



2005-2007 Puget Sound Priorities

Public Review Draft - February 17, 2004

Prepared by the
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PUGET SOUND
ACTION TEAM

Puget Sound Action Team Partners

The **Puget Sound Action Team** is the state's partnership for Puget Sound. The Action Team Partnership defines, coordinates, and puts into action the state's environmental and sustainability agenda for the Sound. Representatives from the following groups serve on the Action Team:

Local Government

- City of Burien, representing Puget Sound cities
- Whatcom County, representing Puget Sound counties

State Government, directors of the following agencies

- Community, Trade, and Economic Development
- Interagency Committee for Outdoor Recreation
- Parks and Recreation Commission
- Washington State Conservation Commission
- Washington State Department of Agriculture
- Washington State Department of Ecology
- Washington State Department of Fish & Wildlife
- Washington State Department of Health
- Washington State Department of Natural Resources
- Washington State Department of Transportation

Tribal Government

- Tulalip Tribes, representing Puget Sound Tribes

Federal Government (*Ex-officio*)

- NOAA Fisheries
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife

Chair: Director of Puget Sound Action Team

The **Puget Sound Council** includes representatives from business, agriculture, the shellfish industry, environmental organizations, local and tribal governments and the legislature, and it provides advice and guidance to help steer the Action Team.

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To obtain this publication in an alternative format, please contact the Action Team's ADA Coordinator at (360) 725-5444. The Action Team's TDD number is (800) 833-6388.



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February 17, 2004

To all those interested in the State's environmental protection and restoration priorities in Puget Sound:

I am pleased to present the *2005-2007 Puget Sound Priorities* for public review and comment. The Puget Sound Action Team partnership invites you to review this document and submit comments no later than March 18, 2004 by one of the methods suggested below.

The Action Team partnership is charged with implementing an integrated conservation agenda for Puget Sound each biennium. This document is the first step in writing a plan of work for the July 1, 2005 to June 30, 2007 biennium. While much good work has been done, there is still much more to do to ensure a healthy Puget Sound for future generations.

The Action Team partnership seeks to coordinate action on high-priority, cross-jurisdictional issues. Each biennium we identify core priorities and specific objectives to achieve progress on those priorities. The Action Team partners have identified the following priorities for the 2005-2007 biennium:

- Clean up contaminated sites and sediments.
- Reduce continuing toxic contamination and prevent future contamination.
- Reduce the harmful impacts from stormwater runoff.
- Prevent contamination from sewage systems, onsite septics and other nonpoint sources, in particular as they affect shellfish.
- Protect shorelines and other critical areas that provide important ecological functions.
- Restore degraded nearshore and freshwater habitats.
- Conserve and recover orca, salmon and groundfish.

We are asking for your input early in the state's budget planning process so we can use it as we build the *2005-2007 Puget Sound Work Plan*. Your comments will better inform each step of our process, including development of state agency strategic plans and budget proposals and the state's new Priorities of Government budget process. The Governor and the legislature will use this work plan in the late fall of 2004 as they develop a budget for the 2005-2007 biennium.

In a time of limited resources, your comments can help us focus on achieving the most important results. Please consider the following questions as you review this document:

- Are some of these priorities more important to you than others? Are some more important in specific areas?
- What results would you hope to see by June 2007? Do the potential objectives describe those results appropriately? Are there other objectives or specific targets you would suggest?
- What are the best activities to achieve those results?
- What are the best measures for those results?
- What are some of the key obstacles to progress for specific priorities and objectives?
- Do you know of specific opportunities that would allow us to make significant progress in a particular area?
- Given the state programs and activities currently underway, what are the most important next steps for the next biennium?
- What actions are needed at the local level to achieve progress on the priority?

Please send your comments to the attention of Harriet Beale, the Action Team's Outreach and Implementation Manager, by **5 p.m., March 18, 2004** by one of the following:

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Olympia, WA 98504-0900

Express: 210 11th Avenue SW, 4th Floor, Suite 401
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If you wish to provide comments in person, you may attend an open house and public hearing on Saturday, March 13, 2004, 9 a.m. to noon at the Shoreline Conference Center, 18560 1st Avenue NE in Shoreline, Washington. Please see our website at www.psat.wa.gov for more information or for an electronic copy of the document.

Following the public comment period, the Action Team staff will work with the Puget Sound Council and the Action Team partnership to prepare a final draft of the *2005-2007 Puget Sound Priorities*. Action Team staff will provide a copy along with a summary of public comments to all commenters, and it will be available on our website late in the spring of 2004.

Thank you for your interest in Puget Sound.

Sincerely,

A handwritten signature in black ink, appearing to read "Brad Ack", with a large, stylized initial "B" on the left.

Brad Ack
Director

2005-2007 Puget Sound Priorities

Public Review Draft

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Introduction to the 2005-2007 Puget Sound Priorities

The Puget Sound Action Team (Action Team), created in 1996, is the state's partnership that defines, coordinates and puts into action the state's environmental protection and restoration agenda for Puget Sound. The Action Team partnership is made up of state agencies and federal, tribal and local government representatives. The Puget Sound Council, which advises the Action Team, is composed of diverse interest groups, state legislators and tribal and local government representatives.

Public review of the *2005-2007 Puget Sound Priorities* is the first step in developing the biennial work plan for Puget Sound for July 1, 2005 to June 30, 2007. The Action Team partnership looks across the spectrum of issues that threaten the health of Puget Sound and sets priorities to guide the partnership's work in the Sound. The work plan identifies objectives for the partnership and coordinates activities among agencies for their work together on each priority. The final work plan in December 2004 will present the two-year strategic focus and budget proposal to the governor and the Washington State Legislature for their consideration as they prepare the biennial budget.

This is the Action Team's fifth biennial work plan to implement the *Puget Sound Water Quality Management Plan*, a long-term comprehensive plan adopted by the state and federal governments to protect and restore Puget Sound. The Action Team partnership has identified the following as the most important priorities for our work together in Puget Sound, but has not ranked any priority over the others in importance:

- Clean up contaminated sites and sediments.
- Reduce continuing toxic contamination and prevent future contamination.
- Reduce the harmful impacts from stormwater runoff.
- Prevent contamination from sewage systems, onsite septic and other nonpoint sources, in particular as they affect shellfish.
- Protect shorelines and other critical areas that provide important ecological functions.
- Restore degraded nearshore and freshwater habitats.
- Conserve and recover orca, salmon and groundfish.

How the Action Team partnership will use public comments

Public comments on the *2005-2007 Puget Sound Priorities* will help direct the agendas of the partnership and its member agencies at the beginning of the state planning process for the two-year budget period. The Action Team partnership is soliciting public comment earlier in the budget development cycle than it did for past work plans. Comments provided during this winter 2004 review period will allow partner agencies to better consider and incorporate the public's input as they develop their agency strategic plans and budgets during the spring and summer of 2004. Although broader agency responsibilities, legal mandates, and budget constraints will shape agency planning, the Action Team partnership agencies will strive to coordinate and focus their work in Puget Sound around the work plan priorities. Action Team partner agencies will

provide detailed information on proposed actions and budgets in the final work plan in the fall of 2004.

In addition, Washington State's newly adopted budget process, the Priorities of Government (POG), will begin in May 2004. Public comment on this document will provide input to the POG process for planning the 2005-2007 budget. And finally, as the governor and the legislature work together in the winter of 2005 to decide where to spend limited state resources, the Action Team partnership's *2005-2007 Puget Sound Work Plan* will provide guidance. The work plan will reflect public review, will be consistent with agency strategic plans and budget proposals, and will be coordinated around achieving measurable progress on the highest priorities for Puget Sound.

How to comment on the 2005-2007 Puget Sound Priorities

The Action Team partnership has identified the seven priorities listed on page 1 for work in Puget Sound. All of the priorities have areas that overlap with others, such as managing stormwater and preventing toxic pollution, or restoring habitat and recovering salmon. The number and order assigned to each priority in this document does not represent a rank in relative importance of any priority. For each priority, the document describes current activities of Action Team partners and identifies potential "objectives," a term used by the partnership to refer to "...the measurable results an agency is expected to accomplish...." in the 2005 to 2007 biennium.¹

Current activities of Action Team partners

Each priority section includes a description of some of the more significant activities Action Team partners are taking to address the priorities. Although the document mentions the work of local, federal, and tribal partners, these descriptions focus on the activities of state agencies because the work plan's primary function is as a state budget document. The Action Team partnership recognizes that this document's emphasis on the role of state agencies does not adequately reflect the important contributions of local, federal, tribal and private partners toward progress in protecting and restoring Puget Sound.

As state agencies prepare for the next biennium, they will review current activities. In doing so, the agencies

will consider the public comments on the Puget Sound priorities. Although this document describes the most significant state programs and activities, it does not mention many of the activities that state agencies are conducting. To review agency activities in greater detail, go to the 2003-2005 Agency Activity Inventory on the Office of Financial Management's Web site at: <http://www.ofm.wa.gov/budget/activity/03-05/activity.htm>

To understand how agencies use various terms to describe their activities, you may view a glossary online from the *Puget Sound Water Quality Management Plan* at http://www.psat.wa.gov/Publications/manplan00/mp_index.htm.

Potential objectives for 2005-2007

In this document, the Action Team partnership identifies a number of specific potential objectives that describe the results it expects to accomplish for each priority in the next biennium. Action Team partners are soliciting input about these potential objectives (see specific questions in the next section), and the partnership will develop objectives based on consensus as it finalizes the work plan in the fall of 2004.

Objectives may describe environmental results such as acres of contaminated sediments cleaned up or programmatic actions by agencies, such as the number of permits issued. Some of the potential objectives identified in this document describe results that depend only in part on state actions. A number of the potential objectives rely on the actions of local governments, tribes and federal agencies, as well as others. In other cases, factors such as ocean conditions that are outside the direct control of people or institutions in the Puget Sound region will affect progress. The potential objectives listed in this document for each priority are examples and suggestions that the agencies will consider along with input from public review as they plan their activities for the next biennium.

The Action Team partners will ultimately adopt objectives and target numbers based on what the state can reasonably and efficiently achieve and measure. The final *2005-2007 Puget Sound Work Plan* will as much as possible include target numbers that the Action Team partners will use for mid-course adjustments as needed to achieve the objectives.

¹ Washington State's Office of Financial Management defines "objective" in their instructions to state agencies for developing the strategic plans and performance measures that will be the basis for their 2005-07 budget requests. See Operating Budget Instructions, Part 1 at <http://www.ofm.wa.gov/budget/instructions/05-07/budinstpart1/pdf>

Questions to guide comments

The Action Team encourages you to consider the following questions in responding to this document:

- Should the Action Team partners assign different weights to some priorities? Are some more important to you than others?
- Do certain priorities have higher importance for you in specific geographic areas?
- What results do we want to see by June 2007? Do the potential objectives describe those results appropriately? What other objectives or specific targets would you suggest?
- What are the best measures for those results? What measures are available to evaluate progress toward the desired result?
- What are some of the key obstacles to progress for specific priorities and activities?
- Do you know of any specific opportunities that would allow the Action Team partnership to make significant progress in a particular priority area?
- What are the best activities to achieve those results?
- Given the state programs and activities currently underway, what are the most important next steps for the next biennium?
- What activities should the state emphasize for a specific priority, for example building program capacity, technical assistance, funding for local governments, enforcement, demonstration projects, education, or research?
- What actions are needed at the local level to achieve progress on the priority?

The Action Team partnership looks forward to hearing from you throughout the process of developing the 2005-2007 work plan and working together now and in the next biennium to protect and conserve the rich and unique resources of Puget Sound.

Priority 1: Clean up contaminated sites and sediments



Department of Ecology

Many persistent toxic chemicals discharged to Puget Sound, such as polychlorinated biphenyls (PCBs), polyaromatic hydrocarbons, dioxins and mercury, tend to bind to sediments at concentrations far above natural conditions. They tend to accumulate in living tissues and can build up in the food chain, resulting in toxicity.

Although some present day activities continue to release these chemicals, current pollution control practices are far better than practices before existing environmental laws came into force. The wastes from 100 years of uncontrolled or poorly controlled dumping and discharges were left in hundreds of upland, groundwater and sediment sites in the Puget Sound basin.

In 1988, agencies in Puget Sound completed the Puget Sound Dredged Disposal Analysis and adopted comprehensive testing requirements and limits on dredged material allowed for disposal at unconfined open water sites. Washington state passed the Model Toxics Control Act (MTCA), the state's contaminated site cleanup law, in 1989. The Washington Department of Ecology (Ecology) adopted comprehensive sediment management standards for Puget Sound in 1991.

Today, large portions of Puget Sound's 1.8 million acres of submerged sediments show some form of chemical or biological degradation. Ecology has identified more than 5,700 acres as contaminated because they

exceed the Washington State sediment management standards. Ecology and the Environmental Protection Agency (EPA) have scheduled more than 2,800 of those acres in about 100 sites for remediation because they exceed cleanup triggers. The remaining contaminated acreage may naturally recover without remediation if the sources of contamination are controlled.

Contaminated underwater sediment sites concentrate in the major urban bays, including Commencement Bay, Elliott Bay, Bellingham Bay, Bremerton, and other water bodies with extensive histories of industrial activities. The contaminated sites on land are widely scattered, as were the oil storage facilities, dry cleaners, creosote plants and other activities that caused the contamination.

Current activities by Action Team partners to clean up contaminated sites and sediments

The Dredged Materials Management Program manages the disposal of contaminated sediments from navigation dredging projects and tracks the acreage of sediments cleaned up through dredging. This unique cooperative program of Ecology, the EPA, the U.S. Army Corps of Engineers and the Department of Natural Resources (DNR) coordinates the management of dredging and disposal to prevent the spread of existing contamination.

Ecology led the nation in setting sediment quality/management standards for Puget Sound. The standards include a "clean" standard and a "cleanup trigger" standard. Ecology manages SedQual, a database of all available sediment data, and uses it to assess sediment quality and identify sites for cleanup. Ecology and EPA policy is to focus resources on cleaning up sites that pose the greatest risk to public health and the environment. Superfund projects tend to be slow as a result of complexities such as legal actions, funding processes, and the number of participants in each project.

DNR, Washington departments of Transportation and Fish and Wildlife, ports, and local governments clean up public and orphan sites, or sites without identified responsible parties. Developing additional funding sources for these projects would accelerate the pace of cleanup.

The Bellingham Bay cleanup model shows the benefit of looking at all of the cleanup sites in one bay together (13 sites) and conducting the cleanup in the context of habitat restoration and future shoreline use. Commencement Bay has an integrated perspective because it started as two large superfund projects. However, most of the superfund work is site by site, each with a separate and lengthy timeline, contributing to a slow pace for cleanup Soundwide.

Action Team partnership's proposed strategy

During the 2005-2007 biennium the Action Team partnership will work to control sources of contamination and to manage navigation dredging operations to clean up contaminated areas whenever possible. In addition, state agencies and federal partners will continue to remediate the identified cleanup sites.

Potential objectives for clean up of contaminated sites and sediments in 2005-2007

- Number of acres of contaminated sediments remediated increase by ___acres from July 2005 to June 2007.
- ___ acres are evaluated to assess whether cleanup is needed during the biennium.
- Number of upland site cleanups completed (through Superfund, MTCA and corrective action at high priority hazardous waste facilities) increases to ___by June 2007. This represents at least ___percent of known number of cleanup actions.
- The public will have continuing access to a comprehensive presentation of all known contaminated sites, their size, key contaminants, status and expected date for remediation to be completed.
- Ecology's inventory of contaminated sediment sites is updated by review of information on patterns of sediment contamination and degradation.
- Source controls at cleaned sites are effective as evidenced by evaluation of longer term monitoring data from a sample of sites.
- Funding is provided for cleanup of orphan sites.

Priority 2: Reduce continuing toxic contamination and prevent future contamination



The layers of contaminated underwater sediments and the number of upland sites scheduled for cleanup (see priority 1) reveal the history of toxic pollution in Puget Sound. However, sources of toxic substances still threaten the Sound's rich marine diversity. Seals and other marine mammals in Puget Sound have high levels of polychlorinated biphenyls (PCBs) and other toxics. The Puget Sound Ambient Monitoring Program tracks how many fish develop liver lesions associated with toxic contamination. Juvenile salmon from rivers with contaminated bays show higher levels of toxics than fish from clean estuaries. A high percentage of adult salmon returning to certain urban streams are dying before they spawn.

Although some toxic compounds have been banned, continuing sources of toxics into Puget Sound include industrial and municipal discharges, urban runoff and stormwater, oil spills, hazardous material spills, air deposition (which also contributes to stormwater pollution), seepage from hazardous sites on land, illegal discharges and dumping activities. The Environmental Protection Agency's (EPA's) Toxics Release Inventory reported that in 2001, more than 879,000 pounds of toxic chemicals were released to the water and over 7,700,000 pounds of toxic chemicals were released to the air in the Puget Sound basin.

Toxics are widespread in Puget Sound but there are geographic differences in types and locations of sources. For example, nearly all of the businesses in the Elliott Bay/Duwamish area discharge to the domestic sewer system. King County treats this wastewater

and discharges it through deep outfalls. However, in Commencement Bay, Sinclair Inlet, Port Townsend, and other areas, many industries have individual permits and outfalls. Each outfall may have a historic or continuing sediment hot spot.

Another source of toxic pollution is oil spills. Catastrophic oil spills are most likely along the main oil tanker routes from the ocean to the major Puget Sound refineries, and from other large commercial vessels including oil barges. The most common direct source of small to mid-sized oil spills that enter the water directly, are oil transfer operations between vessels and facilities. Another important source are highway spills, including from tank trucks, that occur on land and drain to Puget Sound. The most recent significant oil spill occurred on December 30, 2003 during an oil transfer operation when a barge was being loaded at a major Puget Sound marine terminal and spilled about 4,800 gallons of heavy fuel oil into Puget Sound. Only two weeks later on January 15, 2004, a Columbia River dam released a large amount of transformer oil containing PCBs. While this later release did not occur in Puget Sound, it illustrates that hazardous material spills, including persistent bioaccumulative toxics (PBTs) are an ongoing threat.

Increasingly, researchers recognize the toxics settling out of air pollution as a major contribution to toxic contamination of Puget Sound waters. Air pollution from local sources concentrates within transportation routes and areas with many residential heating sources. Researchers have also reported some evidence of cross-Pacific transport of air toxics.

Current activities by Action Team partners to reduce continuing toxic contamination and prevent future contamination

The Washington Department of Ecology (Ecology) administers and regulates the federal National Pollutant Discharge Elimination System (NPDES) and state waste discharge permits for municipal and industrial discharges. As shown in the federal Toxics Release Inventory, the volume of toxics that industries discharge into water is a small fraction of the volume released in air emissions, and is generally decreasing. Wastewater treatment plants are also improving, but opportunities exist to minimize new discharges to

salt water through water reclamation and reuse, new technologies and land application.

Stormwater, especially from roads and commercial areas, carries significant toxics loadings. Water quality monitoring for toxics in stormwater is a critical next step in order to understand the extent of the problem and take action to limit this pollution. The stormwater priority in the next section addresses the prevention of toxic pollution from stormwater.

Ecology's Technical Resources for Energy Efficiency (TREE) program is a model of technical assistance to industries in reducing pollution and managing hazardous waste, as well as in conserving water. Ecology staff step outside the regulatory role of the agency to provide expert technical advice resulting in measurable reductions in pollution and often in cost savings to the industry.

The Puget Sound Action Team has coordinated a toxics work group for Puget Sound, co-chaired by Ecology and EPA. The work group will be making recommendations for actions as well as further research in early 2004.

Efforts to ban PBTs are underway worldwide. Ecology is implementing a PBT initiative for Washington State, which will result in a plan for reducing mercury in the environment and other ongoing work. Ecology and the Washington Department of Health are working to implement the mercury plan, but with limited funding.

To prevent oil spills, the state secured funding administered through Ecology for a rescue tug stationed at Neah Bay during the winter months until the spring of 2008. Ongoing catastrophic spill prevention depends on maintaining the rescue tug in the geographic area of highest risk. Ecology's oil spill prevention program also conducts vessel screening and inspections. It requires that large oil-handling facilities submit oil spill prevention plans that focus on facility design, operation and personnel training.

Ecology requires that regulated facilities and large commercial vessels submit oil spill contingency plans. These plans help to assure that companies are well prepared to rapidly mobilize an effective response when spills do occur. The intent is to minimize damage from spills by rapidly containing the oil and removing it from the environment.

Action Team partnership's proposed strategy

The state has a three-pronged strategy for the 2005-2007 biennium. One approach is to reduce the use of hazardous chemicals by continuing to implement the PBT strategy. A second approach is to reduce the loading of other substances by using best practices and improved treatment methods. The third element of the strategy is to continue to place a priority on actions to prevent oil and hazardous material spills.

Potential objectives for reducing continuing toxic contamination and preventing future contamination in 2005-2007

- Reduce total releases of priority air toxics in Puget Sound by ___ percent over the biennium.
- Reduce total releases of priority toxics discharged to directly to water in the Puget Sound basin as identified by the Toxics Release Inventory by ___ percent over the biennium.
- Total loadings in the Puget Sound basin of PBTs from individually permitted wastewater discharges decrease ___percent over the biennium.
- Fluorescent lamp recycling increases to __ percent by the end of the biennium.
- Ecology completes ___ toxic-focused water quality cleanup plans or technical studies during the biennium. (Ecology will provide target numbers in June 2005.)
- One chemical action plan is completed (per Ecology's PBT strategy) during the 2005-2007 biennium.
- The number of 25-10,000 gallon spills and the volume of oil reaching surface waters from these spills decrease by ___ and ___percent, respectively, over the course of the biennium.
- Ecology's TREE program completes evaluations that suggest quantifiable waste reductions for six industrial facilities in the Puget Sound basin during the biennium.
- Sufficient monitoring data are collected and made available to support activities to control toxics.

Priority 3: Reduce the harm from stormwater runoff



Stormwater runoff is rain or snow that falls on streets, parking areas, rooftops and other developed land and flows directly to Puget Sound or is routed there through drainage systems, streams, and rivers. Stormwater runoff contamination is exacerbated by oil spills, leaking containers, hazardous material releases, air emissions, excessive lawn maintenance and illegal dumping.

Stormwater runoff causes two major problems. First, when stormwater runoff moves over developed land it picks up and transports pollutants to receiving waters. This pollutant mix may include oil, grease, heavy metals, pesticides and other toxic chemicals, sediment, bacteria, and nutrients. The Washington Department of Ecology (Ecology) estimates that of all the impaired water bodies identified for cleanup plans under the Clean Water Act, approximately one-third are impaired by stormwater runoff. These pollutants degrade the water quality of surface waters, restrict harvesting in shellfish growing areas, harm or kill fish and other wildlife, limit recreational opportunities, contribute to sediment contamination in urban bays, and have the potential to pollute groundwater supplies (see priorities 1 and 2 for discussions of contaminated sediments and toxics).

The second major problem of stormwater runoff is the degradation or loss of habitat caused by increases in the volume of the runoff from developed lands. In native forests of the Pacific Northwest, researchers estimate that less than one percent of rain or snow

becomes surface runoff. Most of the precipitation infiltrates to the ground, is taken up by plants, or evaporates. When forests and prairies are cleared and replaced by streets, parking lots and buildings, hydrology is completely changed, surface runoff increases dramatically, and becomes stormwater runoff. Without adequate controls, increased stormwater flows overwhelm stream channels, causing undercutting and erosion of stream banks, depositing excessive sediment, and altering in-stream fish and wildlife habitat. The federal services have identified habitat loss due to stormwater runoff as one of the factors limiting our ability to recover salmon species listed under the Endangered Species Act.

Current activities of Action Team partners to reduce harm from stormwater runoff

At the center of the regulatory approach is the expanded coverage of municipal and construction activities under permits that require improved management of stormwater. Ecology issues and oversees implementation of National Pollutant Discharge Elimination System (NPDES) permits mandated by the federal Clean Water Act. In Puget Sound, Phase I of the stormwater NPDES program covers stormwater management activities of numerous industries, construction sites five acres or larger, and municipal activities and runoff from highways within Seattle, Tacoma and unincorporated parts of King, Pierce and Snohomish counties.

Phase II of the stormwater NPDES program will include approximately 70 smaller municipalities in Puget Sound, as well as construction sites larger than one acre. Ecology plans to issue a combined municipal stormwater permit in 2005. Federal law requires that the permit include provisions for monitoring and reporting. Staff from Ecology and the Puget Sound Action Team (Action Team) will provide technical assistance to local governments to help them implement permit requirements, with additional assistance coming from staff from the Washington Department of Community, Trade, and Economic Development, and the Washington Department of Fish and Wildlife.

Ecology also oversees plans to reduce the number and volume of combined stormwater and sewer overflow (CSOs) events in the 10 Puget Sound jurisdictions with

combined systems. Ecology administers state revolving fund loans to local governments to correct systems that allow overflows of untreated sewage into Puget Sound during heavy rainstorms.

The *Puget Sound Water Quality Management Plan* (PSWQMP) calls for all cities, and counties in Puget Sound to incorporate and implement the elements of a local, comprehensive stormwater program into their stormwater programs (element SW-1 of the PSWQMP). The local, comprehensive program includes all of the minimum requirements of the Phase II program as well as several additional ones, such as identifying existing runoff problems.

The local, comprehensive program calls for the adoption of the 2001 *Stormwater Management Manual for Western Washington* or a technically equivalent manual, which outlines minimum requirements for new development and redevelopment. Regional and national research prompted Ecology to significantly upgrade the flow control standard in the 2001 technical manual, which will often require larger detention ponds to slow runoff rates. The state will provide ongoing education, technical assistance and funding to help local governments enhance their stormwater programs. A continued focus on preventing oil and hazardous material spills is another key to progress in this area.

State and local governments and the development community are interested in new approaches for managing stormwater runoff. Research has shown a clear link between loss of forest cover, increases in impervious surfaces, and degradation in the health of aquatic systems, despite our efforts to manage the stormwater runoff from development. Many stormwater managers and professionals now use low impact development techniques, an innovative approach to site development that preserves native vegetation and soils, reduces and disconnects impervious surfaces, and uses small-scale controls throughout the site to manage, treat, and infiltrate stormwater runoff close to its source of origin. Staff from the Action Team, Ecology, Washington Sea Grant, Washington State University Extension, local governments, and private engineers provide education, research, guidance and technical assistance to local governments to actively promote low impact stormwater techniques. In addition, the Washington Department of Transportation is incorporating low impact development techniques into its highway runoff manual.

Action Team partnership's proposed strategy

Progress on reducing harm from stormwater runoff to Puget Sound will require the cooperative efforts of citizens, local and tribal governments, state agencies, and the development community. Strategies during the 2005-07 biennium include an expanded regulatory program of stormwater permits, increased use of innovative techniques known as low impact development, and continued development of local, comprehensive stormwater programs.

Potential objectives to reduce the harm from stormwater runoff

- Improved water quality conditions and less restrictive harvest classifications over the course of the biennium at ___ shellfish growing areas threatened or degraded by stormwater runoff.
- ___ percent of jurisdictions with combined sewer overflows meet the milestones in their CSO reduction plans, such as implementing CSO reduction activities.
- Stormwater and outfall improvements completed on ___ prioritized segments of state highways during the biennium.
- Increase the number of local governments adopting the elements of the Puget Sound comprehensive local stormwater program by ___ percent during the biennium.
- ___ percent of the jurisdictions who need a municipal stormwater permit have obtained a permit that includes provisions for monitoring and reporting.
- Credits for low impact development techniques in the *Stormwater Management Manual for Western Washington* are updated based on monitoring data and evaluations made available by January 2007.
- The number of local governments with ordinances that allow for or encourage the use of low impact development techniques increases to ___ by the end of the biennium.
- State and local stormwater management programs use monitoring and other information to identify sources of stormwater pollution and effects on aquatic health, and to improve their programs.

Priority 4: Prevent contamination from sewage systems, onsite septics and other nonpoint sources, in particular as they affect shellfish



Protecting and restoring clean water is critical to the future of human and environmental health in Puget Sound. In recent decades, waste from humans and animals has polluted streams, wetlands, groundwater, and marine waters. A significant number of the water bodies on the Washington Department of Ecology's (Ecology) list of polluted water bodies violate standards for bacterial pollution.

Clean water is particularly important to the rich and abundant shellfish resources of Puget Sound, and is key to preserving Washington State's position as the nation's leading producer of farmed bivalve shellfish. Because shellfish are harvested for human consumption, the waters in which they grow must meet stringent bacterial standards. Since 1995, pollution control efforts by state agencies, local governments, tribes, industry groups and citizens have restored approximately 8,000 acres of commercial shellfish beds, but approximately 30,000 acres remain restricted or prohibited for commercial and recreational harvest out of an estimated 141,000 acres of total classified acreage.

Cleaning up polluted waters and preventing future contamination involves the management of sewage treatment facilities, onsite sewage systems, and other nonpoint, or diffuse, sources of bacteria and nutrients such as boating and animal-keeping facilities. More than 100 sewage treatment plants are operated by Puget Sound local governments under National Pollutant Discharge Elimination System (NPDES) permits issued by Ecology.

At the same time, individuals and businesses in the Puget Sound region own and operate an estimated 472,000 onsite sewage disposal systems permitted by local health agencies. Many of these systems are old and poorly maintained, and the technology used in many newer systems requires regular care. Systems that do not work properly present health risks and tend to contaminate ground and surface waters with nutrients, pathogens, and other contaminants.

The Washington Department of Health (Health) or Ecology regulate large onsite sewage systems (more than 3500 gallons-per-day capacity) for a variety of public or private entities. Local health agencies regulate most other onsite sewage systems and rely on construction permit fees as a revenue source. This results in a focus on design and approval of construction permits and a limited capacity to educate homeowners, monitor system performance, assess environmental impacts, and support system upgrades when failures occur.

Current activities of Action Team partners to prevent the harmful effects of sewage systems, onsite septics and other nonpoint sources

The Dairy Nutrient Management Program initially developed by Ecology and now administered by the Washington Department of Agriculture addresses sources of livestock nutrients and bacteria that may pollute surface waters. In addition, the Washington Conservation Commission and county Conservation Districts play important roles by educating landowners and reducing pollution. Conservation districts assist landowners with farm plans, engineering and construction of best management practices, restoring riparian habitat, and coordinate funding support from a variety of programs.

Ecology funds water quality projects, works with local parties to develop and implement cleanup plans for polluted water bodies, monitors water quality, and implements the statewide plan to prevent and control nonpoint pollution.

Ecology and Health issue permits and monitor the performance of larger sewage treatment systems. Ecology's NPDES permits for sewer treatment plants establish limits required to meet water quality standards.

The Puget Sound Action Team (Action Team) staff administers the Public Involvement and Education Fund that supports citizen-led projects to involve and educate local communities in water quality and habitat protection projects. Washington Sea Grant and Washington State University Extension staff provide education and training to a range of audiences on such issues as boating sanitation, sewage management, stormwater management, and livestock management.

Health is drafting proposed changes to improve the state's administrative rules for both large and small onsite sewage systems in collaboration with other Action Team agencies and the private sector. The State Board of Health will adopt the revised rules by the beginning of the 2005-2007 biennium.

Action Team staff, Health and Ecology are leading an effort to coordinate and improve the management of data by local health jurisdictions for the growing number of onsite sewage systems in the region. Using geographic information system technology and working cooperatively with local officials, agency support aims to improve overall management of these systems and to identify high-risk areas in which to concentrate education and maintenance efforts.

A variety of state, local and federal agencies address sewage discharges from recreational boats and commercial maritime activities. The Washington State Parks and Recreation Commission and many private marinas provide sewage pumpout facilities at marinas and marine parks throughout Puget Sound. Consideration needs to be given to creation of "no discharge" zones.

Commercial shellfish harvesting is regulated under a national program administered by Health. The departments of Health and Ecology and the Action Team staff work with local partners in shellfish closure response processes to find and correct sources of pollution. The shellfish restoration plans developed with local governments, tribes, conservation districts, landowners, shellfish growers, and others help to coordinate resources and focus efforts to restore water quality.

Action Team staff is coordinating with local and tribal partners in the Hood Canal basin to expand actions to reduce sources of bacteria and nutrients. These actions will complement studies of the ecosystem to identify causes and potential solutions to the dissolved oxygen problem in Hood Canal waters.

A key challenge in the 2005-2007 biennium involves the task of engaging the owners of more than 472,000 onsite sewage disposal systems to responsibly manage their systems. In addition, growth trends in the Puget Sound region make it increasingly clear that state agencies, local governments and other organizations must work together to investigate sustainable approaches and technologies that reduce wastewater discharges to Puget Sound and provide safe and effective options for wastewater reclamation and reuse.

Action Team partnership's proposed strategy

During the 2005-2007 biennium, the Action Team partnership will focus special efforts in Hood Canal, where nutrients from inadequately treated sewage may be contributing to severe levels of low dissolved oxygen. Other areas of focus will include threatened or contaminated shellfish harvest areas and streams where state and local partners can carry out water cleanup plans and shellfish restoration strategies to reduce bacteria and nutrient loadings. State agencies will provide technical assistance and funding to strengthen local programs in data management, public education, monitoring, and corrective actions, especially in high-risk locations that are particularly vulnerable to the effects of sewage pollution. Local health jurisdictions will seek solutions to increase landowner compliance with maintenance practices through education and regulated inspection programs.

Potential objectives to prevent the harmful effects of sewage systems, onsite septic and other nonpoint sources in 2005-2007

- Number of acres of shellfish growing areas approved for direct commercial harvest of shellfish increases by ____ acres over the course of the biennium.
- Measurable, enhanced efforts to address pollution sources and improve water quality are undertaken in all shellfish growing areas identified in 2005 or 2006 by Health as "threatened."
- Reduce nutrient loadings to Hood Canal from the Skokomish River and the Union River by ____ percent over the course of the biennium.
- Improved water quality conditions and/or less restrictive harvest classifications in ____ shellfish growing areas that are threatened or degraded by concentrations of onsite sewage systems.

- Volume of reclaimed wastewater in Puget Sound increases by ___million gallons per day during the course of the biennium.
- By June 2007, NPDES permits for ___percent of municipal sewage treatment plants have been reviewed, renewed, or newly issued within the past five years.
- Ecology completes ___ nutrient, dissolved oxygen, and fecal coliform-focused water quality cleanup plans on an annual basis. (Ecology will provide target numbers in June 2005.)
- Risk-based management of onsite septic systems is practiced by ___ of 12 local health jurisdictions.
- Number of local health jurisdictions able to create GIS maps to evaluate and manage concentrations of onsite sewage systems located adjacent to water bodies impaired by fecal or nutrient loadings increases to ___ of 12 jurisdictions by June 2007.
- Local health jurisdictions receive state Health's assistance in implementing revised state onsite sewage regulations through ___ and ____ (approach left open for input by commenters).
- Agencies use information that identifies sources and impacts of nutrient and pathogen pollution to implement and improve their program.

Priority 5: Protect shorelines and other critical areas that provide important ecological functions



Puget Sound population growth and the resulting agricultural, forestry and urban activities have modified natural shorelines and other critical areas, compromising the ecological functions they provide. Evidence of ecosystem harm can be found in the high incidence of closed shellfish harvest areas, the list of polluted water bodies, the salmon populations listed under the Endangered Species Act, the disappearance of forage fish and eelgrass in areas of shoreline modification, changes in stormwater flows in urban areas, and studies correlating basins with high impervious surfaces and other measures of development with degraded shoreline and aquatic habitat.

The key to protecting the ecosystem as growth occurs is to regulate new development and re-development, as well as to enforce these regulations. In 1971, the Washington State Legislature passed the Shoreline Management Act to regulate shoreline activities, and in 1990 passed the Growth Management Act (GMA) to ensure that growth occurs in an orderly manner.

All Puget Sound jurisdictions will be updating their growth management plans and ordinances by the end of 2005 to include best available science, especially as it applies to the protection of anadromous fish such as salmon. Part of the use of best available science includes the use of landscape-scale information to inform planning and regulatory decisions. During the next decade, Puget Sound shoreline jurisdictions

will update their Shoreline Master Programs (SMP) to be consistent with revised guidelines that will help preserve remaining nearshore habitat from the damaging effects of shoreline modification.

While the regulatory approach is essential as the region accommodates a growing population, the goal of many communities is to permanently preserve key marine and freshwater properties through acquisition (such as purchase or donations), or to protect them through measures such as conservation easements. Because there are so few remaining areas of high ecological value, the functions they provide are vitally important to supporting ecosystem recovery. Citizens, businesses, farmers, tribes and local governments have come together through local land trusts and in partnership with regional and national conservation groups to identify properties with high value and seek landowners willing to cooperate in preserving these lands. Local governments have adopted tax incentive programs such as the Public Benefit Rating System and Conservation Futures taxing programs to support this approach.

Current activities of Action Team partners to protect shorelines and other critical areas that provide important ecological functions

The Washington Department of Community, Trade and Economic Development (CTED) is the lead agency for the state on growth management updates. CTED coordinated with other state agencies and parties to produce a critical areas handbook in 2003 with guidance for local jurisdictions as they update critical areas ordinances. CTED also coordinates technical assistance and state agency review of updated local ordinances and plans. Action Team partners involved in critical areas guidance include the Washington Department of Ecology (Ecology) for wetlands, frequently flooded areas, and aquifer recharge areas; the Washington Department of Fish and Wildlife (WDFW) for fish and wildlife habitat areas; the Washington Department of Natural Resources (DNR) for geologic hazard areas; and Puget Sound Action Team (Action Team) staff for stormwater issues and nearshore habitat. Individual projects at the local level are regulated through permit processes for WDFW's Hydraulic Project Approval, the U.S. Army

Corps of Engineers permits, Ecology's shoreline and water quality reviews, and DNR's regulation of forest practices. Since catastrophic oil spills are low-probability yet high-impact events, Ecology's oil spill prevention activities described under priority 2 are critical to protecting Puget Sound shorelines.

Ecology provides technical assistance and administers funding to local governments for SMP updates. The updates require inventories of shoreline resources, and local governments rely on information and data from tribes, WDFW, DNR, Health, Ecology, and others. The legislature in 2004 identified jurisdictions in Puget Sound with update deadlines of December 1, 2005. These include Whatcom County, Snohomish County, and the cities of Bellingham and Port Townsend. While the legislature also identified the city of Everett as having a 2005 due date, Ecology exempted the city from the 2005 deadline because it completed a comprehensive SMP update in 2002. Other Puget Sound jurisdictions are volunteering to update their master programs by late 2005 or early 2006, funded either with state SMP money or by Coastal Zone Management grants that are yet to be determined.

Successful updates of GMA plans and ordinances and SMPs depend on the integrity of the public process and support of the local citizens. Action Team staff, CTED, WDFW, Ecology and other agencies as well as Washington Sea Grant and Washington State University Extension staff provide public education, staff training, targeted workshops, publications, and other activities that contribute to public understanding of and involvement in the update processes.

The conservation approach to protecting shorelines and other critical areas involves state agencies that manage state-owned land, such as WDFW, DNR, and the Washington Department of Transportation, as well as the Washington State Parks and Recreation Commission. The Interagency Committee for Outdoor Recreation (IAC) administers funding for acquisition through several funding programs. The Washington Conservation Commission administers the federal Conservation Reserve Enhancement Program to preserve sensitive agricultural lands. Tribal governments manage tribally owned land and are co-managers of the fisheries.

Tribes, local governments and other local parties protect shorelines through watershed planning and local Endangered Species Act responses. Private organizations such as land trusts, national conservation organizations, and local conservation and environmental groups all contribute to the protection

of shorelines and other critical areas. The 2005-2007 biennium will be a period for implementing watershed and salmon recovery plans, and the balance of the regulatory and the conservation approach will vary with each watershed. Local planning groups will apply adaptive management tools to integrate watershed and salmon recovery plans with regulatory and conservation actions to protect ecological function.

Action Team partnership's proposed strategy

The Action Team partnership's strategy for protecting shorelines and other critical areas includes both a regulatory and a conservation approach. Action Team partners will work together to provide funding, technical guidance, data and information, and review and comment for critical areas ordinance updates, other growth management plan and ordinance updates, and SMP updates. At the same time, local governments and other partners, including state agencies providing funding and technical assistance, will work together to conserve shorelines and other critical areas that provide important ecological functions through a variety of conservation tools. At the local level, the regulatory and the conservation approach will come together to implement watershed and salmon recovery plans.

Potential objectives to protect shorelines and other critical areas that provide important ecological functions in 2005-2007

- ❑ Increase the number of acres of land permanently protected through DNR aquatic reserves, WDFW conservation easements or land acquisitions, and grant funding administered by the IAC to acquire or conserve easements by ____ acres through the course of the biennium.
- ❑ Snohomish County, Whatcom County, the city of Port Townsend and the city of Bellingham will update their SMPs to new guidelines by December 1, 2005. Other jurisdictions funded for Shoreline Master Program updates will be on schedule for this biennium or soon after.
- ❑ Island, Mason, San Juan and Skagit counties will update their critical areas ordinances to include best available science to protect eelgrass and kelp beds, forage fish spawning habitat, and shellfish growing areas by December 1, 2005.

- ❑ Develop a landscape-scale computer-based tool for assessing projects and sub-basin areas to assist local governments in protecting shorelines and other critical areas that provide important ecological functions.
- ❑ Provide local governments with technical information and assistance with comprehensive planning decisions and permits related to wetlands.
- ❑ Provide local governments and citizens with technical information and assistance on wetlands restoration and stewardship in the context of voluntary actions, as well as regulatory actions related to shoreline management and federal permitting activities.

Priority 6: Restore degraded nearshore and freshwater habitats



Changes to landscapes along Puget Sound's shorelines and within its watersheds during the past 150 years resulted in the loss of thousands of acres of productive and diverse aquatic habitats. Habitat loss and degradation occurs in streams, riparian areas, floodplains, estuaries, wetlands, and marine shorelines throughout the Puget Sound basin. These habitats support many species throughout their life histories.

Declining water quality associated with the loss and degradation of upstream habitats threatens shellfish harvesting in Puget Sound. Increased development of river floodplains and marine shorelines requires management of new flood and landslide hazards. The greatest losses have occurred in areas of high population density and areas associated with major infrastructure such as roads, dams and levees. An example of dramatic habitat loss is in the urbanized central Puget Sound basin as a result of stream diversion and channel restrictions, shoreline armoring, over-water structures and filled wetlands.

The best strategy for restoring habitat may not necessarily be to focus efforts in the most degraded areas. Current restoration theory suggests that the most successful restoration occurs in areas near existing unmodified habitats where underlying natural processes can be recovered. Restoration projects that focus on the underlying processes that create and maintain habitats, processes such as bluff erosion, over-bank flooding and sedimentation, are more likely to be

successful because they will continue to function over time. The amount, types and distribution of habitats that will be created from restoring a process over a large geographic scale are likely to provide more effective and lasting protection of species. Achieving this type of restoration requires a new level of cooperation and collaboration across the region.

Current activities of Action Team partners to restore degraded nearshore and freshwater habitats

The state and its federal, tribal and local partners began to restore habitat more strategically in the late 1990s when watershed, salmon recovery, and marine resources groups began to identify and carry out restoration projects in their local watersheds. The federal government provides funds through a variety of programs in a number of agencies. The state provides funds through the Salmon Recovery Funding Board (SRFB) and Aquatic Lands Enhancement Act administered by the Interagency Committee on Outdoor Recreation (IAC), as well as other state funding sources.

The state funds Regional Fisheries Enhancement Groups of local volunteers through the Washington Department of Fish and Wildlife (WDFW) for salmon restoration activities. Conservation Districts, Washington Department of Ecology and WDFW staff and others provide significant technical assistance and coordination in bringing local partners together within watersheds. The state has produced Integrated Streambank Protection Guidelines incorporating the best science on protection and restoration of sensitive streamside areas, and white papers through the Aquatic Habitat Guidelines Project to improve management of nearshore marine areas. Puget Sound tribes have contributed data, resources, and leadership for many restoration projects. Thousands of Puget Sound citizens have worked in small groups and as communities to restore habitat for salmon, document forage fish spawning areas and raise money for habitat protection and restoration, usually in concert with state agency technical assistance and funding.

Restoration projects are typically coordinated at the local level and may take years of planning and a number of small-scale projects to complete. Several

regional processes provide opportunities for multiple partners to coordinate for the most strategic use of resources. These include restoration strategies developed by salmon recovery groups for the SFRB and planning for early action projects under the Puget Sound Nearshore Ecosystem Restoration Project (PSNERP), a state, federal, local and tribal partnership. Another regional process is the U.S. Army Corps of Engineers' Puget Sound and Adjacent Waters project (PSAW).

Restoration of the underlying processes that maintain the ecosystem is the most effective and cost-effective approach for the future. The natural systems involved are complex and changeable. Although academic, state, federal and tribal scientists have developed a better understanding of freshwater systems, the processes that govern the nearshore environment are not as well understood. At this time, no monitoring method exists that can be used to evaluate the success of process-based restoration. Any such evaluation method should address the functions being restored for the physical, chemical or biological conditions desired. A significant challenge for 2005-2007 is to evaluate the results of previous restoration projects and build on this information to fund projects that restore and maintain natural processes that will continue to function over the long term.

Action Team partnership's proposed strategy

The Action Team partnership will work together in 2005-2007 to apply adaptive management principles to improve the success of process-based restoration projects. In addition, Action Team partners will improve regional coordination of large-scale initiatives such as the PSNERP, PSAW, the Northwest Straits Commission, salmon habitat restoration through the SRFB, and other efforts in order to most efficiently deploy staff and resources and to meet overall goals for ecosystem restoration.

Potential objectives for restoring degraded nearshore and freshwater habitats in 2005-2007

- PSNERP partners complete a feasibility report and pursue enactment of an approach (e.g., a new or amended U.S. Army Corps of Engineers construction authority) for implementing strategic, large-scale projects to restore processes that create and sustain nearshore habitats.
- Process-based restoration objectives identified by PSNERP partners are explicitly considered in all large-scale mitigation projects, natural resource damage assessment decision documents, and waterfront redevelopment projects affecting Puget Sound's nearshore environments.
- Projects to restore natural habitat forming processes increase the area of tidally and seasonally influenced estuarine wetlands by ___ acres over the course of the biennium.
- Projects to restore riparian habitat improve conditions and processes on ___ miles of Puget Sound rivers and streams.
- Fish passage barrier removal projects open ___ miles of stream habitat during the course of the biennium.
- Reduce the area of Puget Sound infested by *Spartina* spp. by ___ acres (a ___ percent reduction) during the biennium.
- Efforts to restore and protect the natural delivery of sediment and organic matter improve the natural functions of ___ Puget Sound drift cells by the end of the biennium.
- The proportion of restoration actions that incorporate project-specific effectiveness monitoring and formal adaptive management reaches ___ percent by the end of the biennium.

Priority 7: Conserve and recover orca, salmon and groundfish



Center for Whale Research

Conserving and recovering Puget Sound's declining species of orca, salmon and groundfish is a priority for the Puget Sound Action Team. Action Team partners recognize that depletions of these aquatic species may signal a more serious imbalance of the ecosystem.

Federal and state laws require special protection efforts and recovery plans to conserve and recover species at risk of extinction. Because several recovery plans with different goals will be carried out during the 2005-2007 biennium, Action Team partners will coordinate activities among the various recovery plans. All of the efforts underway for other strategic Puget Sound priorities (see priorities 1 through 6) to clean up and prevent pollution and to improve habitats will benefit orca, salmon, groundfish and other species, but additional actions identified in species recovery plans will accelerate that recovery.

Orca

Orca (*Orcinus orca*)—or killer whales—are the world's largest dolphins. Several different populations of these whales visit Puget Sound and the Strait of Juan de Fuca. Transient orcas prey on seals and other marine mammals, travel widely in small groups and are part of a widespread population. The Northern Resident orcas are fish-eaters that travel in pods and spend much of their time in British Columbia but occasionally enter Washington waters. The most common visitors to Washington are the Southern Resident orcas that spend

their summers in the transboundary waters around the San Juan Islands and may travel throughout the Sound at other times of the year.

Canada has listed both the Northern and Southern Resident whales under their Species at Risk Act. The National Marine Fisheries Service (now NOAA Fisheries) designated the Southern Resident orcas as depleted under the Marine Mammal Protection Act. The Washington Department of Fish and Wildlife (WDFW) is developing background materials to support adding all orcas that visit Washington waters to the state list of endangered species.

The total population of the three pods (known as J, K and L) of Southern Resident orcas was 83 in the summer of 2003 and an additional calf was sighted in January of 2004. This is up from a low of 80 in 2001 but below a recent peak of 98 whales in 1995. Factors thought to be contributing to the decline are poor availability of prey, toxic contamination, human disturbance, and altered number and distribution of breeding animals because of past captures.

A key prey for the Southern Residents is salmon. The factors that support the number of salmon and thus contribute to orca survival include freshwater and nearshore habitat conditions, open ocean habitat conditions, fishing decisions, and hatchery decisions. Nearshore habitat is crucial for forage fish that are a food supply for both salmon and orca. Another possible factor in orca decline— toxic contamination— may occur if the orca eat bottomfish from toxic sediment hot spots. As a result, all hot spots with toxics that could be passed on to orca are of concern. The types of human disturbance that may be factors in orca declines occur from private vessels, commercial whale watching boats and underwater noise.

Salmon

In 1999, NOAA Fisheries listed Puget Sound chinook and Hood Canal summer chum salmon as threatened under the federal Endangered Species Act (ESA). Puget Sound stocks of bull trout were also listed as threatened under the ESA by the U.S. Fish and Wildlife Service. The causes of salmon declines have been broadly categorized as habitat destruction, harvest management, hatchery management and hydropower projects.

The ESA listings triggered an aggressive salmon and watershed recovery response, outlined in the 1999 *Statewide Strategy to Recover Salmon: Extinction is Not an Option* developed by the Joint Natural Resources Cabinet. The state legislature in 1998 enacted the Watershed Planning Act, creating local planning units to decide the actions needed to provide adequate water for people and fish as well as healthy watersheds. The Salmon Recovery Act funded local lead entities to coordinate salmon restoration and recommend projects to the Salmon Recovery Funding Board (SFRB) or approval according to restoration strategies for each watershed. The act also initiated for each watershed an analysis of factors limiting salmon recovery led by the Conservation Commission. Ecology administers the Watershed Planning Act, while the Interagency Committee for Outdoor Recreation administers the activities of SFRB.

Groundfish

Groundfish, and rockfish in particular, have declined along the entire west coast of the United States, including Puget Sound. In some cases, this decline may be the result of changes in water temperature, especially for migratory species such as Pacific cod, hake and walleye pollock. Rockfish, on the other hand are generally not migratory, but have fidelity to the site where they settle out as larvae. They are susceptible to fishing pressure, partly because they stay in one area, and in addition because they are opportunistic and non-discriminating feeders. The strongest suspected cause of decline is associated with both sport and commercial fishing.

Some of the 18 species of groundfish in Puget Sound were petitioned for listing as threatened or endangered under the federal Endangered Species Act (ESA), a petition that NOAA Fisheries denied in 2000. However, the federal agency concluded that state authorities should impose stronger conservation measures and target meaningful recovery efforts.

Current Activities by Action Team partners to conserve and recover orca, salmon and groundfish

Orca

Several agencies are developing three different conservation and recovery plans for the orca on both sides of the border. The Department of Fisheries and Oceans (DFO) of Canada will prepare plans for the Northern and Southern Residents. NOAA Fisheries is preparing a plan for the Southern Resident population

under the Marine Mammal Protection Act. If the Washington Fish and Wildlife Commission votes to list orcas, then the WDFW will start work on a recovery plan. A committee that includes NOAA Fisheries, WDFW, the Department of Ecology (Ecology), the Environmental Protection Agency, DFO, and the Ministry of Water, Land and Air Protection for British Columbia shares information and coordinates activities among the various recovery planning efforts. In addition, there is an active community of interested citizens with representatives who will participate in all three processes.

A variety of agencies and groups have efforts underway to minimize disturbance from whale-watching vessels and from underwater noise. A number of groups, including NOAA Fisheries and DFO, are working with the commercial whale-watching fleet to minimize their disturbance of the whales. Success of this system will require improved tracking and enforcement, as well as education for private vessels that violate the guidelines. The recent questions raised over the Navy's use of active mid-range sonar and a proposal for seismic testing represent actions to protect the orca from underwater noise. Orcas are sensitive to oil spills, and cannot be cleaned and rehabilitated if they come in contact with oil, so the rescue tug and state spill prevention programs represent early actions for orca. The Action Team partners will continue to respond to threats to the orca that may emerge.

Efforts to control toxic discharges and to remediate contaminated sediments covered in priorities 1 and 2 should improve conditions for orcas. In addition, recovery of salmon and groundfish through the other parts of this priority will improve prey availability for orcas.

Salmon

The state has funded the Puget Sound Shared Salmon Strategy (Shared Strategy), a non-profit entity, to work with local watersheds to develop a salmon recovery plan for Puget Sound salmon species listed under the ESA by June 30, 2005. Local governments, tribes, watershed groups and a number of local salmon restoration partners are writing chapters for 14 Puget Sound salmon recovery planning areas that, together with a Soundwide chapter on the nearshore marine component of salmon recovery led by the Action Team staff, will comprise the salmon recovery plan for Puget Sound. The Shared Strategy is guiding and coordinating this voluntary and collaborative effort among state, tribal, local, agricultural, environmental, industrial, and other parties. The Shared Strategy works closely

with the Governor's Salmon Recovery Office, WDFW, Action Team staff, Ecology and other state agencies to coordinate state assistance for the local efforts.

State agencies are working on many levels to support salmon recovery. Watershed plans funded under the Watershed Planning Act are being completed for 13 Puget Sound watersheds. At the same time, 15 lead entities operate to coordinate funding of projects under the Salmon Recovery Act. State agency technical assistance and funding has been critical to the success of these efforts throughout Puget Sound. Tribal co-managers are key partners at the regional and local levels and have been at the forefront of salmon and nearshore habitat research, putting into practice process-based restoration techniques. The majority of the work in salmon recovery occurs in local watersheds and on local shorelines, where citizens, farmers, conservation districts, students of all ages, tribes, local governments, and volunteers of stream teams, the regional fisheries enhancement groups funded through WDFW, and other groups contribute many hours and significant resources to recovering salmon in their local streams.

Groundfish

WDFW and the Washington Fish and Wildlife Commission set fishing regulations in consultation with the tribal co-managers. Although regulations have gradually limited fishing in an effort to allow stocks to rebuild, and success of this approach is evident for lingcod, many of the rockfish species have not rebounded. Their numbers continue to remain low, and perhaps more importantly, their reproductive capacity has greatly diminished over the past decade.

There is some question whether the stocks will ever rebuild on their own. Recent attention has focused on other tools such as conservation and recovery areas, mostly through regulatory authority of WDFW, but also through voluntary marine protected areas in the San Juan Islands initiated by the San Juan County Marine Resources Committee. The concept of marine protected areas is somewhat controversial as a management tool for groundfish recovery.

WDFW is developing a rockfish management and conservation plan. Staff efforts are focusing on an analysis and stock assessment that will serve as the foundation for the conservation plan. The timeline for plan completion is uncertain. In the interim, the Washington Fish and Wildlife Commission is considering options for more restrictive fishing limits. Adequate enforcement is critical to this approach, but is limited by budget constraints and competing agency mandates.

Action Team partnership's proposed strategy

The partnership's primary strategy for 2005-2007 for conserving and recovering species at risk is to achieve progress on priorities 1 through 6 of this document for overall ecosystem protection and recovery. At the same time, the Action Team partners will implement actions required in the recovery plans, provide technical guidance and support to local implementers, and participate in addressing regional needs for monitoring and adaptive management. The Action Team partnership will help coordinate implementation of the recovery plan to avoid unnecessary duplication and leverage opportunities among the various recovery plans. Prior to completion of a rockfish conservation plan, the Action Team partnership will support regulatory and voluntary tools for rockfish recovery.

Potential objectives for conserving and recovering orca, salmon and groundfish in 2005-2007

- Dependent on state listing decision: WDFW completes an orca recovery plan and implementation of Action Team partner agency activities occurs on the schedule identified in the plan.
- Action Team partner agencies participate in the development and implementation of orca recovery plans developed by NOAA Fisheries and Canada's DFO.
- Action Team partner agencies implement the activities identified for them in the Shared Strategy for Puget Sound's salmon recovery plan.
- Designations of ___ rockfish recovery areas through a cooperative effort.
- Enforcement of sport fishing regulations (especially for groundfish) is improved by on-water deployment of an additional ___ WDFW (or WDFW-deputized) law enforcement agents.

