



From eelgrass to orcas

Action Team to focus attention on species recovery

“We need to pay attention to what Puget Sound and its resources are trying to tell us, and pull together to restore the health of this magnificent ecosystem,” said **Brad Ack**, chair of the **Puget Sound Action Team**. “It’s more than just one species at risk...it’s the whole food chain, from eel grass to forage fish to salmon, rockfish, birds all the way to the very top of the chain—resident orcas.”

Brad Ack urged the Action Team Partnership at its July 9 meeting to commit focused attention on seven critical priorities. Among these, he issued a charge to develop conservation and recovery plans for orca, salmon, groundfish and forage fish. The charge coincides with declines in mammals, fish and birds.

Recent observations in Puget Sound reveal an ecosystem in distress. Not only are the numbers of many marine species declining, but oxygen-depleted water persists longer and over a broader area than ever before in Puget Sound’s Hood Canal. In addition, some eelgrass beds within bays in the San Juan Islands are disappearing. These symptoms sound alarms reminiscent of Chesapeake Bay a few decades ago, when it was labeled a “dying sea.”

“We are working with the Lower Hood Canal watershed council, the

SPECIES	TIME FRAME	PERCENT DECREASE
Resident orca	1996 to 2001	20
Copper rockfish	1977 to 2000	Spawning potential 80
Wild Coho salmon	1987 to 2000	Marine survival 80
Western grebe (diving duck)	1980 to 2000	95
North Sound herring	1980 to 2000	71

Source: Puget Sound’s Health 2002

University of Washington, partner state agencies and others to find out what is causing the frightening low levels of oxygen in Hood Canal,” said **Duane Fagergren**, director of special projects for the Action Team. “Also, we are collaborating with the Hood Canal Coordinating Council to determine the actions we and people living along Hood Canal can take now to help stop this serious problem.”

Significant declines in salmon

In the Pacific Northwest, declines in once-plentiful wild salmon stocks link to a number of factors, including dams, habitat loss, climate change, harvesting fish and hatcheries. The federal Endangered Species Act has turned our attention to salmon recovery, and we see some promising signs of improvement.

“However, recent, favorable ocean conditions for salmon survival, could paint an overly optimistic, quick recov-

ery picture for some species that are still in long-term danger, especially chinook salmon,” Fagergren said.

Loss of groundfish

Groundfish populations, such as Pacific cod, rockfish, whiting, ling cod, and black cod, which were once robust off the coast and within Puget Sound and British Columbia, have declined, in some cases

dramatically. For many species, such as Pacific cod and whiting, scientists have pointed to changes in climate that have made parts of Puget Sound’s water warmer, and thus unappealing to Pacific cod and whiting that like colder water.

Increasingly restrictive fishing regulations alone may not stabilize populations and help increase the numbers of groundfish, especially for many of the slowly reproducing rockfish species.

“For some groundfish, such as ling cod, tighter regulations seem to be aiding recovery,” said Fagergren.

One idea that is not universally popular, but may be necessary, puts certain areas off limits to fishing or other activities; these “marine protected areas” have the potential to protect not only the fish within the marine protected areas, but also the habitat on which they depend.

See **SPECIES RECOVERY**, page 7

Governor Locke endorses Action Team's strategic framework

In July, Gov. Gary Locke met with the **Puget Sound Action Team and Council** to applaud their efforts and call for a sharpened focus to improve and sustain Puget Sound's water quality and habitat for orcas, salmon, groundfish and other plants and animals.

In a news conference prior to the meeting, the Governor highlighted efforts the Action Team Partnership has made on the Puget Sound agenda that he announced in February. Specifically mentioned were:

- Funding for a rescue tug at Neah Bay to protect the Sound from oil spills for the next two years.
- Funding to identify and address the serious decline in the Puget Sound region's marine bird populations.
- Legislation banning various products that contain mercury, which is toxic to the region's fish and marine birds.

"I am proud of our action on these items," Locke said. "We must stay focused on a common agenda of restoring critical habitat and species, preventing and cleaning up toxic contamination and better managing stormwater and sewage."

Also at the news conference and meeting, Gov. Locke acknowledged the efforts and successes of some of the thousands of "local heroes" from around the region, who labor every day to pro-



Photo by Rob Pavey

Western grebes are among several marine bird species in Puget Sound whose numbers are declining.

tect Puget Sound. (See "Local Heroes" on pages 4 and 5 to learn more.)

At the meeting, the Governor called on Action Team partners to adopt a narrowed set of strategic priorities and focus their energy and effort on these priorities. The Action Team and Council discussed and refined seven strategic priorities proposed by Brad Ack, chair for both organizations.

Goals

Protect and restore Puget Sound's water quality.

1. Protect and restore habitat for fish, shellfish and wildlife in Puget Sound.

2. Protect the biological resources of Puget Sound and recover species at risk, including orcas, salmon and groundfish.

Critical Priorities

1. Clean up contaminated sites and sediments.
2. Reduce continuing toxic contamination and prevent future contamination.
3. Reduce the harmful impacts from stormwater runoff.
4. Prevent contamination from on-site septic systems, sewage systems and other nonpoint sources, in particular as they affect shellfish.
5. Protect shorelines and other critical areas that provide important ecological functions.
6. Restore degraded nearshore and freshwater habitats.
7. Develop and implement conservation and recovery plans for orca, salmon, groundfish and forage fish.

The Action Team Partnership plans to finalize these priorities at its meeting on December 10.

Estuary Research Federation Conference

Researchers gather in Seattle to help direct attention to Puget Sound's future

Fifteen hundred scientists from 29 countries gathered at the 17th biennial conference of the **Estuarine Research Federation (ERF)** in Seattle in mid-September to discuss research findings and estuary management issues. Participants also helped provide some global perspective on issues confronting Puget Sound.

The ERF conference is the largest gathering of expertise from around the globe that is exclusively focused on sharing strategies and science to improve the health of estuaries and coastal areas. The conference theme of "**Estuaries on the Edge: Convergence of Ocean, Land and Culture**" spoke to the issues faced not

only by Puget Sound but by estuaries and coastal areas throughout North America and the world.

Researchers, managers, teachers, students and consultants from Canada, Australia, United Kingdom, United States and other countries who attended the conference chose from 1,100 presentations at the four-day conference. Puget Sound scientists and managers made more than 50 presentations among the diverse sessions of the ERF conference.

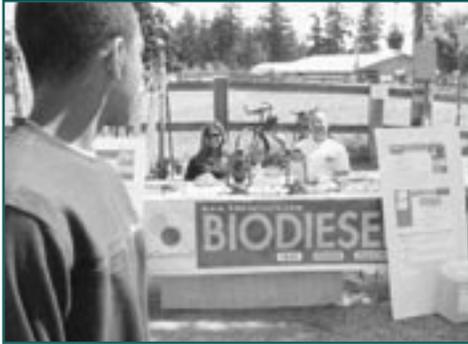
A number of the conference participants also took time to engage in broader discussions, which helped focus attention to threats facing Puget Sound. For example, **Nancy Rabelais**, a

world-renowned expert from Louisiana, brought knowledge of the Gulf of Mexico, Black Sea and her neighborhood to a Seattle radio program. She talked about the problems of low dissolved oxygen in **Hood Canal**. In a newspaper story about the conference, **Tom Mumford** of Washington's Department of Natural Resources discussed the similarity of declines of eelgrass at a number of Puget Sound locations to early signs of estuary collapses in Maryland, Florida, Texas and Australia.

To access the electronic version of the conference program book and a searchable database of presentations visit: <http://fish.washington.edu/news/erf/program.html>.

► SAN JUAN COUNTY

After a spring workshop about low impact development practices, the **Spring Street School**, the **1420 Foundation for Sustainable Education**, and other partners created the **Navigating our Future** community education programs. The group's exhibit at the **San Juan County Fair** in



Action Team photo

Fairgoers in San Juan County learned about an upcoming conference on sustainability.

August publicized a conference planned for October at the San Juan County Fairgrounds. The conference aimed to explore ways to apply sustainability practices in the **San Juan Islands** that are good for the environment as well as vital for the economic health and overall quality of life. Larry Greene, a conference organizer, said that the conference should lead to a web-based community intelligence system to aid citizens in the community design process and to record the findings as a searchable, knowledge-based civic memory to help citizens accomplish the work that follows the conference. Contact **Larry Greene** at (360) 379-3123, lgreene@rockisland.com or visit the organization's Web site at www.navigatingourfuture.org.

► THURSTON COUNTY

In response to polluted shellfish growing areas in Henderson Inlet and Nisqually Reach in 2000, Thurston County officials convened two citizen committees to lay out strategies to protect and restore shellfish harvesting in the adjacent watersheds. This past summer, the two groups presented findings and recommendations to the county

commissioners. The two groups will merge into a single advisory committee and focus on developing more detailed implementation plans for the recommended actions. The combined committee will explore several key issues including regular inspection and maintenance of septic systems; expanded use of low impact development practices; possible changes in development densities and other development codes to better protect native vegetation, buffers and drainages; and cost estimates and funding options for the shellfish program. County officials and other jurisdictions will approve final implementation of the plan. You may view the groups' reports at <http://www.co.thurston.wa.us/shellfish/publicationsmedia.htm#waterquality>. Contact **Mark Swartout**, Thurston County Natural Resources Program, (360) 709-3079 or swartom@co.thurston.wa.us.

► MASON/KITSAP/ JEFFERSON COUNTIES

What are the causes behind the all-time low levels of dissolved oxygen in **Hood Canal**? Could it be from poor water circulation problems in the canal? Are high levels of pollutants from activities that people do causing lower dissolved oxygen conditions in recent years? What can be done about it? These are just some of the questions that the Puget Sound Ambient Monitoring Program and other scientists, tribes and many local interests and individuals in **Mason, Kitsap**, and **Jefferson** counties are proposing to answer through intensive research and monitoring. The Puget Sound Action Team supports the essential research and monitoring. In addition, we are stressing that it is also important to take action now. We urge the removal of pollutants from entering canal waters from activities done by people, pollutants that are likely contributing to the low levels of oxygen. The Action Team and state agency partners are working with federal, tribal, local and university groups to better inform citizens of the problem and to explore ways to repair or improve septic systems and minimize stormwater and agricultural runoff. For more information, contact **John Cambalik** at (360) 582-9132 or jcambalik@psat.wa.gov.

► WHATCOM COUNTY

More than 270 residents of **Bellingham and surrounding areas** participated in the first annual **Imagine This— Home and Landscape Tour** in July. The tour featured 10 homes and landscapes that showed community building and/or environmentally friendly designs. Two different stops on the tour featured examples of buildings that used low impact development: a pervious driveway constructed of EcoStone, designed to protect water quality in Lake Whatcom, and an alley made with porous concrete. Another stop showcased how to live near the waterfront in an environmentally friendly manner by using native plants and soft shoreline armoring techniques. Tour participants received a 22-page resource guide, which included site profiles, resources for further learning and a profile of local businesses available to assist with designing and installing the environmental friendly designs. To download the guide go to <http://www.sconnect.org/NWWashington/viewPage.cfm?pageId=95>. Scroll down to the July "Imagine This home tour" event. Bellingham-based **Sustainable Connections** sponsored the tour. Puget Sound Action Team **Public Involvement and Education funds** helped support the tour. Contact **Derek Long**, Sustainable Connections, (360) 592-2614 or Derek@sconnect.org.

► KING COUNTY

The **City of Seattle Department of Design, Construction and Land Use (DCLU)** has begun a planning process for Seattle's central waterfront area. This planning area encompasses the corridor from the shoreline of Elliott Bay to 1st Avenue, extending from Myrtle Edwards Park on the north to Atlantic Avenue on the south. DCLU will first develop a **Central Waterfront Concept Plan** to identify preferred uses of various waterfront sub-areas, public improvements and open space framework, relationship to transportation corridor, and integration with upland activities. DCLU will have opportunities for public involvement at each stage of planning for Seattle's waterfront area. Contact: **Dennis Meier**, DCLU Senior Urban Designer, (206) 684-8270 or dennis.meier@seattle.gov.

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People taking action to make Puget Sound's marine environment healthier.

This past summer, Gov. Gary Locke introduced four "local heroes" at a news conference and at the joint Puget Sound Action Team and Council meeting who have been instrumental forces in efforts to preserve, protect and sustain Puget Sound.

"These people are indicative of the commitment and the interest in improving the health and quality of Puget Sound," Locke said.

This issue of *Sound Waves* will take a closer look at these "local heroes" who are examples of the thousands of people across the Puget Sound region who are taking actions to make the Sound's marine environment healthier. Gov. Locke acknowledged and thanked **Betsy Peabody, Leslie Banigan, Geoff Menzies and Susan Berta** as examples of the thousands of people who are doing important work for Puget Sound.

Send us your ideas about local heroes in your community so we can share and celebrate their successes. (Contact Toni Droscher, *Sound Waves* editor, at (360) 407-7328 or tdroscher@psat.wa.gov)

▼
The Action Team's Public Involvement and Education program provided funding for the three projects indicated with the pie symbol.

Leslie Banigan—Kitsap County Health District Forming partnerships with landowners



Photo by Michael Drew

Leslie Banigan spends a lot of time outside on the job, working with landowners and monitoring water quality.

Leslie Banigan and her co-workers at the Kitsap County Health District view cleaning up water pollution as a team effort that involves working closely with property owners.

"The landowners are our partners," said Banigan, coordinator of the county's Pollution Identification and Correction program. "We work with people in our county to prevent and correct fecal pollution sources."

In Kitsap County and Washington state, water quality investigators have found that failing septic systems and inadequate animal waste management are sources of fecal coliform bacteria.

"When you show people the results of water samples collected from their property, 99.9 percent of them want to help," Banigan said.

Once they identify a pollution source, Banigan and her staff work with landowners to find solutions that are reasonable and cost-effective. Often they refer landowners to a non-regulatory organization, such as

the Kitsap Conservation District, for further assistance. Rarely does the county have to resort to enforcement, Banigan added.

This partnership approach is just one reason why the county has seen significant improvements in many of its highly polluted waters. Banigan also credits Kitsap County's Surface and Storm Water Management program, the stormwater utility formed in 1995, for giving the Pollution Identification and Correction program the political support and a stable source of funding to enable an ongoing monitoring effort.

The Pollution Identification and Correction staff developed a protocol for monitoring as well as a priority list for ranking the pollution "hot spots" in the county. "As a result, we now have statistically significant water-quality trends," Banigan said.

Since 1998, the county has published an annual report of these trends and makes it available to the public.



Susan Berta—Orca Network

Keeping watch on whales 24/7

If you're an orca whale trying to swim unnoticed through Puget Sound's waters, forget about it. Thanks to the **Orca Network**, scientists, students and citizens all over the Sound—and the world—can follow your every move.

The network is the brainchild of **Susan Berta** and her partner **Howard Garrett**.

Berta became enthralled with whales on a trip to Alaska 10 years ago.

After her trip, Berta wanted to learn more about the whales in this region. She came across the Center for Whale Research in Friday Harbor, where she met Garrett, who had just begun the "Free Lolita" campaign.

Susan soon joined the campaign, and the two became "partners in life and in orcas," and the Orca Network evolved from there, with friends, fellow

orca lovers and researchers sharing sightings all over the Sound.

Eventually, Berta devoted herself full time to the Orca Network. Garrett works full time and makes updates to their Web site before and after work.

"We're pretty much 24/7 whales," Berta said.

Now the network comprises nearly 1,000 members who receive e-mail notifications whenever someone reports a sighting.

These reports help increase the general public's awareness and appreciation for orcas and the issues surrounding their survival.

Researchers from organizations such as the Center for Whale Research and Cascadia Research are also using the information to further their



Photo courtesy of Susan Berta

Even on vacation in Wyoming Susan Berta took time to log in whale sightings on the Orca Network's Web site.

understanding of the different whales living in our waters.

"It feels really good to see this data used by the science community," Berta said.

To get e-mail messages from the Orca Network or for more information, visit <http://www.orcanetwork.org> or call (866) ORCANET.



Photo by Jack Kintner

Betsy Peabody (left), executive director of the Puget Sound Restoration Fund, and Bernard Charles (right), chief of the Semiahmoo First Nation, and his grandson Curtis measure oyster growth at the Drayton Harbor Community Oyster Farm.



Betsy Peabody—Puget Sound Restoration Fund

A practical approach to restoration

When it comes to restoring habitat for shellfish in Puget Sound, **Betsy Peabody** and the **Puget Sound Restoration Fund** are in the thick of things—from creating community shellfish farms in Drayton Harbor and Henderson Inlet to bringing back native Olympia oysters throughout the Sound.

Peabody's involvement with shellfish is so widespread, an article in Bremerton's newspaper *The Sun* referred to her as the "Johnny Oysterseed" of the Puget Sound region.

When Peabody created the restoration fund in 1997, she had a clear, tangible mission: to achieve on-the-ground restoration of habitat and native species in Puget Sound. She also took a more business-like approach to protecting the region's resources.

Her first order of business was to raise funds for high-priority projects. To get funding, Peabody put together a board of directors and advisors and called upon a group of people with diverse backgrounds, including **Bill Taylor**, president of Taylor Shellfish Co. and **Nick Handy**, executive director of the Port of Olympia.

"Betsy is a pragmatic environmentalist," said **Stuart Glasoe**, shellfish program coordinator for the

Puget Sound Action Team. "She is articulate and has vision, passion and a real talent for building partnerships with businesses and other groups. She helps them understand how restoration efforts are in their best interest."

When the Washington Department of Fish and Wildlife developed a plan to rebuild Olympia oyster stocks, Peabody and the Puget Sound Restoration Fund stepped in to develop a partnership among growers, tribes, private tideland owners and several state agencies.

In Drayton Harbor, Peabody worked with Geoff Menzies (see story below), Trillium Corporation and volunteers to plant oysters in a polluted bay with the goal of cleaning up the area and re-opening the harbor to shellfish harvesting. The project sparked an intense community-based effort that is serving as a model for a cleanup project underway in Henderson Inlet in Thurston County.

The restoration fund's work is not limited to oysters. Next on their plate is a project to restore native abalones that were once abundant in Puget Sound's waters. True to form, they are collaborating with diverse forces to push this venture forward.



Geoff Menzies—Drayton Harbor Community Shellfish Farm

Bringing oysters back...It takes a village

Sometimes it takes a village to raise an oyster. In northern Whatcom County, citizens, businesses, tribes and local governments on both sides of the border are working to clean up Drayton Harbor with the goal of bringing oyster harvesting back to the once highly productive area.

In 1995, **Geoff Menzies** was the last oyster farmer in the harbor. When pollution levels exceeded the limits defined by Washington Department of Health, he had to shut down his operation.

Several years ago, Menzies connected with **Betsy Peabody** and the **Puget Sound Restoration Fund**. Building upon past efforts, they set about finding new ways to clean up bacterial pollution in the harbor and strengthen community support for re-establishing oyster farming.

And so began the Drayton Harbor Community Shellfish Farm.

"This project has really galvanized people around the harbor," Menzies said.

With a strong, broad-based commitment from diverse community interests, Menzies and Peabody persuaded the Department of Health and the Department of Natural Resources to approve the planting of a million Pacific oysters in a two-acre section of the harbor in 2001.

The project has also rallied financial support from a variety of sources, including grants and funds from the Puget Sound Action Team's Public Involvement and Education program.

The city of Blaine is now also considering new best management practices for managing its stormwater, Menzies said.

At the heart of the community effort is a core group of 15 citizen volunteers who work with Menzies to plant and tend to the oysters. Four times a year, volunteers gather monitoring information and take samples of stormwater.

They're hoping the two-acre project site will pass Department of Health stan-

dards and be clean enough to harvest the oysters for a community celebration and oyster feed this spring. The balance of the crop will be sold to raise funds for ongoing efforts to keep the waters clean for future shellfish lovers.



Photo courtesy of Geoff Menzies

Geoff Menzies heads out into Drayton Harbor with volunteer Tom Cullen to monitor the progress in cleaning up the harbor.



Sargassum muticum

Non-native seaweed concerns scientist

Under the seemingly pristine waters of San Juan County lurks a seaweed that is not native to the region and has the potential to radically alter the area's underwater ecology and biodiversity.

Sargassum muticum is a native of Asia and now grows in the low intertidal and shallow subtidal habitats throughout Puget Sound and along the west coast of North America. Few native herbivores find it tasty, so it thrives and pushes out other species including the native kelps that are the dominant organisms in the lower intertidal and upper subtidal zone.

"Because *Sargassum* distribution is primarily subtidal (underwater), it has largely escaped notice as an agent of change to marine habitats," said **Kevin Britton-Simmons**, a marine ecologist with the University of Chicago's Department of Ecology and Evolution.

Britton-Simmons' latest subject is *S. muticum*. He is researching its life history and interactions with native plants and animals. Britton-Simmons has spent the past five years at the University of Washington's Friday Harbor Laboratories documenting changes *Sargassum* causes to the underwater communities at several locations in the San Juan archipelago. He recently completed his doctoral thesis on the plant's effects on native habitats.

"The *Sargassum* invasion has the potential to substantially change the shallow subtidal zone in San Juan County in the coming decades," Britton-Simmons said.

"Marine areas protected from fishing or other activities are as heavily invaded as areas without such protections" he said. "Targeted control of *Sargassum* could help maintain the biological diversity and integrity of these sensitive areas."

Tracking the arrival of non-native species is often similar to detective work. In the case of how *Sargassum*

entered these waters, scientists believe that it probably came as packing material in shipments of imported oysters and began its invasion into kelp forests nearly 50 years ago.

Data dating back to the early 1990s from the Washington Department of Natural Resources showed *Sargassum* growing along 40 percent of the shoreline in north Puget Sound and San Juan Islands and 38 percent of the Hood Canal shoreline. *Sargassum* grows in 13 to 17 percent of the shorelines in the central and south basin of Puget Sound. Britton-Simmons suggested

that because the data is outdated and the way the data was collected, these numbers are a conservative estimate of the extent of invasion. He believes that much more of Puget Sound has been invaded than the data shows.

Sargassum shoves out native algae due to competition for light. This is a concern because native kelps are an important source of food and provide critical habitat for a wide variety of species in nearshore ecosystems.

As a result of complex interactions among urchin, native kelps and *Sargassum*, Britton-Simmons' research suggests a potentially serious decline in the commercially valuable green sea urchin fishery. Green sea urchins don't eat *Sargassum*, and they may be pushed aside as more of the shoreline becomes infested with *Sargassum*, which in turn displaces native kelp—the preferred meal of choice for green sea urchins.

"At this point, we can only speculate on how *Sargassum* affects more mobile marine species such as fish," Britton-Simmons said.

"Under normal conditions, habitat in the Strait of Juan de Fuca should remain unaltered for thousands of years," said **Kevin Anderson**, aquatics nuisance species program coordinator with the Puget Sound Action Team. "Unfortunately, invasive species can dramatically change intertidal and underwater habitats within decades."

For more information about Kevin Britton-Simmons' research, contact him at (773) 702-4815 or k-brittonsimmions@uchicago.edu or visit his Web site at www.kevinbs.net.

For more information about the Puget Sound Action Team's aquatic nuisance species (ANS) program, contact Kevin Anderson at (360) 407-7324, kanderson@psat.wa.gov or visit the Action Team's Web site at www.psat.wa.gov/Programs/Aquatic.htm.



Action Team photos

Top: Kevin Britton-Simmons, marine ecologist, is studying the effects of the non-native *Sargassum muticum* on the region's waters.

Lower: *Sargassum muticum* with eggs (upper left of photo) from a tube-snout fish.

Four sites in Puget Sound may become state's first aquatic reserves

In late September, Commissioner of Public Lands **Doug Sutherland** announced his recommendations of four Puget Sound locations to be the first sites in the state's new **aquatic reserves program**.

The reserve status will protect the habitat, biodiversity and ecosystems unique to each site. The **Department of Natural Resources** will review each site and work with citizens to determine how best to manage the sites in a way that is compatible with the surrounding lands and zoning.

"Aquatic reserves are an important part of creating healthy, aquatic ecosystems in Puget Sound," Sutherland said.

The four sites are on state-owned aquatic lands:

- **Vashon/Maury Island (south Puget Sound):** Includes a spawning area for a major stock of herring and is an important area for wintering marine birds.
- **Cypress Island (San Juan islands):** Includes valued aquatic habitat adjacent to the island's upland areas that are in excellent condition.
- **Fidalgo Bay (near Anacortes):** A shallow bay dominated by extensive eelgrass beds and highly productive mudflats.
- **Cherry Point (near Bellingham):** A known spawning ground for herring containing many different kinds of marine species.

The Department of Natural Resources will be asking for public input at meetings scheduled from now through April 2004. For more information, contact **Todd Myers**, director of communications, at (360) 902-1023.

Changes to Water Quality Funding Cycle

The Washington Department of Ecology is changing the application schedule for its **Water Quality Funding Cycle**. The change will occur throughout the course of two funding cycles. The next funding cycle in fiscal year 2005 will begin a month earlier than usual, beginning on Dec. 1, 2003 and ending Feb. 3, 2004. The following and subsequent funding cycles (FY 2006, etc.) will begin in September of each year.

For more information about dates and locations of upcoming workshops about the funding program, contact **Dan Filip** at the Department of Ecology at (360) 407-6509 or visit the Web site at www.ecy.wa.gov/programs/wq/funding/2005/index.html.

Group discusses stormwater permits

The Washington Department of Ecology has convened a group to discuss issuing the municipal stormwater permit for western Washington. The **Westside Stormwater Group** includes representatives from local governments, businesses, environmental interests, agriculture, shellfish growers, ports and state agencies. The group is providing recommendations to the Department of Ecology, who will then report to the state legislature by January 2004.

Each meeting is open to the public and includes time for public comment. Upcoming meetings are scheduled for Oct. 29 at the Tacoma Public Library, 1102 Tacoma Ave. S; and Nov. 12 at the City Council Chambers, Federal Way.

For more information Contact **Lauren Driscoll** at the Department of Ecology, (360) 407-6467 or ldri461@ecy.wa.gov.

Species recovery, *continued from page 1*

Dwindling numbers of forage fish

Forage fish, such as surf smelt and sand lance, are a critical food source for many bird, marine mammal and fish populations of Puget Sound. An effort launched in 2000 by the Northwest Straits Commission and citizens of the seven Marine Resources Committees shows promise for protection of this important group of forage fish that spawn on selected upper beach areas. Scientists from state agencies have helped document and map these important beaches in nine Puget Sound counties.

Fewer orcas

State and federal agencies have launched programs to assist recovery of southern resident orca and certain groundfish within Puget Sound and off the coast. The Washington Department of Fish

and Wildlife, in consultation with tribes, leads these efforts on behalf of the state. The Department of Fish and Wildlife is having scientific and policy discussions with the Department of Fish and Oceans Canada to help increase the numbers of orcas and some migratory fish.

"The task of recovering or increasing the current low numbers and conserving species is daunting, but not impossible," said Fagergren. "Often the interaction of species is important to understand, and recovery of one may influence positive recovery of the others."

Fagergren emphasized that a successful approach to increasing the numbers of these important marine animals includes a broad partnership effort with common goals and objectives for studies and ultimate recovery.

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The Puget Sound Action Team is a partnership of state agencies and tribal and local governments charged with developing and coordinating conservation programs to protect and restore Puget Sound. An advisory council, the Puget Sound Council, with representation from business, agriculture, the shellfish industry, environmental organizations, local and tribal governments and the legislature provides advice and guidance to help steer the Action Team. The Action Team staff, a program of the Governor's Office, provides the necessary professional and technical services to ensure the Action Team's success. Staff guides the implementation of the *Puget Sound Water Quality Management Plan*.

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Chair: Brad Ack, Puget Sound Action Team

Agriculture

Jerry Van der Veen, *Van der Veen Dairy*

Business

vacant

City Councils

Jackie Aitchison, *Poulsbo*

County Councils

Rhea Miller, *San Juan*

Environmental Community

Tom Putnam, *Puget Soundkeeper Alliance*

Shellfish Industry

Bill Dewey, *Taylor Shellfish Co., Inc.*

State Senate

Tracey Eide (*D-Federal Way*)

Pam Roach (*R-Auburn*)

State House of Representatives

Phil Rockefeller (*D-Kitsap*)

Mark Schoesler (*R-Ritzville*)

Tribes

Fran Wilshusen, *Northwest Indian Fisheries Commission*

NOAA Fisheries

Bob Lohn, *Regional Administrator*

State Parks & Recreation Commission

Rex Derr, *Director*

Tulalip Tribes, Dept. of the Environment

Daryl Williams, *Director*

U.S. Environmental Protection Agency

Ron Kreizenbeck, *Deputy Regional Administrator*

U.S. Fish & Wildlife Service

Ken Berg, *Manager*