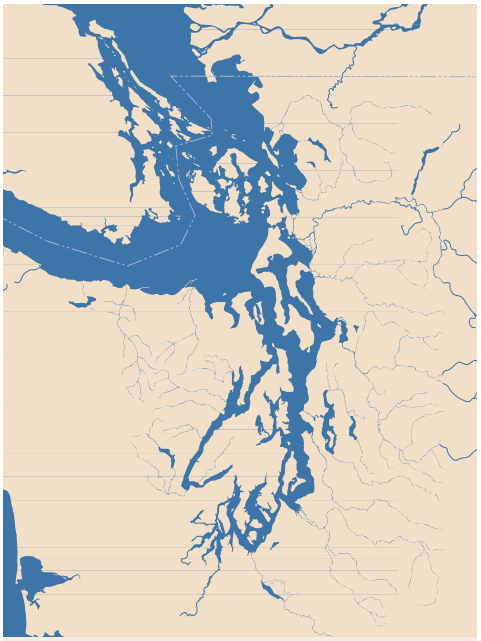
An estuary restoration project for the Dungeness River will begin a bold program to restore estuarine and river function. The project is the highest ranked project on the North Olympic Peninsula Lead Entity's 2001 project list. Clallam County and their many partners in the Dungeness River Management Team, as well as other lead entity governments, support this project as the solution to several lower watershed problems, including water quality violations, damage to residences by flooding, and habitat limitations. This is the first phase of the restoration effort and includes property acquisition on the west side of the river mouth, removal of associated residences and infrastructure, and extensive riparian planting. Another important benefit of the project will be the elimination of failing on-site septic systems that may be a contributing factor to the recent shellfish closures in Dungeness Bay. Contact Cathy Lear, a Salmon Recovery Planner with Clallam County at (360) 417-2361 or clear@co.clallam.wa.us.

Pierce County

The Department of Heath recently downgraded Filucy Bay for increased fecal coliform bacteria in water samples. Likely sources of the bacteria include failing on-site sewage systems and poor agricultural practices. However, work is underway to alleviate the problem. The Tacoma-Pierce County Health Department (TPCHD), with the help of local residents has so far dye-tested more than one-third of the houses with on-site septic systems. The Pierce County Conservation District reports that there are more than 35 agricultural parcels potentially affecting water quality in Filucy Bay. The conservation district will contact the agricultural practitioners and write farm plans as quickly as possible with current resources. Pierce County Public Works has been developing ordinance language for the adoption of a Filucy Bay Shellfish Protection District as well as taking and testing water samples. Contact Ray Hanowell, TPCHD, (253) 798-2845 or rhanowell@tpchd.org.

Thurston County

In 1985 Thurston County was one of the first Puget Sound counties to create a storm and surface water utility that funded solutions to stormwater problems. Concerned about flooding and pollution of Puget Sound, officials confined the service area at that time to the populated and urbanized areas of the northern portion of the county. Now, after 15 years of regional growth, the county commissioners are entertaining a proposal to include the balance of the county in the rate boundary. In the past few years, requests for assistance with flooding due to rainfall and high groundwater in south Thurston County areas have risen dramatically and taxed utility staff and resources. Inclusion of south county property owners would generate roughly $500,000; services provided would include capital facilities projects, system maintenance and public education. For more information, contact Jim Bachmeier, (360) 754-4681.



Puget Sound Water Quality Action Team Local Liaisons:

Island and Snohomish counties:
Joan Drinkwin, (360) 848-0924

Thurston and Mason counties:
Tim Ransom, (360) 407-7323

Whatcom and Skagit counties:
Stuart Glasoe, (360) 407-7319

San Juan County:
Ginny Broadhurst, (360) 738-6122

Clallam, Kitsap and Jefferson counties:
John Cambalik, (360) 582-0575

Pierce and King counties:
Kathy Taylor, (253) 333-4920

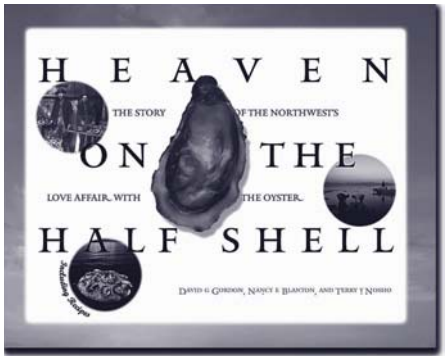
Whatcom County

Whatcom County has the most dairies of any county in the state. Shellfish downgrades caused by bacterial contamination in the mid-1990s spotlighted the need for better manure management to protect water quality. That is happening. Regulations adopted by the county and state in 1998 and farmer support for conservation planning turned things around. The county's nutrient management ordinance prohibited spreading of manure during winter months, and the state act required the development of farm plans for all dairies by 2003. Plans have been written and are being implemented for about 75 percent of the county's 210 dairies. In addition to other improved practices, more than 3,000 acres of land have been devoted to buffer strips along waterways. The state Department of Ecology completed more than 600 inspections and issued 36 enforcement orders to correct specific problems. Contact: George Boggs, Manager, Whatcom Conservation District, (360) 354-2035.

Heaven on the Halfshell: New book pays homage to oyster farming in the Pacific Northwest

The history of oyster farming in the Pacific Northwest spans more than 100 years, and is presented in text and photos in *Heaven on the Half Shell,* a new book recently published by the Washington Sea Grant Program.

Heaven is an historical accounting of local oystering from early Native American uses to modern farming methods. The book tells the oyster tale from a cultural, environmental and economical perspective in lively text accompanied by a rare collection of photographs and personal histories.



"We wanted to record the recollections of Washington's elderly oystermen, many of whom were passing away," said David G. Gordon, one of the book's authors and a science writer with the Sea Grant Program. "Of course we recognized an opportunity to promote the sustainable use of marine resources—one of Sea Grant's national priorities—and to remind folks about the link between regional water quality and the quality of our lives."

Photo courtesy of Washington Sea Grant

Heaven on the Half Shell includes photos that depict the rich history of shellfishing on the west coast.

Heaven on the Half Shell is subtitled "The Story of the Northwest's Love Affair with the Oyster" and appeals to a broad audience, with it's rich collection of oystering photos from the birth of the industry during the California Gold Rush, through the cannery days of World War II, and into the present era of hatcheries and high-tech aquaculture techniques.

Heaven also contains 18 mouth-watering recipes, including Oyster and Artichoke Pot Pie and several variations of Oyster Stew.

The book is available directly from Washington Sea Grant or can be ordered from local bookstores.

To promote the publication of *Heaven on the Half Shell,* the Sea Grant Program, with funding help from the Action Team, will be taking the book on tour with a traveling exhibit. To find out more about the book and the exhibit, contact Melissa O'Neill at (206) 685-9215 or mboneill@u.washington.edu. You can also visit the Sea Grant website at http://www.wsg.washington.edu.

Shellfish growers adopt environmental policy

West Coast shellfish growers adopted a formal Environmental Policy at the group's annual meeting September 21. The policy, which was developed through a series of workshops from Alaska to California, lays the foundation for best management practices in shellfish farming.

The project was a joint effort of the Pacific Coast Shellfish Growers Association, the West Coast States' Sea Grant Marine Extension offices and the National Marine Fisheries Service.

"Our environmental policy is a result of shellfish growers themselves coming together with their practical expertise, combined with the best available science," said Bill Dewey, president of the Pacific Shellfish Institute, a scientific research group, and a member of the Puget Sound Council. "Shellfish growers depend on a clean, healthy marine environment in which to raise our crops. Protecting that environment is not only good citizenship, it is good business."

The Shellfish Growers Environmental Policy covers five broad principles: environmental stewardship, environmental excellence, regulatory compliance, waste management, and sharing beach resources. Copies may be obtained by contacting the Pacific Coast Shellfish Growers Association in Olympia, Washington at (360) 754-2744 or on the web at www.pcsga.org.

The next step for the Shellfish Growers is to develop a detailed Environmental Code of Practice, which spells out management practices that reflect the principles of the Environmental Policy. At press time, public workshops about the code were being scheduled for the new year. Check the PCSGA website for the schedule.

Readership Survey

The *Sound Waves* editorial staff would like to thank those who responded to the readership survey that was included in the Fall 2001 issue.

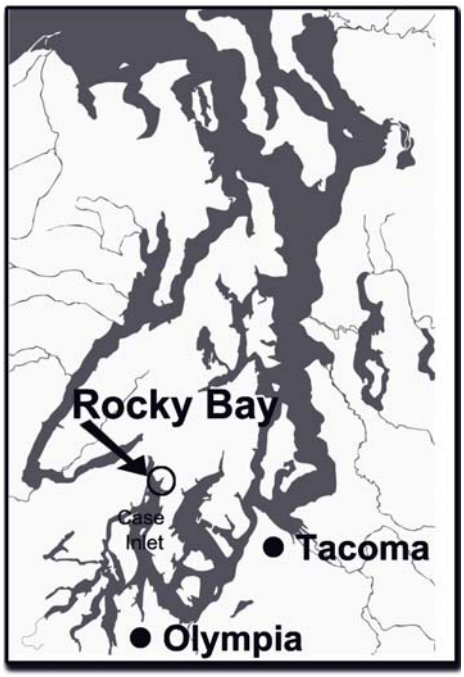
One of the survey's goals was to find out how many people knew about our online version of *Sound Waves* and to encourage readers to sign up for e-mail notifications of upcoming issues. If you're interested in receiving e-mail notification and having your name removed from the print mailing list, send an e-mail to gwilliams@psat.wa.gov.

We will be considering the comments and suggestions from the survey in this next year as we work to improve the content, look and usability of *Sound Waves* print and online version. Let us know how we're doing.

If you would like more detailed information about the survey results, contact Toni Droscher, *Sound Waves* editor, at (360) 407-7328 or tdroscher@psat.wa.gov.

SUCCESS STORY: ROCKY BAY REOPENS FOR SHELLFISH HARVESTING

Commercial shellfish harvesters Harold and Aaron Wiksten are celebrating the reopening of Rocky Bay, on the northeast side of Case Inlet in Pierce County. Six years ago the State Department of Health closed the bay to harvesting because of poor water quality. This success story involved state and local agencies and many dedicated volunteers. The following is a brief history of the closing and eventual reopening of Rocky Bay:



1992—Washington State Department of Health informed the Tacoma-Pierce County Health Department (TPCHD) that water quality in Rocky Bay was declining due to increased fecal coliform counts in marine water samples. The primary sources of the bacteria were believed to be on-site sewage systems, stormwater, and poor agricultural practices in the watershed. TPCHD received a Centennial Clean Water Fund grant to locate and correct the fecal coliform sources in the Rocky Bay watershed. This work included a survey of waterfront septic systems and stormwater sampling by TPCHD and evaluation of agricultural operations by the Kitsap Conservation District. Water quality continued to decline.

1995—Commercial shellfish harvest was prohibited in 30 acres of Rocky Bay. A number of agencies, including the Department of Health, TPCHD, Pierce County Public Works and Utilities (PW&U), the Department of Ecology, the Puget Sound Water Quality Action Team and others, began to develop a Closure Response Strategy. TPCHD, and PW&U created a Shellfish Protection District and a Shellfish Protection Program for Rocky Bay. The Pierce County Council approved ordinances creating the Rocky Bay Shellfish Protection District and the Rocky Bay Shellfish Protection Program. As part of the Protection Program, the Rocky Bay Action Team was formed to interact with and obtain assistance from the local community and became involved with the Key Peninsula, Gig Harbor, Islands (KGI) Watershed Council.

1996—TPCHD received a Special On-Site Shellfish grant to investigate suspect systems and to help homeowners repair failing on-site sewage systems. Four systems were repaired.

1997 to 1999—PW&U Engineer Robert DuBois designed and oversaw the installation of stormwater improvements on properties near Rocky Bay to reroute storm runoff away from four on-site systems.

1999—Friends of Rocky Creek conducted a cleanup of Rocky Creek using volunteers and inmates from the Purdy Women's Correction Center. Cleanup and monitoring continues.

2000—Washington Department of Transportation regraded a road ditch along a portion of SR 302 to redirect stormwater away from a small culvert that allowed flow across neighboring properties, adversely impacting the on-site systems. Also, PW&U worked with the KGI Watershed Council and the local community to create the Rocky Bay Subwatershed Plan that includes monitoring and stream restoration activities protecting habitat and water quality around Rocky Creek.

2001—The Department of Health confirmed, through water quality testing, that Rocky Bay again meets the standard for commercial shellfish harvest. The area is offcially reopened for harvest.

ACTION TEAM STUDY:

Assessing the effects of urbanization on shellfish growing areas

Development practices and land use activities can negatively affect water quality and aquatic resources. Shellfish beds are particularly vulnerable to pollution, and sanitary conditions tend to worsen as upland land uses intensify.

But what about the finer points associated with these issues? How exactly does urbanization affect water quality in the nearshore environment? What types and patterns of development are suitable for shellfish harvesting? Are there quantifiable relationships and identifiable thresholds associated with urbanization and contamination of shoreline environments? What variables affect these relationships? And how can land use plans be structured to protect shoreline environments and shellfish resources?

To begin tackling these issues the Puget Sound Water Quality Action Team is carrying out a study to assess the effects of urbanization on water quality in shellfish growing areas. Key elements of this study include:

- Data and literature collection that will be used to refine the problem statement and to determine the current state of knowledge.
- Technical assessments correlating urbanization levels with sanitary conditions in select watersheds using both present-day and historical trend assessments.
- Development of standards and guidelines for land uses and management practices for shellfish protection.

The project is funded by the Environmental Protection Agency and should be completed in late 2002.

Also part of the project, but not yet funded, is the development of a predictive model that will be used to help local communities assess land use changes and water quality impacts, and to identify appropriate measures to avoid or mitigate these impacts.

For more information contact Stuart Glasoe, Shellfish Program Lead, at (360) 407-7319 or sglasoe@psat.wa.gov.

Puget Sound's Health

The Puget Sound Ambient Monitoring Program (PSAMP) is a coordinated effort among state and federal agencies to measure the health of Puget Sound's waters and resources. The program complements monitoring by local governments and citizen volunteers.

Survey finds new exotic species on coast, in Sound

By Helen Berry, Washington Department of Natural Resources

Exotic species are increasingly recognized to be a threat to ecosystem health. However, little is known about their status in Washington's marine waters. To improve baseline information on exotic species, the Washington State Department of Natural Resources organized a survey of exotic organisms in May 2000. The agency recently completed a report summarizing this effort.

The 2000 Expedition was the second Rapid Assessment survey for exotic marine organisms in Washington. Three regions were sampled to capture a range of oceanographic conditions and land use patterns: Elliott Bay/Duwamish River (the extensively developed downtown Seattle area); Totten and Eld Inlets (two South Sound inlets with primarily residential and aquaculture land uses); and Willapa Bay (Washington's largest outer coast bay).

The team of taxonomic experts collected a total of 40 exotic species, most of which are native to the North Atlantic or the Northwestern Pacific. Most were introduced to the Northeastern Pacific with oysters imported for aquaculture, as organisms attached to ships' hulls or in ballast water. Four exotic species found in Willapa Bay were previously unknown from that bay.

> **"The team of experts collected a total of 40 exotic species, most of which are native to the North Atlantic or the Northwestern Pacific.**

Among the three regions, 15 exotic species were collected in each of the Elliott Bay and Totten/Eld Inlet regions, and 34 were collected in Willapa Bay. The apparent dominance by exotics was slightly greater in Totten/Eld Inlets than in Elliot Bay, and much greater in Willapa Bay.

In general, Elliott Bay has experienced the most extensive physical alteration, and Willapa Bay the least. Thus the greatest number and extent of invasions was found in the least physically altered system. This pattern appears to contradict the hypothesis that more disturbed habitats are more vulnerable to invasions. It is important to note, however, that while Willapa Bay is relatively undeveloped, habitats and natural processes in the bay have been extensively altered by practices such as agriculture, aquaculture, dredging and deforestation.

Elliott Bay is an international port, while Totten/Eld Inlets and Willapa Bay are aquaculture centers. Since the latter regions appear to be as invaded as (or more invaded than) Elliott Bay, this suggests that aquaculture activities may historically have been as effective as (or more effective than) ship-associated mechanisms in moving organisms. Commercial aquaculture is a possible mechanism for introducing onto the Pacific Coast 35 of the 40 exotic species collected by the Expedition, while ship-associated mechanisms are linked to 28 of the species.

Copies of the 2000 Exotics report are available from the DNR Nearshore Habitat Program at (360) 902-1100.

Grant will help in removal, disposal of derelict gear

Although the term "derelict gear" may seem murky, lost or abandoned fishing gear such as nets and crab pots on the bottom of Puget Sound is serious business. This gear can catch and kill birds, shellfish, fish and marine mammals, and its removal by highly trained divers is extremely hazardous work.

The Northwest Straits Commission (http://www.nwstraits.org) received a $75,000 grant from the National Oceanic and Atmospheric Administration, which will be matched by local partners (such as state agencies, tribes, foundations, commercial divers and fishermen).

The grant will accomplish several tasks: fund a pilot-scale project to precisely locate and map derelict gear in the seven-county area of northern Puget Sound; develop protocols for removing and disposing or recycling nets and other gear; remove or disable some of the gear; and document marine life that has been captured by such" ghost nets." There are also plans to monitor the recovery of marine life in the areas from which nets have been removed.

NWSC and its seven-county member Marine Resources Committees (Clallam, Jefferson, San Juan, Island, Whatcom, Skagit and Snohomish counties) plan to raise public awareness about derelict gear, involve private and public partners, locate and retrieve abandoned gear, and develop non-punitive procedures to report future loss of gear so it can be quickly retrieved.

NWSC will form partnerships for the project with federal (such as NOAA Dive Center, and the Navy) and state agencies (such as the Puget Sound Action Team, departments of Fish and Wildlife, and Natural Resources) with tribes, and with commercial diving and fishing organizations.

Representative Phil Rockefeller (D-23rd District and member of the Puget Sound Council) and Senator Bob Oke (R- 26th District) have expressed interest in removal of derelict gear from a broader area of Puget Sound and Hood Canal. They would like to implement similar actions in other parts of the Sound, following on progress made by the NWSC project.

To learn more about the NWSC Derelict Gear project, contact Tom Cowan, the commission's Director, at (360) 428-1558 or cowan@nwstraits.org.

PIE PROJECTS 2002 Action Team Funds New Environmental Education Projects

In November, the Action Team awarded contracts totaling $397,269 to 12 groups that aim to raise people's awareness of environmental issues in Puget Sound and engage them in activities to protect and enhance the Sound.

The contracts are part of the Public Involvement and Education (PIE) Fund program administered by the Action Team. Money for the PIE Fund is appropriated by the legislature from the Washington State Water Quality Account.

More than 300 projects have been funded during the last 14 years.

PIE projects boost Puget Sound's health by motivating environmental stewardship and empowering people to solve local pollution problems.

For more information about PIE, visit the Action Team's website at http://www.wa.gov/puget_sound/ or call the Action Team at (800) 54-SOUND or (360) 407-7300.

Citizens for a Healthy Bay ($35,000)
Contact: Lisa Harris
Phone: (253) 383-2429

- The *Commencement Bay Clean Boating and Clean Marina Program* will expand the EnviroStar Program in Pierce County to include Commencement Bay marinas; conduct workshops for marina owners and managers; and offer pollution-detection training sessions to citizens.

City of Bellingham ($32,000)
Contact: Renee LaCroix
Phone: (360) 676-6850

- *Reining in the Rain* will demonstrate how low impact development practices can be integrated into current activities to help reduce negative impacts from traditional stormwater runoff management.

Maxwelton Salmon Adventure ($37,794)
Contact: Laura Fox
Phone: (360) 579-1272

- The *Envision the Future, Remember the Past* program will research, collect and publish the natural history of the Maxwelton watershed, create a watershed unit of study for local 5th grade students, and meet with groups of adults and youth to explore the watershed's history. At the close of the project, the sponsor will invite members of the community to join together to create a vision for the future of the watershed.

Pacific Science Center ($37,625)
Contact: Kristen Bergsman
Phone: (425) 450-0207

- The *Taylor Creek Watershed Internship Project* will educate residents about Taylor Creek, an urban stream in south Seattle, and empower them to monitor and protect its health. High school interns will monitor the water quality and present lessons about Puget Sound and salmon to fourth and fifth grade students. Translations of some materials will be produced for non-English speakers in the community.

Pacific Woodrush ($28,751)
Contact: Mary Peck
Phone: (360) 417-0980

- *Exploring the Watershed: Building Community-Based Partnerships* aims to enhance residents' awareness and stewardship of Siebert Creek, a stream originating in Olympic National Park and flowing to the Strait of Juan de Fuca. Pacific Woodrush will sponsor eight evening seminars and day-long field trips that focus on issues including stormwater and water quality, salmon habitat, estuarine and nearshore environment, and watershed management.

Port Townsend Marine Science Center ($45,000)
Contact: Judy D'Amore
Phone: (360) 379-0370

- In collaboration with Marine Resources Consultants, the Port Townsend Marine Science Center will offer marine biology research cruises to Port Townsend visitors who will view sub-tidal habitats with an underwater camera, actively participate in scientific habitat and water quality monitoring, and learn about trends in marine ecosystem health. Data collected will be available to resource managers to guide local decision-making.

Seattle Parks and Recreation ($42,894)
Contact: Caitlin Evans
Phone: (206) 684-0877

- This project will promote and encourage low impact development by demonstrating to residents in the Pipers Creek watershed of north Seattle how homes and gardens can be designed, redesigned and maintained to protect water quality.

Society for Ecological Restoration Northwest ($17,000)
Contact: Nancy Hahn
Phone: (206) 547-9641

- In partnership with radio station KMTT, "The Mountain," the society will produce additional segments of "Restoration Radio Minutes" to include news stories about restoration efforts and volunteer opportunities in Puget Sound.

Tacoma Neighborhood Network Center ($5,000)
Contact: Scott Hansen
Phone: (253) 845-6578

- The center will enlist visually and hearing-impaired as well as physiologically impaired community members to participate in hands-on restoration activities on Puget Creek, a small urban stream in Tacoma.

Washington Organic Recycling Council ($44,375)
Contact: Connie Allison
Phone: (360) 754-5162

- The council will offer seven one-day training workshops throughout the Puget Sound basin providing the information, specifications and techniques needed to implement and verify compliance with the state's new soil preservation and restoration guidelines.

WSU Cooperative Extension—Jefferson County ($29,700)
Contact: L. Katherine Baril
Phone: (360) 379-5610

- The *Watershed Neighbors* project will coordinate a network of realtors, mortgage bankers, and volunteer watershed stewards to provide guidance materials on relevant topics to new residents who buy or modify their property. Residents will receive a "Welcome to the Watershed" packet designed to increase their understanding and appreciation of their local watershed.

WSU Cooperative Extension—King County ($42,130)
Contact: Paul Racette
Phone: (206) 205-3171

- Landowners along targeted streams in King and Pierce counties will be invited to participate in workshops designed to provide more details about conservation tools such as conservation easements, donations of land, and County Public Benefit Rating Systems.

Puget Sound Water Quality Action Team
P.O. Box 40900
Olympia, WA 98504-0900

Return Service Requested

PRSRT STD
U.S. POSTAGE PAID
WASHINGTON STATE
DEPT OF PRINTING

Read Sound Waves on the Web!

If you'd like to receive an e-mail reminder when *Sound Waves* is posted on our website, send an e-mail to gwilliams@psat.wa.gov.

Sound Waves is produced quarterly by the Puget Sound Water Quality Action Team.

If you need this document in an alternate format, call (360) 407-7300, (800) 54_SOUND, or the TDD number: (800) 833-6388.

Editor/Designer:
Toni Weyman Droscher
(tdroscher@psat.wa.gov)

Editorial Assistant: Stephanie Lidren

Sound Waves is run on an alcohol-free press using vegetable-based inks.

CALENDAR

February 16-18
The Third Puget Sound Giant Octopus Survey
Divers in Puget Sound south of Keystone on Whidbey Island and inside of Deception Pass southward are encouraged to report any octopus sightings on the above dates to the Seattle Aquarium for its 3rd annual survey. For more details, contact Dr. Roland Anderson at the Seattle Aquarium at (206) 386-4346 or roland.anderson@ci.seattle.wa.us.

February 20
6:30 p.m.
Low Impact Development Presentations—Puyallup Watershed
Sumner Branch of the Pierce County Library
The Peninsula Neighborhood Association is hosting a Low Impact Development presentation in the Puyallup Watershed. For more information, please call Marian Berejikian at the Peninsula Neighborhood Association office at (253) 851-9524.

February 20 and 21
The Research and Extension Regional Water Quality Conference 2002
Vancouver, Washington
An opportunity for research, extension and agency personnel to exchange information on water quality issues that are important for the region. Presentations will include current science and scientific advances as well as their application for technology transfer and outreach.
Organizers include Washington State University, Washington Water Research Center, WSU Cooperative Extension and EPA Region 10
For more information, contact the Washington Water Research Center at (509) 335-5531.

April 10-11
Achieving Cleaner Water Conference
Doubletree Hotel, Spokane
The Washington State Department of Ecology is sponsoring the 4th annual Washington State Conference on Nonpoint Pollution. The conference will focus on actions and people in Washington who are working to achieve cleaner water by reducing nonpoint pollution. The program will include speakers, panel sessions, keynote sessions, poster sessions, commercial and non-profit exhibitors, workshops and field trips. Registration fee is $100 and includes lunch both days or $70 for single day registration. Exhibitors fee is $200. For more information, contact Gina Mulderig, conference coordinator, at (253) 843-9268.

Low Impact Development Workshop for the South Sound

March 20, 2002

Worthington Center at St. Martin's College, Olympia

Join regional experts, elected officials and members of the development and regulatory communities in the South Sound as they explore technical, regulatory and financial aspects of innovative stormwater management practices. Low impact development strategies include retention of native vegetation, reduced impervious surfaces and landscaped bioretention areas to manage stormwater and protect streams, fish habitat and hydrologic functions of watersheds.

Similar workshops are being planned for other locations around the Sound. For more information, contact the Puget Sound Water Quality Action Team at (360) 407-7300 or gwilliams@psat.wa.gov.