1999-2001 Puget Sound Water Quality Work Plan

Prepared by the

Puget Sound Water
Quality Action Team
P.O. Box 40900
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1-800-54-SOUND

Revised in July 1999 to reflect the
final 1999-2001 budget

STUART GLASOE

Puget Sound Water Quality Action Team

The Action Team has 17 members: a city and a county representative; a representative of federally recognized tribes; ex officio nonvoting representatives of three federal agencies; the heads of 10 state agencies involved in carrying out the Puget Sound Management Plan and a governor-appointed chair.

The Action Team:

- *Develops a biennial work plan and budget.*
- *Coordinates the monitoring and research programs.*
- *Periodically amends the Puget Sound Water Quality Management Plan.*
- *Coordinates implementation of the Puget Sound Management Plan.*

Nancy McKay
Chair

Chuck Clarke*
Regional Administrator
U.S. Environmental Protection Agency

Kaleen Cottingham
Deputy Commissioner of Public Lands
Department of Natural Resources

Tim Douglas
Director
Department of Community, Trade and Economic Development

Tom Fitzsimmons
Director
Department of Ecology

Gerry Jackson*
Deputy Supervisor
U.S. Fish and Wildlife Service

Jim Jesernig
Director
Department of Agriculture

Laura Eckert Johnson
Director
Interagency Committee for Outdoor Recreation

Louise Miller
Metropolitan King County Council

Steve Meyer
Executive Director
Washington State Conservation Commission

Mary Selecky
Secretary
Department of Health

Sid Morrison
Secretary
Department of Transportation

Cleve Pinnix
Director
State Parks and Recreation Commission

Vacant
City representative

Jeffrey Koenings
Director
Department of Fish & Wildlife

Will Stelle*
Regional Administrator
National Marine Fisheries Service

Daryl Williams
Director
Department of the Environment
Tulalip Tribes

* Indicates non-voting member

Puget Sound Council

The Council has twelve members: seven appointed by the Governor and four non-voting legislators. The Chair of the Action Team also chairs the Council.

The Council:

- *Advises the Action Team on work plan projects and activities, and on coordination with other state and local activities.*
- *Recommends changes to the Puget Sound Management Plan, as needed.*
- *Reviews progress on implementation of the work plan.*
- *Tracks the progress of state agencies and local governments in implementing the work plan.*

Nancy McKay
Chair

Kirk Anderson
(Representing business)
Fisher Properties, Inc.

Representative Gary Chandler*
Washington State House of Representatives

*Vacant**
Washington State House of Representatives

Bill Dewey
(Representing the shellfish industry)
Taylor Shellfish Company

Bob Edwards
(Representing city government)
Renton City Councilmember

Senator Tracey Eide*
Washington State Senate

Rhea Miller
(Representing county government)
San Juan County Commissioner

Tom Putnam
(Representing the environmental community)
Puget Soundkeeper Alliance

Senator Pam Roach*
Washington State Senate

Jerry Van der Veen
(Representing agriculture)
Van der Veen Dairy

Fran Wilshusen
(Representing tribal governments)
Northwest Indian Fisheries Commission

* Indicates non-voting member

If you need this document in an alternate format contact the office of the PSWQAT at 360-407-7300 or 1-800-54-SOUND. Our TDD number is 1-800-833-6388. This work plan is also available on the Action Team's web site at: http://www.wa.gov/puget_sound.

STATE OF WASHINGTON

PUGET SOUND WATER QUALITY ACTION TEAM

OFFICE OF THE GOVERNOR

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July 26, 1999

To: Persons interested in the *1999-2001 Puget Sound Water Quality Work Plan*

We are pleased to present the final *1999-2001 Puget Sound Water Quality Work Plan*. This plan coordinates state, federal, tribal and local actions to restore and protect the Sound's resources and water quality. The Action Team has identified seven priorities for the 1999-2001 biennium:

- Protect and restore habitat for fish, and shellfish, and remove barriers to salmon passage.
- Prevent downgrades or closures of shellfish areas and reopen closed areas.
- Fix existing and prevent future stormwater problems and reduce toxic discharges.
- Fix existing and prevent future on-site sewage system problems.
- Implement watershed plans.
- Prevent the introduction of new aquatic nuisance species and control the spread of those that already have been introduced.
- Provide public education and involvement on these priorities.

Since 1990, $111,000,000 has been earmarked by the legislature to realize the state's long-term vision for protecting Puget Sound. The Puget Sound Water Quality Management Plan outlines the state's vision and comprehensive strategy to address Puget Sound issues from toxic sediments to the loss of wetlands and habitat. The budget for the 1999-2001 work plan contains $328,000 in new funding to help state agencies prevent infestations of European green crab and inventory nearshore marine habitats. Two programs were reduced by $980,000: technical assistance and funding for water quality projects of local conservation districts; and sediment cleanup and management technical assistance.

Additionally, the state's new efforts on salmon recovery will complement this work plan by addressing unresolved habitat issues in the Puget Sound basin. As strategies for salmon recovery are developed, we will consider incorporating them into the Puget Sound Management Plan.

I want to thank all those who helped develop this work plan. We have a road map and the resources to make real progress over the next two years.

Sincerely,

Nancy McKay

Nancy McKay
Chair

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INTRODUCTION

Protecting Puget Sound, as we begin a new millenium, is increasingly complex and challenging. We have made progress on many fronts, but new issues are emerging and many existing problems persist as the region's population continues to grow. Many species of salmon and bottomfish are in trouble. Despite the restoration of thousands of acres of shellfish beds, shellfish from 25 percent of the Sound's commercial growing areas still are not safe to eat. Hundreds of homeowners have repaired or upgraded their on-site sewage systems, but with 10,000 new systems going in each year, local officials will have to work even harder to prevent future problems. Past losses of wetlands, discharges of toxics, declines in populations of some species and water pollution have left Puget Sound with major needs for restoration.

This *1999-2001 Puget Sound Water Quality Work Plan* lays out a two-year strategy to continue work to protect the Sound's health in the face of new and continuing problems. It builds on past efforts and focuses attention on priority issues (see pages 2-5).

The goals of this work plan are to achieve measurable improvements in Puget Sound over a two-year period and to continue implementing the *Puget Sound Water Quality Management Plan*. The Puget Sound Management Plan provides the framework for an ongoing comprehensive and coordinated approach to protect and restore the Sound.

The "Actions" sections of this work plan identifies targeted actions that government agencies intend to take to protect and restore Puget Sound during the 1999-2001 biennium. The actions were provided by federal, state, local and tribal governments, including the Action Team, and are based on long-term strategies for addressing environmental issues.

All levels of government – including conservation districts and ports – are partners in carrying out this work plan.

If federal, state, tribal and local governments implement this work plan, they will make a significant contribution to protecting and restoring the biological health and diversity of Puget Sound.

Milestones in the Management of Puget Sound

1985 - Puget Sound Water Quality Authority established.

1986 - First *Puget Sound Water Quality Management Plan* developed.

1988 - Puget Sound designated by the U.S. EPA as an estuary of national significance, becoming part of the National Estuary Program.

1991 - U.S. EPA approves the Sound's Management Plan as the federal Comprehensive Conservation and Management Plan.

1991 & 1994 - Management Plan updated.

1996 - Puget Sound Water Quality Protection Act restructured management of the estuary, replaced the Authority with a new Puget Sound Water Quality Action Team and Puget Sound Council, and required biennial work plans to protect Puget Sound.

1996 - First two-year work plan adopted.

1998 - Legislature clarified Action Team's mandate to include salmon recovery actions in the work plan.

Legislature expanded Action Team membership to include a representative of tribal governments and the regional heads of three federal agencies.

1999 - Legislature expanded the membership of the Puget Sound Council to include an additional member from the House and one from the Senate.

Structure of the Work Plan

This introduction provides background on preparation of the work plan, highlights action to be taken on work plan priorities and summarizes the state agency budget. Actions for protecting Puget Sound start on page 8 and are divided into sections corresponding to major pollution problems, resource issues and management tools. For each section, a brief introduction presents the goal and strategy of the Puget Sound Management Plan, background information on the topic, and a summary of related state budget proposals. Tables 3 and 4 at end of the work plan show the proposed state budget for implementing the work plan by agency and topic.

Preparing The Work Plan

The Puget Sound Water Quality Action Team developed this work plan and budget with advice from the Puget Sound Council. Biennial work plans and budgets are based on the Puget Sound Management Plan and other ongoing activities and plans.

Work on this work plan began in the fall of 1997. Through more than 30 local forums and meetings around the Sound, Action Team support staff identified local priorities for this work plan. Early in 1998, the Puget Sound Council recommended its priorities based on local concerns and environmental trends.

In February 1998, the Action Team adopted priorities for this work plan (see next section). In May and June 1998, state and federal agencies, tribal and local governments and other entities submitted actions to include in this work plan. State agencies also provided their proposed budgets for implementing the work plan.

A draft work plan was circulated for public review in July and August 1998. The Puget Sound Council met in August and September to review the work plan and public comment and to develop recommendations on changes to the draft. On September 30, 1998, the Action Team considered the public comment and the Council's recommendations and approved changes to finalize this work plan.

In December 1998, the Action Team sent the recommended work plan and budget to the legislature and governor. This current edition of the work plan incorporates the final state budget for the 1999-2001 biennium. The actions section of this edition has been edited to include just the state agency actions that received funding.

Local Issues and Current Scientific Findings

In developing priorities for this work plan, the Action Team considered information from various sources, including local forums and meetings and recent scientific findings. The results of the local forums and meetings conducted by Action Team support staff are compiled in the report, *Local Priorities for the 1999-2001 Puget Sound Water Quality Work Plan.*

Around the Sound, the most frequently mentioned priority issues were stormwater management, habitat protection and implementation of watershed plans. Local officials and residents strongly emphasized the need for local funding and for better coordination and enforcement of existing federal, state and local programs. Environmental groups identified toxic pollution, illegal discharges, contaminated sediments and the loss of nearshore habitat as key issues.

Two reports released by the Action Team in 1998 – the *1998 Puget Sound Update* and *Puget Sound's Health 1998* – provide scientific evidence that some aspects of Puget Sound's health are improving. However the Sound continues to suffer many damaging effects from the region's growing human population. Improvements over the past several years in the condition of Puget Sound and its natural resources include steady or increasing populations of some organisms and decreases in some toxic contaminants in a few areas. Harbor seals and many species of marine birds are doing well and their numbers are growing. Some contaminants in mussel tissue have decreased at some locations from levels measured in the 1970s and 1980s, indicating a decline in the concentrations of contaminants in the waters of Puget Sound.

Evidence of continued environmental problems for Puget Sound includes the poor or declining condition of a wide variety of marine organisms. Many continuing problems relate to harvest practices, changes our society has made to the physical environment, and contamination of the environment by toxic chemicals, pathogens and excess nutrients. Marine organisms in poor or declining condition in Puget Sound include many species of bottomfish, salmon, herring and marine invertebrates.

Priority Issues for the 1999-2001 Work Plan

The challenge for this work plan is to address important issues that require immediate action while preserving the fragile gains made across the spectrum of water quality issues. To provide this balance, the Action Team identified the following seven priorities for the 1999-2001 work plan.

- Protect and restore habitat for fish, and shellfish and wildlife, and remove barriers to salmon passage.
- Prevent downgrades or closures of shellfish areas and reopen closed areas.
- Fix existing and prevent future stormwater problems and reduce toxic discharges.
- Fix existing and prevent future on-site sewage system problems.
- Implement watershed plans.

- Prevent the introduction of new aquatic nuisance species and control the spread of those that already have been introduced.
- Provide public education and involvement on these priorities.

Members of the Action Team set priorities based on, among other things, recommendations from local communities, the condition of biological resources, the potential for irreversible damage if action is not taken, the need to prevent future pollution and degradation, and other mandates and initiatives.

Identifying an issue as a priority means that the Action Team recommends focusing additional work and resources on it in order to achieve measurable results during the 1999-2001 biennium. *This does not mean that work on other efforts should stop – it is important to continue addressing all issues facing the Sound.*

In addition to priority issues, this work plan contains actions that continue to implement important programs in the Puget Sound Management Plan, including monitoring and research, agriculture and forestry, spills, municipal and industrial discharges, and contaminated sediments and dredging.

Following is a description of each priority and highlights of actions that local and tribal governments, federal and state agencies and other government entities will take to address it during the 1999-2001 Biennium.

Priority: Protect and restore habitat for fish, shellfish and wildlife, and remove barriers to salmon passage.

Fish and wildlife need adequate high-quality habitat to survive. But thousands of acres of habitat and wetlands have been filled, paved, diked, bulkheaded, silted in, eroded or otherwise damaged or lost. Access to thousands of miles of salmon streams is cut off by barriers to fish passage. Many marine habitats are degraded by pressures from fishing and disturbances, such as shoreline armoring

Highlights of Actions:

- The Department of Natural Resources will map nearshore habitat.
- The Department of Transportation will remove barriers to fish and will implement wetlands mitigation projects in advance of highway construction projects.
- Federal and state agencies, tribal governments, local governments and conservation districts will continue to assist landowners, community groups and others to identify, restore, enhance and protect fish and aquatic habitat and to remove barriers to fish passage.
- Local governments will continue to implement and improve local ordinances to protect and enhance critical fish habitat, wetlands and other aquatic habitat.

Priority: Prevent downgrades or closures of shellfish areas and reopen closed areas.

Puget Sound's shellfish are a highly valuable resource that depend on clean water. Shellfish can be degraded by bacterial and toxic pollution and changes to habitat. Contamination can render shellfish unsafe to eat. Bacterial pollution comes mainly from surface water runoff which carries improperly treated human and animal wastes.

Highlights of Actions:

- The state will monitor water quality and classify shellfish growing areas.
- State agencies will assist local governments in preventing downgrades and reopening closed harvest areas.
- Health will provide early warning of water quality problems in shellfish growing areas.
- The state and local governments will classify recreational shellfish beds used by the public and inform and educate people about safe and legal shellfish harvest.
- Local governments will identify and correct pollution sources that threaten or cause closures or downgrades of commercial and public shellfish beds.
- Local and tribal governments, conservation districts and others will develop shellfish closure response plans, in partnership with the state, when downgrades occur.

Priority: Fix existing and prevent future stormwater problems and reduce toxic discharges.

Stormwater is a problem in every area of the Puget Sound basin and it poses a major threat to salmon habitat. New development generates runoff that must be appropriately controlled to prevent flooding, erosion of habitat, siltation of streambeds, water pollution and sediment contamination. Existing developed areas need to upgrade their stormwater conveyance systems to correct problems.

Toxics chemicals can cause poisoning, cancer, birth defects and other problems in exposed aquatic life, and can threaten human health. Toxics reach Puget Sound water and sediments from industrial and municipal discharges, combined sewer overflows, stormwater, nonpoint sources of pollution and illegal dumping.

Highlights of Actions:

- Cities and counties will develop and implement basic stormwater programs to control runoff from new development and redevelopment, and ensure that stormwater facilities are properly operated and maintained.
- Urbanized cities and counties will develop and implement comprehensive stormwater programs.
- The state will provide technical assistance to local governments as they develop and implement local programs to manage stormwater.
- Ecology will update the stormwater management manual for the Puget Sound Basin.
- The state will provide technical assistance and guidance on National Pollutant Discharge Elimination System (NPDES) stormwater permits issued to municipalities, construction sites, industry and Transportation.
- The Department of Transportation will test improved practices for managing stormwater and provide grants for mitigating stormwater runoff from highways.
- Transportation will implement the highway runoff program under the NPDES permit, and provide training on erosion control and spill management.
- The U.S. Environmental Protection Agency and Ecology will strengthen wastewater discharge permits.
- Some municipalities will reduce discharges of toxic materials to Puget Sound by upgrading wastewater treatment and developing water reuse.
- Municipalities with combined sewer overflows will reduce the number and volume of overflows to meet state standards.
- Federal, state and local governments will clean up contaminated sediment sites.

Priority: Fix existing and prevent future on-site sewage system problems.

On-site sewage systems are the preferred approach for treating domestic sewage in rural areas of Puget Sound. But many older systems are failing or will soon fail. New systems must be properly designed, sited, installed and maintained to operate successfully. Improperly operating systems can pose a hazard to local health and contaminate water with nutrients and disease-causing pathogens, making shellfish unsafe to eat.

Highlights of Actions:

- The state will provide policy and technical guidance to local health jurisdictions and others regarding management of on-site sewage systems.
- The state will review and revise its technical standards and guidance for approved systems, and approve new technologies.
- Local health jurisdictions will implement on-site sewage system regulations, including programs for operation and maintenance.
- Local health jurisdictions will educate and help homeowners, community groups and others to properly operate and maintain on-site sewage systems.

Priority: Implement watershed plans.

Water quality and habitats are damaged by the cumulative effect of small problems from many individual sources of pollution. Under the *Puget Sound Water Quality Management Plan*, many local governments have formed citizen committees to review the problems in priority watersheds, identify appropriate actions to fix the problems, and prepare local watershed action plans. Implementing these plans will protect and restore water quality and habitats, including many shellfish growing areas.

Highlights of Actions:

- The state will assist local governments and tribes in developing and implementing local

watershed action plans to control nonpoint sources of pollution and to protect and restore salmon habitat.

- Local governments and watershed committees will develop, fund and implement watershed action plans.

Priority: Prevent the introduction of new aquatic nuisance species and control the spread of those that already have been introduced.

Marine life in Puget Sound has evolved in a balanced ecosystem. Humans rely on that balance. But human, and sometimes natural, activity can introduce a plant or animal that upsets this balance, with the potential to displace important species and harm our economy. The key to addressing this issue is to prevent or slow the introduction of aquatic nuisance species and control measures must be applied to species that have already been introduced.

Highlights of Actions:

- The Department of Fish and Wildlife will control the spread of European green crab into Puget Sound.
- Washington Sea Grant will provide information and technical assistance on aquatic nuisance species.
- The state and tribal governments will contain and eradicate *Spartina* cordgrass infestations in Puget Sound's estuaries and purple loosestrife in the basin's wetlands.

Priority: Provide public education and involvement on priorities of the 1999-2001 work plan.

Protecting water quality and habitat requires active stewardship. When people understand the problems and the needed solutions, they are more likely to get actively involved in protecting and restoring Puget Sound. For this reason, education is an important part of solving water quality and habitat problems and promoting salmon recovery. Education involves people, gives them tools to make informed decisions and leads to local action.

Highlights of State Actions:

- The University of Washington and Washington State University will maintain their water quality field agent programs.
- The Puget Sound Water Quality Action Team will build citizen stewardship by providing funding for public involvement and education projects that protect Puget Sound and restore salmon.
- The state will develop educational materials and programs, and support local communities in involving and educating the public about Puget Sound and salmon.
- Cities and counties will educate and involve citizens on water quality and natural resource issues, including stormwater management, the Endangered Species Act, wetlands and habitat protection and the operation and maintenance of on-site sewage systems.

How the Work Plan Relates to Other Protection Efforts

The Puget Sound Management Plan's programs complement other important federal, tribal, state and local government efforts to protect water quality and biological resources. These include managing growth, protecting threatened species and managing watersheds. The Action Team helps coordinate approaches, activities and funding among these initiatives.

Members of the Action Team representing state agencies are also members of the Joint Natural Resources Cabinet, which coordinates the management of water and threatened species of salmon statewide. State plans for recovering salmon, being developed by the Governor's Salmon Recovery Office, will include appropriate sections of the work plan that address habitat.

This work plan is being adopted at a time when all levels of government are making unprecedented efforts to protect and restore the environment. Because these initiatives are evolving, the links among them are still being developed.

Local governments have and will continue to coordinate among water quality initiatives occurring in their communities.

Many new watershed plans are being initiated under the Watershed Planning Act (Chapter 247, Laws of 1998) These plans need to incorporate past work in their watersheds, including plans developed under Chapter 400-12 WAC, the Nonpoint Rule.

Salmon restoration projects will be carried out in many watersheds under the Salmon Recovery Act (Chapter 246, of 1998). An analysis of limiting

factors in each watershed will be undertaken as part of these efforts. These analyses should review all available information in developing conclusions. In addition, other initiatives may benefit from the data generated by the limiting factors analyses. At the same time, as mentioned above, the state is developing a salmon recovery plan to address proposed listings of salmon under the federal Endangered Species Act. Many, but not all, of the salmon recovery measures related to habitat are already included in this work plan.

In addition, Congress has authorized and funded new marine resource protection efforts in the northern Puget Sound. The sum of $350,000 has been earmarked to complement current management responsibilities. A network of county-based Marine Resource Committees (MRCs) will be established to use state and local authorities in protecting and conserving the resources of the Northwest Straits. The MRCs will coordinate activities through a Northwest Straits Advisory Commission that will provide technical assistance, integrate science, develop an ecosystem focus and coordinate funding.

Local Government Funding for Puget Sound

Local governments contribute a significant portion of the total funds available for restoring and protecting Puget Sound. In preparing the work plan, the Action Team asked local governments to estimate the cost of their actions. The total cost estimate for all local projects in this work plan is $469 million. Of this figure, $190 million was identified as purely local costs; the balance was split among local, state and federal costs. However, not all local projects submitted contained cost estimates and many jurisdictions did not submit actions for the work plan. Therefore, the above figure is a low estimate of total local expenditures. This figure illustrates the major commitment local governments are making to protect and restore Puget Sound and the scale of local needs for new and enhanced sources of funding.

Many of the local actions submitted for the work plan have not secured full funding. The above number is a cost estimate for projects that local governments intend to accomplish but, in some cases, they will need state or federal grants to carry out the actions.

State Agency Budget Summary

State funding for restoration, technical assistance, resource management, pollution control and stewardship training is critical to the future health of Puget Sound.

Table 1 is a summary of the final budget for implementing the 1999-2001 work plan. A detailed budget is shown in Table 3 at the end of the work plan. Action team agencies will spend a total of $91,299,261 to implement the work plan. Of this total, $63,964,000 is for the Department of Transportation to carry out projects related to transportation facilities.

The budget contains two enhancements over the 1997-1999 biennium. The Department of Fish and Wildlife will receive $248,000 to control introduction of European green crab. The Department of Natural Resources will receive $80,000 to conduct a rapid assessment of nearshore habitat.

There is a reduction of $150,000 to Ecology's program for sediment cleanup and technical assistance for multi-user disposal sites. There is also a reduction of $830,000 in the proviso for technical assistance and funding for water quality projects of local conservation districts.

Many actions in this work plan relate to restoring salmon or implementing watershed plans. These are indicated in the right column on the tables of actions, as directed by the 1998 legislature.

Table 1. Summary of 1999-2001 State Agency Expenditures

Agency	Continued 1997-1999 Proviso Funds	Action Team Recommendations for 1999-2001		Final Budget Provisos for 1999-2001		Non-Proviso Funds Being Reported by Agencies
		Adjustment	Total	Adjustment	Total	
Agriculture	$73,000		$73,000		$73,000	
Community, Trade and Economic Development	$123,000		$123,000		$123,000	
Conservation Commission	$1,324,000		$1,324,000	($830,000)	$494,000	
Ecology	$13,989,000	$13,700,000	$27,689,000	($150,000)	$13,839,000	
Fish and Wildlife	$2,496,000	$4,974,235	$7,470,235	$248,000	$2,744,000	
Health	$3,371,000	$263,693	$3,634,693		$3,371,000	
Natural Resources	$1,014,000	$80,000	$1,094,000	$80,000	$1,094,000	
Puget Sound Action Team	$4,109,000	$1,300,000	$5,409,000		$4,109,000	
State Parks	$189,000		$189,000		$189,000	$525,000
Transportation						$63,964,000
University of Washington	$443,261	$300,000	$743,261		$443,261	
Washington State University	$331,000	$346,000	$677,000		$331,000	
Total	$27,462,261	$20,963,928	$48,426,189	($652,000)	$26,810,261	$64,489,000

Actions to Protect and Restore Puget Sound During the 1999-2001 Biennium

About the Actions

The following sections describe actions that federal, tribal, state and local governments will take to protect and restore Puget Sound during the 1999-2001 biennium. The sections — except Aquatic Nuisance Species and Washington/British Columbia Cooperation — correspond with programs in the *Puget Sound Water Quality Management Plan*.

The first page of each section includes an introduction that describes goals and strategies in the Management Plan (if applicable), background and trends, highlights of actions to be taken during the 1999-2001 biennium and the final budget for state actions.

Federal, tribal, state and local governments submitted the actions on the following pages. Each action includes an anticipated outcome or result. In some cases, the Action Team is recommending action throughout the basin (soundwide) by cities, counties and health districts.

Salmon: A check indicates that the project is designed primarily to protect and restore salmon habitat.

Budget Code: This column is used only for state agency actions and indicates the budget category that supports the action. Budget categories and related amounts and fund sources are listed in Table 3 at the end of the work plan. Entries show the agency initials followed by a number, such as DFW-17 for the Department of Fish and Wildlife's budget item number 17. A zero after the agency initials indicates that the budget for the action is not included in this work plan.

PS Plan Element: Most entries in this column reference programs and elements in the *Puget Sound Water Quality Management Plan*. In some cases, the program element is shown as a "0," as in "SP-0." This indicates that the action is not specifically mentioned in the Management Plan but is consistent with program goals or strategies.

Guide to program abbreviations:

AG	Agricultural Practices
ANS	Aquatic Nuisance Species
EM	Estuary Management & Plan Implementation
EPI	Education & Public Involvement
FP	Forestry Practices
H	Habitat Protection
HHW	Household Hazardous Waste
L	Laboratory Support
MB	Marinas & Recreational Boating
M	Monitoring
NP	Nonpoint Pollution
OS	On-Site Sewage
P	Municipal & Industrial Discharges
R	Research
S	Contaminated Sediments
SF	Shellfish Protection
SP	Spills Prevention & Response
SW	Stormwater and Combined Sewer Overflows
WB	Washington/British Columbia Cooperation
W	Wetlands Protection
WP	Local Watershed Plans

Nonpoint: A check indicates that the project originates from the planning process described in Chapter 400-12 WAC.

Priority: A check indicates that the project responds to one or more of the Action Team's priorities for the 1999-2001 biennium (see page 2.)

	Priority	Nonpoint	Salmon	Budget Code	PS Plan Element	Action ID
	☑	☐	☑	DOE-08	W-2	635
etlands s are ned problems	☑	☐	☑	DOE-08	W-7	634
possible homish Basins.	☑	☐	☑	DOE-08	W-8	633

Action ID: Numbers in this column will be used by the Action Team to track and report on actions. Some proposed actions that were not funded have been deleted. Therefore, there are some missing numbers.

Puget Sound Management Plan Goal

- Provide adequate management, funding and enforcement to implement the *Puget Sound Water Quality Management Plan.*

Strategies for Achieving Goal

- Continue the existing Puget Sound Estuary Program management structure.
- Obtain funding for the program.
- Require accountability by implementing agencies.
- Provide strong enforcement at all levels of government.
- Ensure federal activities are consistent with the *Puget Sound Water Quality Management Plan.*

Background

The *Puget Sound Water Quality Management Plan* provides the framework for managing and protecting Puget Sound. It coordinates the roles and responsibilities of federal, tribal, state and local governments and encourages the involvement of businesses, individuals and organizations. Work plans – based on the Puget Sound Management Plan – are developed every two years and identify priorities for action. The work plans contain federal, tribal, state and local government actions to protect the Sound and its resources. The Puget Sound Water Quality Action Team and Puget Sound Council develop the work plans and the Council oversees their implementation. The first work plan was prepared and finalized in July 1997 for the 1997-1999 Biennium.

Adequate funding is crucial for protecting Puget Sound. The Action Team advocates full funding for existing federal and state programs that provide grants and loans to protect the Sound. The Action Team also advocates enhancing the authority of local jurisdictions to raise their own funds.

The *Puget Sound Water Quality Management Plan* is also the state's Comprehensive Conservation and Management Plan (CCMP) for the Puget Sound Estuary Program. The CCMP is authorized by the federal Clean Water Act. As a CCMP, the plan addresses federal actions affecting Puget Sound. Under the Clean Water Act, the Puget Sound CCMP is supported, in part, by federal technical and financial assistance.

Highlights of 1999-2001 Actions

- The Action Team and Puget Sound Council will coordinate implementation of the *1999-2001 Puget Sound Water Quality Work Plan.*
- Agencies that administer grant and loan programs will give priority, to the extent possible, to actions identified in this work plan.
- The Action Team will develop benchmarks and goals for performance measures. The Action Team support staff will update the Puget Sound performance measures report.
- The Action Team and Puget Sound Council will prepare and distribute the 2001-2003 work plan.
- The Action Team and Puget Sound Council will track progress on implementing work plans.
- The Action Team and Puget Sound Council will update the *Puget Sound Water Quality Management Plan.*

1999-2001 Budget for State Actions

Total Provisoed Funding	$1,391,452
Total Other Funding	$0

ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
JOINT ACTIONS							
The Puget Sound Action Team recommends that agencies that administer grant and loan programs give priority, to the extent possible under statutory requirements, to actions identified in the work plan.	More funding will be made available for work plan activities as Action Team support staff work with representatives of state and federal agencies to assist and advise them on how to distribute available funds for this purpose.	☑	☑	☑	PSAT-01	EM-4	0
PUGET SOUND WATER QUALITY ACTION TEAM							
Coordinate implementation of the work plan.	Implementers will understand relationships among work plan programs and related programs. The Action Team, Puget Sound Council and other groups will meet to oversee implementation.	☑	☐	☑	PSAT-01	EM-8	2
Prepare the "2001-2003 Puget Sound Water Quality Work Plan". Evaluate successes and shortcomings of the 1999-2001 work plan. Identify priorities and critical next steps. Involve the Action Team and Council in key decisions. Involve governments, stakeholders and the public in preparing the plan and coordinate planning with other relevant initiatives.	The "2001-2003 Puget Sound Water Quality Work Plan" will be prepared and submitted to the governor and legislature.	☑	☐	☑	PSAT-01	EM-8	3
Develop benchmarks and goals for the Action Team's performance measures. Update performance measures annually.	The legislature and public will be better informed about short and long-term performance in protecting and restoring Puget Sound. The Action Team will be able to more effectively target and improve programs to protect and restore Puget Sound.	☑	☐	☑	PSAT-01	EM-8	4
Review progress and produce annual progress reports on implementing the work plan. Provide feedback to those implementing the work plan. (These tasks are assigned to the Puget Sound Council.)	Implementation of the work plan will be improved.	☑	☐	☑	PSAT-01	EM-8	5
Update the "1994 Puget Sound Water Quality Management Plan", which provides the long-term strategy for protecting the Sound.	Goals, strategies and elements will be reviewed and revised in a timely manner. The Puget Sound Management Plan will be coordinated with biennial work plans and other relevant initiatives. Governments, stakeholders and the public will be involved in the update.	☑	☐	☑	PSAT-01	EM-0	6
Support development of state and federal environmental policies, programs and regulations that protect Puget Sound.	Policies, programs and regulations will be improved to better protect Puget Sound and its biological resources.	☑	☐	☑	PSAT-04	EM-0	7
Coordinate a discussion of ways to create a funding vehicle to help local governments implement the Puget Sound Management Plan. This activity will complement initiatives on funding led by the Government Council on Natural Resources.	Options for funding will be developed.	☑	☐	☑	PSAT-01	EM-4	8

Puget Sound Management Plan Goals

- Establish and coordinate federal, tribal, state and local programs to protect wetlands and habitat.
- In the short term, achieve no net loss of wetlands function and acreage and of aquatic, riparian and other habitat important to water quality protection.
- In the long term, achieve a measurable net gain of wetlands function and acreage and a net gain of aquatic and riparian habitat and other habitat important to water quality protection.

Strategies for Achieving Goals

- Act aggressively and use existing mandates to protect aquatic systems and habitat.
- Coordinate government actions to protect and manage fish and wildlife habitat by providing integrated solutions for habitat protection at the watershed level.
- Preserve wetlands through non-regulatory methods.
- Develop and implement local programs to protect wetlands and a program to protect wetlands on state-owned uplands and aquatic lands.
- Develop and implement a long-range wetland education strategy.
- Inventory wetlands to establish an accurate data base.
- Restore wetlands.
- Encourage interagency coordination.

Background and Trends

Over 175 species of fish and wildlife feed and breed in wetlands. At least one-third of Washington's threatened and endangered species require healthy wetlands for survival. Since the arrival of settlers in the Puget Sound basin, 70 percent of tidally influenced wetlands have been lost, largely due to urbanization, port development, industrial use, dredging and filling.

The declining condition of Puget Sound's habitat is reflected in the 1998 proposed listing of two species of salmon in Puget Sound as threatened under the Endangered Species Act. Other proposed listings could follow. Human activities and non-native plants continue to degrade wetlands along the Sound's shoreline and rivers. The invasive marsh grass *Spartina* already infests some 800 acres of intertidal habitat in Puget Sound.

The Puget Sound/Georgia Basin International Task Force work groups have developed recommendations to manage aquatic nuisance species; reduce the loss of nearshore habitat; and establish marine protected areas in the shared waters of British Columbia and Washington.

One work group found that local regulations for shoreline development are outdated and do not adequately protect nearshore habitat or manage the cumulative effects of shoreline development.

Highlights of 1999-2001 Actions

- Federal agencies will help restore and protect intertidal habitats and freshwater wetlands and restore species listed under the Endangered Species Act.
- The U.S. Army Corps of Engineers will restore intertidal, off-channel, freshwater and estuarine habitats.
- Many tribal, state and local governments and groups will identify and remove barriers to fish habitat.
- The Department of Fish and Wildlife will identify and integrate fisheries concerns into major marine project proposals.
- Tribal, state and local governments will work together to improve habitat at the watershed level.
- Tribal, state and local governments and interested groups will identify habitat needs and solutions to protect and maintain healthy salmon populations.
- The Department of Transportation will run its fish barrier removal program and implement the Advanced Environmental Mitigation Revolving Account for mitigating projects in advance of highway construction.

1999-2001 Budget for State Actions

Total Provisoed Funding	$2,055,344
Total Other Funding	$19,028,000

See page 8 for key.

STATE AND FEDERAL ACTIONS	OUTCOMES	Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
CONSERVATION COMMISSION							
Provide assistance to the 12 conservation districts in Puget Sound as part of the Commission's statewide salmon habitat enhancement program.	Conservation districts will help private landowners protect and enhance salmon habitat.	☑	☐	☑	CC-01	H-3.1	11
DEPARTMENT OF COMMUNITY TRADE & ECONOMIC DEVELOPMENT							
Provide technical assistance to protect wetlands and aquatic habitat and minimize runoff and flooding for local governments planning under the Growth Management Act.	Information on land-use practices that affect water quality will be provided to local governments to help them complete or amend local plans and regulations.	☑	☐	☑	CTED-01	W-2	12
DEPARTMENT OF FISH AND WILDLIFE							
Provide technical assistance to local jurisdictions on water quality, marine development and stormwater management.	Local governments will receive help on the following issues: assistance with Hydraulic Project Approvals; training on the Stream Bank Protection Guidance Manual; early identification of fish and wildlife concerns about proposals for major marine projects; protection of water and sediment quality and habitat issues related to aquatic toxicants and pesticides; and implementation of watershed plans developed under Chapter 400-12 WAC (the Nonpoint Rule).	☑	☐	☑	DFW-03	H-0	14
Provide technical assistance and policy support to protect, inventory, preserve, manage and restore wetlands. Support training and testing on delineation, mapping, inventory and functional analyses methods. Provide mapping, inventory, protection and restoration planning for Fish and Wildlife wetlands.	Development of wetland assessment and management tools will continue, including a wetlands document under the priority habitats and species program; model sensitive areas ordinances for wetlands and riparian areas; methods to analyze wetland functions; mitigation banking; and indicators of wetland health.	☑	☐	☑	DFW-04	W-0	15
Provide locally based technical assistance on water quality and habitat. Support consideration of fish and wildlife needs in local planning processes and actions. Assist the development and implementation of watershed plans (including the Chapter 400-12 WAC plans), growth management ordinances, shoreline master programs, and related salmon recovery activities and projects.	Coordination between Fish and Wildlife and local planning staffs and action groups will be improved. Fish and Wildlife staff will participate in local meetings, hearings and actions and support implementation of local watershed plans. Regional support activities will be better coordinated with local and soundwide actions (stormwater, water quality, wetlands, fish passage). Technical support will be provided for salmon recovery planning.	☑	☑	☑	DFW-05	H-0	16
Provide locally based technical assistance for habitat recovery and conservation planning related to proposed listings of salmon under the Endangered Species Act (ESA). Coordinate and support local lead groups (counties, cities, ports and action groups) in developing and implementing plans for ESA-related salmon habitat recovery efforts.	Support will be provided to develop and negotiate local habitat plans for depressed, threatened or endangered salmon stocks. Technical and policy support and guidance will lead to timely and appropriate local responses to Chapter 246, Laws of 1998 (the Salmon Recovery Act) and the Endangered Species Act.	☑	☐	☑	DFW-06	H-0	17

STATE AND FEDERAL ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
DEPARTMENT OF FISH AND WILDLIFE							
Develop and implement marine protected areas (MPAs) or marine sanctuaries. Evaluate potential sites and criteria for regional management plans and provide evaluation to determine success. Provide public outreach and develop partnerships with local jurisdictions, tribes and others to establish and manage these sites at the local level.	Local marine protected areas and regional management plans will be developed. Public understanding and support for marine protected areas, the educational and non-consumptive use opportunities they provide and opportunities to rebuild marine stocks will be enhanced. Local involvement, ownership and direct actions toward rebuilding and protecting depressed marine fish stocks will be facilitated.	☑	☐	☐	DFW-10	H-0	20
Coordinate with public ports, local jurisdictions and other development groups on major marine projects. Provide an agency lead person for marine and estuarine habitat policy and technical concerns.	Concerns about fish and wildlife will be integrated into planning for major marine projects. Development proposals will be integrated with baywide, watershed, growth management and other comprehensive planning efforts. Enhanced permitting assistance and protection will be provided for critical habitats, salmon and other marine resources.	☑	☐	☑	DFW-13	H-0	22
Map nearshore and offshore subtidal habitat deeper than 30 feet and use the maps to make decisions on planning for marine protected areas. Use the maps to provide information on habitats and ecosystems to harvest managers. (Agency budget enhancement requested.)	Phase 1 - Maps of one to three high-priority areas will be produced. Phase 2 - Subtidal maps of the entire Sound will be produced. Phase 3 - Improved information on subtidal habitats will be available for use in planning and managing these areas (including designation of marine protected areas).	☑	☐	☐	DFW-19	H-3	26
Develop, distribute and implement a comprehensive set of guidelines to protect stream and marine corridors, and standards for restoring salmonid habitat. Components will build on Fish and Wildlife's current Integrated Streambank Protection Guidelines and include additional specific guidance, technical assistance and training for state and local agencies and others.	Guidelines for consistent habitat protection and restoration will be available and distributed through workshops, training sessions, outreach programs and other educational materials.	☑	☐	☑	DFW-24	H-0	27
DEPARTMENT OF NATURAL RESOURCES							
Continue site visits by regional personnel and volunteers to Daily Prairie, Kings Lake Bog, Snoqualmie Bog and Bald Hills Lake. Increase the level of hydrologic monitoring at these sites and assess wetland functions (using Ecology's Wetlands Functions and Values Assessment Protocol).	Wetland sites in the Puget Sound trough will be protected.	☑	☐	☑	DNR-02	W-1	28

STATE AND FEDERAL ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
DEPARTMENT OF ECOLOGY							
Facilitate the restoration of degraded wetlands by implementing a watershed-based program to restore wetlands. Implement and refine the program in the Snohomish basin. Continue to maximize restoration in the Stillaguamish, Nooksack and Snohomish basins. Continue to work with other entities to identify where the program can be applied. Continue to assist Snohomish County with the Spencer Island and Drainage District 6 pilot restoration and monitoring projects.	A plan will be developed to restore wetlands in the Snohomish basin. Wetlands will be restored when possible in the Stilliguamish, Nooksack and Snohomish basins.	☑	☐	☑	DOE-08	W-8	29
Facilitate better stewardship of wetlands by developing and updating technical assistance materials and providing technical assistance to local governments on non-regulatory protection of wetlands. Provide assistance on the use of stewardship tools to protect salmon. Administer grants and participate in site-specific preservation activities.	Local governments will be more aware of stewardship tools to protect wetlands. Local preservation programs will be designed to more effectively address watershed problems. Key wetland sites will be preserved.	☑	☐	☑	DOE-08	W-7	30
Assist local governments in planning and administering wetlands protection programs.	Local government protection of wetlands will be improved.	☑	☐	☑	DOE-08	W-2	31
WASHINGTON STATE DEPARTMENT OF TRANSPORTATION							
Monitor wetland sites that were developed to mitigate the impacts of transportation projects.	Monitoring data will be used to ensure permit compliance. Monitoring results will be incorporated into the design and implementation of new wetland mitigation projects to improve site performance.	☑	☐	☑	DOT-03	W-0	33
Fund and operate the Advanced Environmental Mitigation Revolving Account. An additional enhancement is required to fully capitalize the account beyond the 1998 level. Enhancements will be applied to project implementation. The account provides funding for mitigation projects prior to construction of transportation projects. It also supports the department's participation in development of a rule on wetland banking, coordination with local jurisdictions on bank sites and incorporating salmonid habitat needs and concerns in bank-site placement and design.	The potential will be increased for partnerships between the department and basin stakeholders to implement restoration projects. Mitigation projects will be implemented in advance of the impacts of construction. The department will be represented in development of rules on wetland banking. A banking instrument template for mitigation bank credits, debits, purchases and balances will be established. The public will be educated about the department's banking program.	☑	☐	☑	DOT-03	W-0	34
Implement watershed-based strategies for environmental mitigation, flood management and compliance with environmental permits. Provide support for the department's Snohomish basin pilot project.	Partnerships with local stakeholders will be established to integrate the department's mitigation needs into watershed recovery strategies. Strategies and guidance to reduce flood hazards and provide emergency response to floods will be developed to guide the department's protection of salmon.	☑	☐	☑	DOT-04	H-0	35

STATE AND FEDERAL ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
WASHINGTON STATE DEPARTMENT OF TRANSPORTATION							
Support administration and standardized design for the department's barrier removal projects and grant programs. Participate on the Interagency Review Team for Salmon Restoration. Implement projects to remove barriers to fish passage identified in an existing inventory prepared by the Department of Fish and Wildlife. Accelerate implementation of barrier removal projects.	Salmon recovery will be helped by removing barriers to fish passage associated with state roads. A statewide database will be developed to track barriers to fish passage. Technical assistance on fish passage projects will be provided to local entities and department regions. The department will be involved in the development of critical path methodologies required by Chapter 246, Laws of 1998 (the Salmon Recovery Act).	☑	☐	☑	DOT-04	H-0	36
Provide technical support for project coordination and recovery planning. Transportation's response strategies involve close coordination with the department's regions, ferries, rail, TransAid, Operations & Design, and the Environmental Affairs Office to address project delivery in response to proposed listings under the Endangered Species Act. Develop a pilot mapping and field identification system for roadside areas which contain threatened and endangered salmon, animals and plants; sensitive groundwater recharge areas; public water supplies; and other sensitive areas.	Projects and activities that could affect listed salmon will be identified and evaluated. With stakeholder input, standard measures will be developed to avoid or minimize impacts. The department will negotiate with state and federal agencies for acceptance of ESA compliance strategies. Department employees will be trained about ESA issues, responsibilities and procedures. The department will participate in forums for recovery planning and regulatory changes.	☑	☐	☑	DOT-04	H-0	37
UNIVERSITY OF WASHINGTON, WASHINGTON SEA GRANT PROGRAM							
Provide technical assistance, education and information for groups working to protect and restore salmonids. Actions will include: working with the Washington Coastal and Shorelines Planners Group to develop a workshop covering habitat, salmon and Endangered Species Act (ESA) issues; and working with the Government Council on Natural Resources to develop educational materials and workshops on habitat, salmon and ESA issues.	Community members and local decision-makers will receive information necessary to improve and protect their local waterways for salmonids.	☑	☐	☑	UW-01	H-2	38
U.S. ARMY CORPS OF ENGINEERS							
Modify an existing weir on the Sammamish River and plant riparian vegetation along the river.	Fish passage on the Sammamish River will be improved and additional riparian vegetation will support fish and wildlife habitat and control erosion.	☑	☐	☑		H-0	39
Restore a channelized stream to more natural conditions and remove fill from a floodplain.	Better fish habitat will be provided in an existing channel. The floodplain and riparian area will be restored to benefit fish and wildlife.	☑	☐	☑		H-0	40
Construct a $35 million facility to allow fish to pass downstream of the Howard Hansen Dam in the Green River. Restore in-stream habitat and construct off-channel habitat.	Construction will begin in 2001. Operation will begin in 2004.	☑	☐	☑		H-0	41

STATE AND FEDERAL ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
U.S. ARMY CORPS OF ENGINEERS							
In partnership with others, provide cost-effective training on delineation of wetlands to government personnel.	Affordable training of personnel from all levels of government will lead to improved resource management.	☑	☐	☑		W-0	42
Create wetlands and enhance fish and wildlife habitat adjacent to the mouth of Thornton Creek in Lake Washington.	Wetland habitat and rearing habitat for salmonids will be increased.	☑	☐	☑		H-0	43
Using geographical information system (GIS) software, map existing information on soils, habitat types, topography, county zoning, waterways, drainages, endangered species, cultural resources, wetland systems, and actions for Skagit County that are permitted by the Corps.	The Corps will be able to identify possible environmental impacts of projects, track cumulative and secondary impacts of Corps-authorized projects and identify key restoration areas in the watershed and county.	☑	☐	☑		H-0	44
Restore estuarine and blind channel habitat in the lower Stillaguamish River.	Fish will have better access to the areas. Water quality (dissolved oxygen and temperature) will be improved.	☑	☐	☑		H-0	45
Remove levees and fish barriers in Deepwater Slough, South Fork and Skagit River.	Approximately 200 acres of freshwater intertidal habitat will be restored and fish will have better access to the area.	☑	☐	☑		H-0	46
Provide additional large woody debris in two side channels of the Green River.	The complexity of the side channel stream will increase by adding more pools, thus increasing use by fish.	☑	☐	☑		H-0	47
Restore intertidal habitat and daylight Hamm Creek back to the Duwamish River.	Intertidal habitat and its primary productivity will be increased and passage for fish will be improved.	☑	☐	☑		H-0	49
Restore off-channel habitat on a slough of the Green River.	Habitat for smolt and water quality (dissolved oxygen and temperature) will improve.	☑	☐	☑		H-0	50
Restore one-half acre of intertidal habitat in the Duwamish Waterway.	Fish and wildlife habitat in the Duwamish Waterway will be improved.	☑	☐	☑		H-0	51
U.S. ENVIRONMENTAL PROTECTION AGENCY							
Continue to support identification of wetlands and planning to protect and restore them. Work within the interagency Technical Oversight Committee to develop ecologically sound mitigation banking.	A technically sound approach will be applied to mitigation banking to address or mitigate the loss of wetlands and nearshore habitat.	☑	☐	☑		W-0	52
Provide technical assistance and funding for activities that protect wetlands.	Wetlands will be better protected.	☑	☐	☑		W-5	53
Work with the Department of Ecology and other agencies to restore specific wetland sites.	Wetland sites will be restored.	☑	☐	☑		W-8.1	54
Use EPA funding sources to assist tribes and local communities in the Puget Sound basin developing aquatic habitat protection plans.	Model plans will be developed to address land uses impacting, or potentially impacting, aquatic resources in the Puget Sound basin.	☑	☐	☑		H-0	55

STATE AND FEDERAL ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
U.S. ENVIRONMENTAL PROTECTION AGENCY							
Work with the state Department of Transportation and appropriate Washington natural resource agencies to develop a mitigation bank for tidal wetland affected by work being proposed in and along the tidal nearshore habitat.	A wetland mitigation methodology will be developed that could result in a net increase in nearshore habitat.	☑	☐	☑		W-0	56
Coordinate with the U.S. Army Corps of Engineers in the development of a general permit for specific work in the Puget Sound basin that has been determined to have more than a minimal impact to nearshore habitat (e.g., bulkheading, minor dredging, dock construction in identified environmentally sensitive areas).	Regulatory control will be strengthened to prevent the cumulative loss of nearshore habitat.	☑	☐	☑		H-0	57
U.S. FISH & WILDLIFE SERVICE							
Provide funds and technical assistance to protect and restore species listed as threatened by the federal government and/or species of concern.	The status of federally listed species and other federal trust resources (primarily migratory birds and anadromous fish) will be improved.	☑	☐	☐		H-0	58
Provide technical assistance and cost-share funding to support protection and restoration of wetlands and other nearshore habitat.	There will be net increases in the acreage and function of coastal wetland habitats and protection of existing high-quality habitat areas.	☑	☐	☑		W-8	59
Restore native vegetation, with a focus on riparian areas, and reduce sediment inputs into streams and rivers.	Steam habitat will be restored and enhanced and watershed functions restored and water quality improved.	☑	☐	☑		H-0	60
Correct blockages to fish passage.	Salmon, bull trout and steelhead habitat will be opened.	☑	☐	☑		H-0	61
U.S. GEOLOGICAL SURVEY							
Report on habitat conditions at about 20 sites on rivers and streams in the Puget Sound basin.	Information on habitat for fish in Puget Sound Basin rivers and streams will be improved.	☑	☐	☑		H-0	62

TRIBAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
JAMESTOWN S'KLALLAM TRIBE						
Remove log storage operation and restore wetlands and tidelands.	Water quality, salmon and shellfish habitat will be restored.	☑	☐	☑	H-0	65
Stabilize channels through engineered log jams.	Salmon habitat will be restored.	☑	☐	☑	H-0	66
Reduce water withdrawals through conservation.	Salmon habitat will be restored.	☑	☐	☑	H-0	67
Design and permit restoration projects.	Salmon habitat will be restored.	☑	☐	☑	H-0	68
Educate the public about salmon and the Endangered Species Act.	Salmon stocks and habitat will be restored.	☑	☐	☑	H-0	69
Complete model and analysis of sediment transport.	A basis to restore fish and shellfish habitat will be established.	☑	☐	☑	H-0	70
LUMMI NATION						
Restore native vegetation in 50 acres of riparian buffer along the Nooksack River and tributary streams. Treat 150 acres of previously planted vegetation to promote vegetation growth.	Restored buffers will help lower water temperatures while stabilizing the banks, silt deposition areas, accumulation of woody debris, and vegetative cover for salmonids and other fish and wildlife.	☑	☐	☑	H-0	71
Remove or storm-proof 40 miles of logging roads.	Sediment in salmon-bearing streams and rivers from roads will be reduced and a more natural and stable hydrology will be restored to forested slopes.	☑	☐	☑	H-0	72
Install five to 15 historic-scale log jams along one mile of prime chinook spawning ground in the South Fork Nooksack River.	The rate of river migration and incision will be reduced, protecting massively eroding banks and riparian buffers, creating pool habitat and cover, and providing additional sediment storage in the upper watershed.	☑	☐	☑	H-0	73
Restore 3,000 feet of off-channel spawning, rearing and refugia habitat.	Salmon recovery efforts will be assisted through habitat restoration.	☑	☐	☑	H-0	74
Assess up to 3,000 acres of estuary and wetlands habitat for potential restoration through a formal environmental impact statement process.	A habitat assessment will be completed.	☑	☐	☑	H-0	75

TRIBAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
SQUAXIN ISLAND TRIBE						
Assess conditions in bays and watersheds in the tribe's Usual and Accustomed areas in the south Sound in order to better understand threats to its natural resource base of salmon and shellfish. Conduct a literature search to evaluate all available information on marine and freshwater quality and habitat issues in a prioritized list of watersheds. Data will be represented in GIS format and a library of watershed resources and customized maps of the assessment area will be developed.	Salmon and shellfish resources will be protected.	☑	☐	☑	H-0	76
Identify factors that limit production of shellfish and salmon in key watersheds; focus on current threats as well as past actions identified in watershed action plans; and develop new strategies if they are necessary.	Managers will be able to think more critically about how to tackle resource problems in specific watersheds.	☑	☐	☑	H-0	77
Develop spatial and computer models to establish links between human activities and conditions in marine and freshwater environments.	Project planners will have information on where resources are best directed to protect and restore salmon and shellfish resources.	☑	☐	☑	H-0	78
STILLAQUAMISH TRIBE						
Continue to locate and repair fish blockages in the Stillaquamish watershed.	Fish blockages will be replaced.	☑	☐	☑	H-0	79
Work cooperatively with the University of Washington, Tulalip Tribes, Snohomish County and Department of Ecology to place engineered log jams in the North Fork Stillaguamish River to create fish habitat, stabilize the streambank and enhance channel complexity.	Habitat will be created for rearing and holding fish during migration. Streambanks will be stabilized and channel complexity will be improved.	☑	☐	☑	H-0	80
Develop a prioritized list of habitat restoration projects and implement the top ranking ones.	Fish habitat and water quality will be improved.	☑	☐	☐	H-0	81
Reduce sediment inputs to Deer Creek and restore fish habitat. The project will be designed to speed up the recovery of large conifer species in the riparian zone of flood plains dominated by alder.	Alder-dominated riparian zone will be restored to a conifer-dominated one, providing shade and large woody debris for fish.	☑	☐	☑	H-0	82
TULALIP TRIBE						
Purchase riparian zones and replant them with native vegetation.	Riparian zones in agricultural areas will be rebuilt where none currently exist or where minimal vegetation is left.	☑	☐	☑	H-0	83
Develop a method to integrate the Incremental Flow In-stream Methodology with watershed analysis.	A method will be developed to determine adequate in-stream flow and better manage riparian habitat in specific watersheds.	☑	☐	☑	H-0	84

TRIBAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
Fund five new and/or recently decommissioned U.S. Geological Survey gauging stations for 10 years.	Better streamflow information will be available to assess needs for fish habitat and streamflow.	☑	☐	☑	H-0	85
Restore land that is currently diked for agriculture and/or dairy cattle back to estuarine wetlands. Remove the tide gate in Allen Creek.	Three hundred acres of wetlands will be restored and available for rearing of juvenile salmon.	☑	☐	☑	H-0	86
Gather information on the use of estuarine and mainstream habitat by juvenile salmon at different life stages, including distribution, life history and age class.	The tribe will have a better understanding of the habitat needed by juvenile salmon..	☑	☐	☑	H-0	87

See page 8 for key.

LOCAL GOVERNMENT ACTIONS	OUTCOMES	Priority	Non-point	Salmon	PS Plan Element	Action ID
SOUNDWIDE						
THE PUGET SOUND ACTION TEAM RECOMMENDS THAT:						
All local jurisdictions should continue to protect wetlands and aquatic habitats through comprehensive land-use planning, preservation, restoration, regulation, education and program evaluation. Local comprehensive plans should be designed to protect wetlands and habitat. Local development regulations should contain the following basic elements consistent with the Department of Ecology's model ordinance: * Goal of no-net-loss of wetland acreage and function * Definition of regulated activities * Wetland classification scheme * Definition of regulated wetlands * Method of categorizing wetlands * Wetland buffers and setbacks * Requirement that wetland impacts be unavoidable or necessary * Requirement that developments minimize wetland impacts * Requirement for compensatory mitigation, with specified replacement ratios Local jurisdictions should: * Provide incentives for landowners to protect wetlands, stream corridors and nearshore habitat. * Update and re-adopt local shoreline master programs to minimize harm to nearshore and marine resources by meeting new standards being developed by Ecology. * Maintain and improve wetland inventories and stream classifications to recognize the functions and values of these areas and protect them from incompatible activities. Conservation districts should continue to help landowners protect and restore wetlands and aquatic habitats, particularly where those efforts increase access to critical habitats for fish.	There will be no net loss of wetlands acreage and function in the Puget Sound basin.	☑	☐	☑	W-2	90

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
HOOD CANAL COORDINATING COUNCIL (JEFFERSON, KITSAP AND MASON COUNTIES AND SKOKOMISH AND PORT GAMBLE S'KLALLAM TRIBES)						
HOOD CANAL COORDINATING COUNCIL						
Collect, evaluate, update and distribute data and information about ongoing programs and projects to improve water quality and salmon habitat.	Data on water quality and habitat in the Hood Canal watershed will be updated and made available in a single database. Criteria for ranking actions to protect and improve salmon habitat will be determined. The shellfish-finfish report will be updated.	☑	☐	☑	H-0	91
Lead efforts to protect and recover salmon runs in the Hood Canal watershed. Participate in the development of strategies to restore habitat as part of the Summer Chum Conservation Initiative. Facilitate changes to local land-use policies to better protect habitat for salmon.	Salmon habitat will be protected and restored.	☑	☐	☑	H-0	92
CLALLAM COUNTY						
CLALLAM COUNTY						
Expand the Dungeness River Schoolhouse Bridge.	Salmon habitat will be enhanced and estuary functions will improve..	☑	☐	☑	H-0	93
Reintroduce chinook to Morse Creek.	Chinook will be restored to the watershed.	☑	☐	☑	H-0	94
Construct acclimation ponds for spring chinook fry as part of the reintroduction of the species to Morse Creek.	Construction of the ponds will be completed.	☑	☐	☑	H-0	95
Complete projects to pull back dikes along the Dungeness River.	Salmon habitat will be enhanced and the channel bed will be stabilized.	☑	☐	☑	H-0	96
Complete design and scoping for the restoration of the Dungeness River delta and estuary. Reconfigure the Dungeness Levee Project.	Salmon habitat will be enhanced.	☑	☐	☑	H-0	97
Construct large woody debris structures at several sites.	Salmon habitat will be enhanced and the river restored to increase its natural function.	☑	☐	☑	H-0	98
Replace three culverts along Bear Creek.	Access will be provided to close to a mile of habitat.	☑	☐	☑	H-0	99

See page 8 for key.

LOCAL GOVERNMENT ACTIONS	OUTCOMES	Priority	Non-point	Salmon	PS Plan Element	Action ID
PORT ANGELES						
Continue to work with the Washington Department of Fish and Wildlife and local groups to determine the feasibility of building and operating a fish pond on Morse Creek to imprint chinook salmon fry from the Dungeness River hatchery.	The run of chinook salmon in Morse Creek will be restored and enhanced.	☑	☐	☑	H-0	100
Continue to work with the Lower Elwha Klallam Tribe and the local Rotary Club to restore and enhance salmon habitat between the recently completed Valley Creek Estuary project and State Route 101.	One mile of salmon habitat on Valley Creek will be restored.	☑	☐	☑	H-0	101
SEQUIM						
Replace two three-foot culverts on Bell Creek with more passable 16-foot wide-open, bottomless culverts (in cooperation with a Department of Transportation bypass project).	Salmon will have safer passage along the stream.	☑	☐	☑	H-0	102
Review the city's critical areas and stormwater ordinances and continue working with the Washington State Department of Fish and Wildlife, Jamestown S'Klallam Tribe and local groups to protect salmon and habitat.	Salmon will be protected as wetlands and critical areas are preserved when development occurs.	☑	☐	☑	H-0	103
In cooperation with the Clallam Conservation District, Sequim will provide technical assistance for projects on fish streams within the city and Clallam County.	Habitat will be improved for fish spawning and rearing.	☑	☐	☑	H-0	104
In cooperation with the Clallam Conservation District, Clallam County, Jamestown S'Klallam Tribe and other groups, provide assistance in applying for grants to restore streams and rivers in Clallam County.	Miles of stream habitat will be restored.	☑	☐	☑	H-0	105
Working with the Jamestown S'Klallam Tribe, identify and evaluate conditions for fish habitat in the Dungeness Valley Watershed (Bell Creek area). Develop a plan to remove significant barriers to fish.	As barriers are removed or redesigned, fish will have safer passage along the stream.	☑	☐	☑	H-0	106
CLALLAM CONSERVATION DISTRICT						
Improve the lower Dungeness watershed by planting in the riparian zone, fencing, providing for off-channel watering, removing invasive plants and artificial barriers to fish, placing large woody debris, allowing the stream channel to meander, removing sediment and improving in-stream habitat.	Improvements will be made and previous projects maintained to provide ten miles of good habitat for salmon.	☑	☐	☑	H-0	107

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Nonpoint	Salmon	PS Plan Element	Action ID
Make improvements along Morse Creek, including replacing large woody debris, allowing the stream channel to meander, improving in-stream habitat, planting in riparian areas, creating a side channel and improving the estuary.	Habitat for fish will be improved in lower Morse Creek increasing accessibility to high-quality rearing habitat in the entire watershed.	☑	☐	☑	H-0	108
Implement projects to improve habitat and access for salmon in the Pysht River, including improving in-stream habitat, replacing large woody debris, constructing log jams, carrying out stream typing, upgrading and removing culverts, decommissioning roads and improving road drainage.	Salmonid fish habitat will be improved.	☑	☐	☑	H-0	109

ISLAND COUNTY

ISLAND COUNTY

Inventory all county culverts on creeks that support fish (using Washington Department of Fish and Wildlife criteria), set priorities for removing barriers to fish, and develop a long-term strategy to replace culverts.	Culverts that impede fish passage will be identified and a strategy to remove them will be completed.	☑	☐	☑	H-0	110
Inventory the biological and physical features of the highest priority creeks that support fish and identify potential restoration projects.	A notebook will be produced for each creek. A list of priorities for restoration will be completed as well as a management strategy for each inventoried creek.	☑	☐	☑	H-3	111
Replace a culvert on Glendale Creek's lower reach with a channel accessible to fish and revegetate the channel to the extent possible, given the limited right-of-way.	The Glendale Beach Community will be protected from flooding. Nonpoint pollution in the creek will be reduced. Historic salmon runs will be re-established.	☑	☐	☑	H-0	112
Replace an existing fish passage barrier on Glendale Road Creek with a culvert designed for improved fish passage.	An estimated 1,333 lineal meters (4,000 feet) of habitat will be opened up along the creek.	☑	☐	☑	H-0	113
Replace an existing culvert under the Glendale/Holst Road with one designed for fish passage.	An estimated 2,891 lineal meters (8,673 feet) of creek habitat will be opened to salmon.	☑	☐	☑	H-0	114
Replace the Maxwelton and Erickson roads culverts that were severely damaged in 1996 with fish-friendly culverts.	An estimated 16.7 lineal meters (50 feet) of habitat will be opened. (Note: the county plans to work with local landowners to eliminate barriers along the rest of the tributary to increase this figure).	☑	☐	☑	H-0	115

See page 8 for key.

LOCAL GOVERNMENT ACTIONS	OUTCOMES	Priority	Non-point	Salmon	PS Plan Element	Action ID
Adopt the non-regulatory Natural Lands Plan. The plan provides financial incentives to individual property owners to preserve critical areas and agricultural and forestry activities. It also provides for restoration and protection of degraded wetlands and stream corridors and recommends various funding strategies to augment the county's capacity to acquire priority lands.	A program will be established to protect and manage significant natural lands in the county.	☑	☐	☑	H-0	116
Integrate the Wetland Compensation Program into the existing process for developing public works projects.	Wetlands within the county will be enhanced, restored and protected.	☑	☐	☑	W-0	117
OAK HARBOR						
With the Department of Ecology and U.S. Army Corps of Engineers, study hydrology for restoration of the Freund Marsh.	The function of the wetland will be improved.	☑	☐	☑	W-8	118
WHIDBEY ISLAND CONSERVATION DISTRICT						
Include protection of wetlands and aquatic habitat as priorities in developing farm plans.	Wetlands and aquatic habitat will be protected through the implementation of best management practices contained in the farm plans.	☑	☐	☑	H-0	119
JEFFERSON COUNTY						
JEFFERSON COUNTY						
Replace seven culverts.	More than five miles of salmon and steelhead habitat will be opened.	☑	☐	☑	H-0	120
Revise the critical areas ordinance, resource lands ordinance, stormwater ordinance, Shoreline Management Master Program and other ordinances so they comply with the Jefferson County Comprehensive Plan.	Local ordinances will be consistent with new requirements set in response to the Endangered Species Act. Critical habitat for fish and wildlife will be better protected.	☑	☐	☑	H-0	121
Improve baseline information about the shoreline as part of the revision to the Shoreline Management Master Program.	The database will be improved, which will lead to better decisions about land uses that affect fish and wildlife habitat.	☑	☐	☑	H-0	122
In conjunction with local, state and tribal governments, the Noxious Weed Board will work to prevent the invasion of new plants and to eradicate noxious weeds.	Sediments and blockages to fish will be reduced and stream flow and spawning habitat will be improved.	☑	☐	☑	H-0	123

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
PORT TOWNSEND						
Continue to participate in and take a leadership role in the Jefferson County Water Resource Council, as it educates the public and conducts environmental studies.	The public will be more aware of water issues. Salmon will be better protected, and groundwater and surface water better managed.	☑	☐	☑	H-0	124
JEFFERSON COUNTY CONSERVATION DISTRICT						
Provide educational, technical and financial assistance to landowners, community groups, government agencies and tribes to protect and restore habitat for fish, remove fish passage barriers, purchase conservation easements to riparian habitat, and prevent downgrades and closures of shellfish growing areas.	One mile of riparian habitat will be improved, 10 acres of replanted riparian buffers maintained, five culverts replaced, and 20 acres of riparian area conserved (through easements). Restricted shellfish beds in Quilcene Bay will be reopened.	☑	☐	☑	H-2	125
KING COUNTY						
KING COUNTY						
Facilitate and support the tri-county response to the proposed Endangered Species Act listing of chinook, including the identification of new regional funding sources for programs and projects and the recently completed Regional Needs Assessment.	Implementing new salmon recovery, water quality protection and flood and drainage hazard reduction programs and projects throughout the region will provide a coordinated effort to effectively respond to the proposed listing of chinook under the Endangered Species Act.	☑	☐	☑	H-0	126
Purchase private land in the Snoqualmie watershed containing habitat of high quality that is prone to significant flooding.	The function of stream and river channels in floodplains will be improved and competitive uses of habitat areas eliminated. Threats to public health and safety, and damage and costs associated with flooding will be reduced.	☑	☐	☑	H-0	127
Construct log jams in the headwaters canyon of Patterson Creek to create pools for fish and store sediments.	Additional habitat for spawning coho salmon will be created by stabilizing the streambed.	☑	☐	☑	H-0	128
Develop and implement best management practices in the Snoqualmie Watershed that allow fish-friendly maintenance of agricultural ditches.	The agricultural community will better understand the salmon's need for good habitat. Habitat will be improved. Agriculture in King County will remain viable and fish runs will be better protected.	☑	☐	☑	H-0	129
The Lake Washington/Cedar River Watershed Forum will organize the local cost-share for a set of capital improvements at the Ballard Locks to be built in November 1999.	Mortality and injury of juvenile salmonids passing through the Ballard Locks to Puget Sound will be reduced, resulting in a projected increase of 20 percent in adult salmon returning to the watershed.	☑	☐	☑	H-0	130

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
The Lake Washington/Cedar River Watershed Forum will continue to fund studies of the survival of juvenile sockeye salmon in Lake Washington (completed at the end of 1999).	Causes of decreased survival of juvenile sockeye salmon in Lake Washington will be identified and practical strategies recommended to increase their survival.	☑	☐	☑	H-0	131
Jurisdictions within the Sammamish watershed will protect and preserve habitat in key areas including Issaquah Creek/Lake Sammamish waterways and Paradise Valley (Upper Bear Creek) using acquisition, easements and tax incentives.	Approximately 1,400 acres of habitat will be protected. Public understanding of watershed issues will be increased. Jurisdictions will provide early response to requirements of the Endangered Species Act. Water quality in Lake Sammamish will be better protected.	☑	☐	☑	H-0	132
Jurisdictions within the Sammamish watershed will restore key habitat along the river, eliminate barriers to fish passage, increase available refuge, spawning and over-wintering habitat for fish, and improve water quality at locations including Bothell, Redmond, Woodinville, Kenmore and King County.	Habitat will be restored at four key sites, totaling over one mile of river bank and channel. Jurisdictions will provide early response to requirements of the Endangered Species Act. Water quality in the river will improve.	☑	☐	☑	H-0	133
AUBURN						
Purchase a 56-acre cattle farm that contains one-half mile of Mill Creek and approximately 20 acres of severely degraded wetlands. Remove cattle from contact with the salmon-bearing stream and restore and protect wetlands and streams.	Water quality and habitat for salmon and wildlife will be significantly improved and protected.	☑	☐	☑	H-0	134
Adopt and implement the Mill Creek Special Areas Management Plan in cooperation with the city of Kent and King County.	The streams and wetlands in the Mill Creek, Miller Slough and Midway Creek watersheds will be restored and protected.	☑	☐	☑	H-0	135
Participate in the Green/Duwamish Watershed Forum. Work with the U.S. Army Corps of Engineers to develop and implement the Green/Duwamish Ecosystem Habitat Restoration Study, which may include up to six major projects within the city's boundaries.	Activities to address water quality, flooding and protection of habitat will continue and be effectively coordinated. Both the quality and quantity of habitat will be enhanced.	☑	☐	☑	H-0	136
DES MOINES						
Daylight a major culvert at the Marine View Drive bridge that restricts the passage of salmon and sea-run cutthroat trout in Des Moines Creek.	Two miles of spawning habitat will be made available to salmon and trout.	☑	☐	☑	H-0	137
DUVALL						
Restore Cole Clemens Creek.	Salmon habitat will be preserved and enhanced.	☑	☐	☑	H-0	138

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
FEDERAL WAY						
Inventory and classify wetlands and streams according to functions and values.	Higher value wetlands will have larger buffers.	☑	☐	☑	W-2	139
Revise the environmentally sensitive areas ordinance. Classify wetlands in a three-tiered system with appropriate buffers.	The ordinance will be consistent with Ecology's model wetland ordinance.	☑	☐	☑	W-2	140
Complete two large restoration projects on Hylebos and Lakota creeks.	Salmon habitat will be improved through stream bank stabilization, placement of large woody debris and restoration of vegetation in the riparian zone.	☑	☐	☑	H-0	141
Continue to maintain completed stream habitat projects on Hylebos Creek and Joe's Creek.	Native vegetation will become established and salmonid habitat will be improved.	☑	☐	☑	H-0	142
ISSAQUAH						
Complete a project -- funded through the Sammamish Watershed Forum and involving staff from King County, the cities of Redmond, Issaquah, Bellevue, Woodinville and Bothell, and the Muckleshoot Tribe -- to establish protocols for volunteers to use to restore, maintain and monitor habitat. The project includes coordinated training on stewardship of habitat, restoration, maintenance and monitoring, and the development of a database to track volunteers and activities.	Common standards will be used to gather watershed data. Programs will be better coordinated and more effective. Residents in the watershed will be educated and involved in restoring and maintaining habitat. Volunteers will reach out to their peers and educate the community, providing for better understanding of watersheds and how the public can protect and improve water resources.	☑	☐	☑	H-0	143
KENT						
Develop a shallow infiltration system along the Cedar River to increase flow in Rock Creek during low-flow periods.	Water quality and stream volume to the entire reach of Rock Creek will be improved during spawning seasons.	☑	☐	☑	H-0	144
Install a shallow well near Mill Creek to provide cool, oxygenated water, thereby reducing water quality problems and improving fish habitat.	Stream temperatures during the summer months will be lowered and dissolved oxygen will increase. Additional stream reaches in Mill Creek will be suitable as fish habitat.	☑	☐	☑	H-0	145
Continue to plant a 300-acre site and install habitat elements for fish and wildlife.	A high-quality fish and wildlife area will be established along the Green River in a highly developed portion of the watershed.	☑	☐	☑	H-0	146
Adopt and implement the Mill Creek Special Areas Management Plan in cooperation with the city of Auburn and King County.	The streams and wetlands in the Mill Creek, Miller Slough and Midway Creek watersheds will be restored and protected.	☑	☐	☑	H-0	147

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
KIRKLAND						
Revise the sensitive areas ordinance in order to preserve and, where feasible, enhance the values and functions of each drainage basin within the city.	As future development occurs, the functions of minor lakes, streams, wetlands and buffers (e.g., conveying flood and stormwater, maintaining the quality of receiving waters, providing habitat for cutthroat trout, coho salmon and wildlife) will be preserved within each drainage basin.	☑	☐	☑	H-0	148
NORMANDY PARK						
Repair banks which are sloughing along Walker Creek.	Habitat will be restored along the entire length of the creek.	☑	☐	☑	H-0	149
Install in-stream structures to create pools along entire length of Miller Creek.	The pool-to-riffle ratio will be increased along the entire length of the creek.	☑	☐	☑	H-0	150
Restore and enhance the existing saltwater marsh on the Cove Community Club property at the mouth of Miller Creek.	Estuarine habitat in Miller Creek will be restored.	☑	☐	☐	H-0	151
Remove numerous upstream obstacles to fish passage on Miller Creek, such as the log jam at the 1st Avenue culvert and impassable culverts at 160th Street and Highway 509.	The amount of spawning habitat accessible to salmon will be tripled.	☑	☐	☑	H-0	152
Correct problems with siltation along the entire length of Miller Creek, adding clean gravel to the stream bed.	Spawning habitat will be restored along the entire length of the stream.	☑	☐	☑	H-0	153
Plant native species along the entire length of Walker Creek.	Vegetation in riparian zones will be restored and the quality of habitat improved.	☑	☐	☑	H-0	154
NORTH BEND						
Develop and fund a habitat protection plan.	The completed plan will address technical needs, legal authority and funding to protect and restore habitat areas.	☑	☐	☑	H-0	155
Update the city's growth management plan to respond to new growth projections, the Endangered Species Act and the need to control floods and protect habitat.	The growth management plan will be based on current population projections and include updated land-use policies.	☑	☐	☑	H-0	156
Study, select, fund and build enhancements to reduce flooding, protect water quality and protect habitat resources in the flood plain.	The flood plain will be stabilized and habitat better protected.	☑	☐	☑	H-0	157
Develop a habitat conservation plan that responds to the Endangered Species Act.	Protection of habitat will be improved.	☑	☐	☑	H-0	158

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
REDMOND						
Revise sensitive areas ordinance to improve protection of wetlands, streams, rivers and the associated riparian zone.	The protection and integrity of city's freshwater ecosystem will be improved.	☑	☐	☑	H-0	159
Continue capital improvement projects to restore degraded streams, rivers and wetlands.	Protection and integrity of the city's freshwater ecosystem will be improved.	☑	☐	☑	H-0	160
RENTON						
Participate in the Green/Duwamish watershed and Lake Washington/Cedar River watershed forums. Complete and begin implementing the Ecosystem Restoration Study for the Green/Duwamish watershed. Implement watershed forum priorities. Participate in developing plans for the recovery of chinook salmon in water resource inventory areas 8 and 9.	Habitat and salmon will be restored and protected.	☑	☑	☑	H-0	161
Implement the city's wetland mitigation bank program.	A total of 45 acres of primarily upland area will be converted to wetland to be used as a wetland bank site.	☑	☐	☑	W-0	162
Revise and consolidate the city's critical areas ordinance to improve protection of wetlands, streams, rivers and associated riparian habitat.	Improved protection of environmental resources will help the city comply with future federal regulations under Endangered Species Act and National Pollution Discharge Elimination System permits.	☑	☐	☑	H-0	163
Complete the acquisition of the Panther Creek wetland and seek to secure public ownership of other wetlands and open spaces that have environmental and recreational benefits.	Wetlands will be protected and will continue to provide natural water quality treatment, maintain natural flood storage, provide wildlife habitat and allow for recreational and educational opportunities.	☑	☐	☑	W-2	164
Complete construction of the Maplewood Creek Fish Channel Project and the implementation of other capital improvement projects to restore habitat in the city's streams, rivers and wetlands.	A fish passage will be restored and enhanced habitat for fisheries resources will be created. The Maplewood Fish Passage channel will create 22,000 square feet of new fish habitat and an additional 1,400 linear feet of new channel. Water quality will be improved by creating enhanced buffers along waterbodies.	☑	☐	☑	H-0	165
Complete the construction and conduct monitoring of the U.S. Army Corps of Engineers' Cedar River, Section 205, Flood Damage Reduction Project and associated mitigation projects.	Flooding on the Cedar River will be controlled and fisheries resources protected.	☑	☐	☑	H-0	166

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
SEATAC						
Working with King County, the Port of Seattle, and the city of Des Moines, implement the Des Moines Creek Basin Plan. Carry out capital improvement projects to rehabilitate salmon habitat in the urban stream system. Projects include constructing a regional stormwater facility, removing a blockage to salmon migration, and stabilizing and enhancing habitat.	Erosion of stream banks and channels and resulting sedimentation downstream will be controlled. The amount of habitat available for salmon spawning and rearing will be increased. In-stream water quality and nearshore habitat will be improved. The process to control stormwater quality and quantity will be planned, designed and conducted.	☑	☐	☑	H-0	167
SEATTLE						
Construct projects to improve water quality, enhance fisheries and benthic habitat, remove barriers to fish passage and control stormwater quantity. This will include retrofits of some existing drainage systems.	Stormwater will be reduced and be of better quality. Fish will have safer passage through streams, and benthic habitat will be better protected.	☑	☐	☑	H-0	168
Plan and implement projects to clean up contaminated sediments and restore habitat.	There will be a net gain in improved habitat.	☑	☐	☑	H-0	169
Implement a habitat conservation plan for the Cedar River watershed. Address in-stream flows. Conduct monitoring and research to assess the effectiveness of the plan.	The watershed will be managed to restore and better protect habitats of at-risk species.	☑	☐	☑	H-0	170
SHORELINE						
Revise the sensitive areas ordinance, adopted in 1995, to incorporate new policies after the comprehensive plan is adopted (late 1998).	Sensitive areas will be protected with adequate buffers, building standards and policies to protect wetlands.	☑	☐	☑	H-0	171
SNOQUALMIE						
Adopt a master site plan and management plan for Meadowbrook in conjunction with the city of North Bend . The land is located within the 100-year flood plain and contains riparian and palustrine wetlands.	Floodplain land and high-priority wetlands will be enhanced for wildlife and interpreted for public education.	☑	☐	☑	W-2	172
TUKWILA						
Participate in the Green/Duwamish Watershed Forum. Work with the U.S. Army Corps of Engineers to implement the Green/Duwamish Ecosystem Habitat Restoration Study which may include up to six major projects within the city's boundaries.	Effective regional coordination of activities to address water quality, flooding and protection of habitat will continue. Both quality and quantity of habitat will be enhanced.	☑	☑	☑	H-0	173
Continue to administer sensitive areas ordinance (#1758) adopted by the city council to protect and restore wetland, streams and ponds for function and value. Consider revising the city's critical areas ordinance to be consistent with Ecology's model ordinance for wetland buffers.	Future development will preserve riparian habitat.	☑	☐	☑	H-0	174

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
Remove 48 inch diameter flap gates for two culverts that discharge Riverton Creek into the Duwamish River. Enhance habitat on approximately 300 feet of the creek and on a 200 x 80 foot pond.	Approximately two miles of moderately high value salmonid habitat will be open to migration, rearing and spawning.	☑	☐	☑	H-0	175
KING CONSERVATION DISTRICT						
Work with landowners adjacent to freshwater streams and wetlands to restore and protect fish habitat, riparian corridors and associated wetlands.	Provide technical assistance to 24 landowners. Plan, design and implement 5 stream and wetland enhancement plans. Plan, design and implement one in-stream or bioengineering project. Provide habitat enhancement/protection information. Recruit and coordinate volunteer involvement in project implementation.	☑	☐	☑	H-0	251
Work with landowners adjacent to nearshore habitat to protect and restore saltmarsh and nearshore habitat.	Provide technical assistance, design services and information to 10 landowners.	☑	☐	☑	H-0	252
Work with Central Puget Sound Watershed Forum to plan and design nearshore habitat restoration projects and provide native plant material.	Plan, design and implement two nearshore habitat restoration projects. Propagate and provide native saltmarsh plants grown from local seed sources. Recruit and coordinate volunteer involvement in project implementation.	☑	☐	☑	H-0	253
Provide educational workshops to landowners on implementing Best Management Practices that protect water quality, streams, wetlands and fish habitat.	Conduct six workshops that lead participants through the process of implementing Best Management Practices. At least half of the workshops will target livestock owners.	☑	☐	☑	H-0	254
PORT OF SEATTLE						
Begin a habitat mitigation project on the Duwamish River as a part of the East Waterway dredging project.	Seven acres of habitat will be improved and sediment will be cleaned up.	☑	☐	☑	H-0	176
KITSAP COUNTY						
KITSAP COUNTY						
Reconfigure or remove culverts that block passage of fish at road crossings.	Fish will have safer access to previously blocked areas.	☑	☐	☑	H-0	177

See page 8 for key.

LOCAL GOVERNMENT ACTIONS	OUTCOMES	Priority	Non-point	Salmon	PS Plan Element	Action ID
Implement the revised critical areas ordinance (CAO) and revised Shorelines Master Program. The CAO requires a variance for bulkheading of undeveloped lots and raises the standard for armoring of a lot with an existing single family home, creating a greater burden of proof that shore protection is necessary. Non-structural alternatives are preferred. The CAO requires buffers on streams and wetlands. Building setbacks are required on shorelines and unstable slopes.	Alteration of the natural shoreline and natural shoreline processes will be minimized. Habitat and water quality will be better protected.	☑	☐	☑	H-0	178
BREMERTON						
Carry out projects to restore habitat along Gorst Creek, including realigning the channel, establishing riparian buffers and providing public viewpoints.	Habitat for fish and wildlife will be improved. The public will have a better understanding of the need for good habitat.	☑	☐	☑	H-0	179
PORT OF BROWNSVILLE						
With the Suquamish Tribe, actively pursue placing salmon fish pens at the port.	There will be an increased possibility that juvenile salmon will imprint on Steel Creek and respond by returning in the future spawn.	☑	☐	☑	H-0	180
As part of the new East Breakwater project, replace old buildings with structures that are built on pilings. Remove and replace 240 feet of creosote bulkhead.	Twenty-five hundred square feet of sandy beach will be recovered. Habitat for salmon and other marine life will be improved.	☑	☐	☑	H-0	181
MASON COUNTY						
MASON CONSERVATION DISTRICT						
Continue to provide financial assistance to landowners to restore stream habitat.	Habitat along streams will be restored.	☑	☐	☑	H-0	182
Educate landowners about good management practices to address harmful effects of stormwater and protect stream channels, wetlands and habitat.	Harmful effects of stormwater will be reduced, stream channels, wetlands and habitat will be enhanced, and landowners will better understand why good practices are important.	☑	☐	☑	H-0	183

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
PIERCE COUNTY						
GIG HARBOR						
With local non-profit agencies and Pierce County, assess stream flows and barriers to fish passage throughout the Key Peninsula, the city, and local islands (the Kitsap, Gig Harbor, Key Peninsula watershed). Integrate data with existing city and county data to support improved planning and to identify projects in the watershed.	Watershed planning and project development will be better integrated. Stream flows will be improved and barriers removed to better support salmon runs.	☑	☑	☑	H-0	184
TACOMA						
Begin restoration of three areas of habitat in Commencement Bay through the Natural Resource Damage Assessment Program.	Habitat quality will be improved.	☑	☐	☑	H-0	185
With Pierce County and the cities of Puyallup, Fife and Sumner, support the Stream Team's continuing work on projects to protect and restore habitat.	Habitat will be restored and the public better educated about the need for good habitat.	☑	☐	☑	H-0	186
PIERCE COUNTY CONSERVATION DISTRICT						
Involve volunteers in projects to restore, protect or enhance water quality and habitat for fish and wildlife.	Volunteers will provide 10,000 hours of work on projects. Habitat and water quality will be improved. Volunteers will better understand the importance of protecting habitat and water quality and, in turn, will inform other people about these needs.	☑	☐	☑	H-4.3	187
Promote the use of native plant materials by landowners through an annual sale of native trees. Educate landowners about the proper material for their sites and how to plant and maintain it.	Eighty thousand (13 kinds) of native plants and shrubs will be provided to over 700 landowners.	☑	☐	☑	H-4	188
Use geographic information system (GIS) mapping to inventory, catalog and set priorities for fish passage projects in the Puyallup watershed. Make the database available to agencies and organizations. Work with landowners to carry out priority projects.	Fish will have safer passage through the watershed.	☑	☐	☑	H-3	189
Fix 12 barriers to fish passage by installing fish ladders and new culverts.	Miles of habitat for salmon spawning and rearing will be opened.	☑	☐	☑	H-0	190

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
SAN JUAN COUNTY						
SAN JUAN COUNTY						
Continue implementing critical areas regulations to protect wetland functions and habitats, including kelp and eelgrass beds.	Valuable wetland, riparian and shoreline habitats will be better protected.	☑	☐	☑	H-0	191
Continue to support the county land bank in acquiring development rights. Work with the conservation district and other organizations to acquire, protect and restore significant wetlands and habitat.	Key areas of wetlands and habitat will be restored and/or protected.	☑	☐	☑	H-0	192
Complete a pilot project to designate and protect the habitats, shorelines and water quality of Westcott and Garrison bays on San Juan Island. Apply lessons learned from the project to similar work in other embayments.	Protection and management of the shorelines, water quality and aquatic habitats in Westcott and Garrison bays and other areas will be improved.	☑	☐	☑	H-0	193
Continue support for the county Marine Resources Committee and the implementation of actions related to tanker traffic, recovery of bottomfish, improving pumpout facilities at marinas, salmon recovery and other priority issues. Educate the public about these issues and others being addressed by the Marine Resources Committee.	Habitats for bottomfish will be improved. Spills will be prevented. Habitats and water quality in marine and shoreline areas will be improved. The public will better understand these issues.	☑	☐	☑	H-0	194
SKAGIT COUNTY						
SKAGIT COUNTY						
Implement structural and non-structural projects to reduce damage from floods and protect the environment, including projects to remove fish passage barriers, stabilize river banks and reduce urban and residential flooding and stormwater problems. Sites for the county's efforts include Hope Island, the Edison Slough, Cockreham Island and the Deep Water Slough. Three full-time employees will be added to support salmon recovery.	Salmon habitat will be protected and restored. At least two projects to remove or repair barriers to fish passage will be completed each year.	☑	☐	☑	H-0	195
Educate the public and train county employees about protection and regulation of habitats, wetlands and critical areas. Support development of a countywide Habitat Conservation Plan (HCP).	Habitats, wetlands and critical areas will be better protected. An HCP will be completed to better protect salmon.	☑	☐	☑	H-4	196
ANACORTES						
Continue to enforce the critical areas ordinance.	Future development projects will provide for preservation of riparian habitat.	☑	☐	☑	W-2.1	197

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Nonpoint	Salmon	PS Plan Element	Action ID
BURLINGTON						
Develop a habitat conservation plan for the city.	Salmon habitat will be protected and restored.	☑	☐	☑	H-0	198
SKAGIT CONSERVATION DISTRICT						
Provide technical and cost-share assistance to landowners to implement riparian habitat conservation plans. This will include the rental and purchase of riparian conservation easements.	Nonpoint pollution will be prevented and abated, and fish and wildlife habitat will be improved.	☑	☐	☑	H-0	199
PORT OF SKAGIT COUNTY						
Implement the Skagit Wetlands and Industry Negotiations (Skagit WIN) plan to protect and mitigate wetland areas.	More than 22 acres of wetland area will be added to the port property.	☑	☐	☑	W-5	200
SNOHOMISH COUNTY						
SNOHOMISH COUNTY						
Design and construct capital projects to improve water quality, rehabilitate drainage systems and restore fish habitat.	Water quality, the drainage system and fish habitat will be improved.	☑	☐	☑	H-0	201
Manage open space lands to protect water quality.	Water quality, the drainage system and fish habitat will be improved.	☑	☐	☑	H-0	202
Continue to implement the county's critical areas ordinance.	Water quality, the drainage system and fish habitat will be improved.	☑	☐	☑	H-0	203
BOTHELL						
Continue to enforce the critical areas ordinance, shoreline master program, zoning codes and development regulations.	Natural functions of wetlands and aquatic habitat will be better protected.	☑	☐	☑	H-0	204
EVERETT						
Conduct a field survey to identify and prioritize barriers to fish migration within the city or along its water transmission corridor. Remove high-priority fish migration barriers based upon this survey.	Habitat available for anadromous salmon spawning and rearing will be increased.	☑	☐	☑	H-0	205

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
GOLD BAR						
Purchase more than 20 acres of class II wetlands and buffers. Amend the critical areas ordinance to increase setbacks.	A critical wetland will be protected and rearing habitat will be created. Shorelines and wetlands will be better protected.	☑	☐	☑	H-0	216
MARYSVILLE						
Continue to enforce the city's critical area ordinance.	Steep slopes, wetlands and streams will be protected from harm.	☑	☐	☑	H-0	207
Continue to educate the public about the benefits of protecting wetlands and stream corridors and about regulations to protect them.	Wetlands and stream corridors will be better protected.	☑	☐	☑	W-7	208
Remove an existing 48 inch culvert, which is blocking a spawning area for fish, and replace it with a fish passage culvert with pool.	The spawning area will be accessible to salmon.	☑	☐	☑	H-0	209
MONROE						
Develop and implement an identification and correction program for obstacles to the passage of salmon into potential spawning areas.	Salmon will have additional area in which to spawn.	☑	☐	☑	H-0	210
STANWOOD						
Coordinate with tribes, schools, and city, county, state and federal agencies to develop a management plan for restoring and enhancing salmon habitat along Church Creek.	Watershed work among agencies will be unified, an appropriate lead agency identified and a forested wetland to trap sediments established. Livestock fencing will control erosion and manure transport and conservation easements will protect restored areas in perpetuity.	☑	☐	☑	H-0	211
SNOHOMISH CONSERVATION DISTRICT						
Work with landowners to restore and protect stream habitat and riparian corridors by providing technical assistance and cost-sharing for good management practices and other habitat improvements. Provide information to landowners on the use of conservation easements to protect habitat.	Fish habitat will be better protected in county watersheds.	☑	☐	☑	H-0	212
THURSTON COUNTY						
THURSTON COUNTY						
Replace or retrofit 16 culverts that are barriers to fish passage (if funded)	200,000 square feet of spawning habitat and 2.5 million square feet of rearing habitat will be opened up.	☑	☐	☑	H-0	213

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
Survey noxious aquatic weeds in all Thurston County lakes that have public access. Survey and remove Eurasian water milfoil in Long Lake.	Noxious aquatic plants will be eradicated from selected lakes.	☑	☐	☐	H-0	214
Restore a fish passage from the Deschutes River to an old oxbow by replacing old drainage pipe with a large, bottomless arch culvert.	Fish passage will be provided between the Deschutes River and four acres of spring-fed water in an old oxbow of the river. This will provide access to rearing and spawning areas in the lower reaches of Tempo Creek.	☑	☐	☑	H-0	215
OLYMPIA						
Implement a habitat assessment that identifies key habitats, including salmonid rearing and spawning habitat, and actions that need to be taken to protect and enhance priority habitats.	Priority habitats will be protected and enhanced.	☑	☐	☑	H-0	216
Replace the culvert at the Mottman Road crossing of Black Lake Ditch.	Chances for chinook, coho and chum salmon to survive in the Percival Creek system will be improved.	☑	☐	☑	H-0	217
YELM						
Initiate a rehabilitation and restoration project for Yelm Creek in cooperation with Thurston County, including culvert analysis and sizing, hydraulic analysis, channel restoration, riparian habitat and fish restoration.	Stream habitat will be restored in Yelm Creek and barriers to fish passage will be removed.	☑	☐	☑	H-0	218
In cooperation with Thurston County, implement a rehabilitation and restoration project on Thompson Creek, including analysis and sizing of culverts, hydraulic analysis and protection of riparian habitat.	Stream habitat will be restored and barriers to fish passage will be removed.	☑	☐	☑	H-0	219
THURSTON CONSERVATION DISTRICT						
Assist landowners to develop and implement streambank stabilization, bio-engineering, and restoration of in-stream and streambank upland habitat on private lands.	Four bio-engineering projects, four streambank stabilization projects and six habitat restoration projects will be developed and implemented.	☑	☐	☑	H-0	220
WHATCOM COUNTY						
WHATCOM CONSERVATION DISTRICT						
Work with the Lummi Nation to re-establish the historic estuary within the Lummi River watershed. Construct wetlands to filter out excess nutrients.	Essential salmonid rearing habitat will be created. Water quality will be enhanced through the reduction of nonpoint pollution.	☑	☐	☑	H-0	221

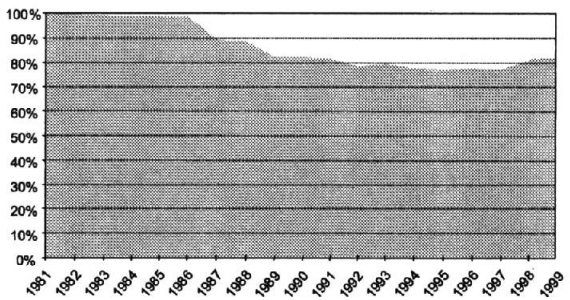
Puget Sound Management Plan Goals

- Protect water quality and prevent contamination of commercial and recreational shellfish beds so shellfish are safe to eat.
- Sufficiently reduce contamination of shellfish beds to allow the reopening of at least one contaminated shellfish bed each year.
- Prevent human consumption of shellfish from contaminated beds until the contamination is corrected.

Strategies for Achieving Goals

- Adopt pollution prevention policies to protect shellfish growing areas.
- Respond to existing and potential shellfish bed contamination with aggressive restoration and protection programs.
- Monitor shellfish areas for toxins and pathogens.
- Increase public awareness of and involvement in shellfish protection.

Percent of Commercial Shellfish Area Approved for Direct Harvest



Source: Department of Health, 1999

Between 1986 and 1989, there was a sharp decline in the area available for direct shellfish harvest. From 1990 to 1996, the area of shellfish beds downgraded and the area upgraded were about the same. During the 1997-1999 biennium, 313 acres were downgraded and 4,499 acres were upgraded. This was due to long-term efforts by tribal, state and local governments to correct pollution sources.

Background and Trends

Commercial shellfishing contributes about $30 million annually to Puget Sound's economy. More than 250,000 people harvest shellfish from the Sound's 1,300 public beaches each year. Shellfish also have important cultural significance to Indian tribes.

Shellfish cannot be harvested from about 20 percent of the Sound's classified commercial harvest areas due to bacterial contamination from improperly treated human sewage and animal waste. This bacteria originates from many sources including failing on-site sewage systems, animal wastes from farms, stormwater runoff, untreated sewage from boats, and pet and wild animal feces. Municipal and industrial wastewater, combined sewer overflows and stormwater runoff prevent commercial harvest from Everett to Tacoma.

Since 1987, citizens, businesses, conservation districts and tribal, state and local governments have worked hard to protect and restore shellfish beds. This work led to the reopening of nearly 4,500 acres in 1998. In an effort to prevent future downgrades of shellfish harvest areas, the Department of Health now notifies tribal and local governments and the shellfish industry when water quality problems could result in future closure of a growing area. The department also partners with local health agencies to classify recreational shellfish areas, educate the public and monitor growing areas for biotoxins.

Tools to reduce bacterial pollution include local programs for managing stormwater and on-site sewage systems, farm management plans, shellfish protection districts, local closure-response plans, watershed action plans, and financial and technical assistance programs.

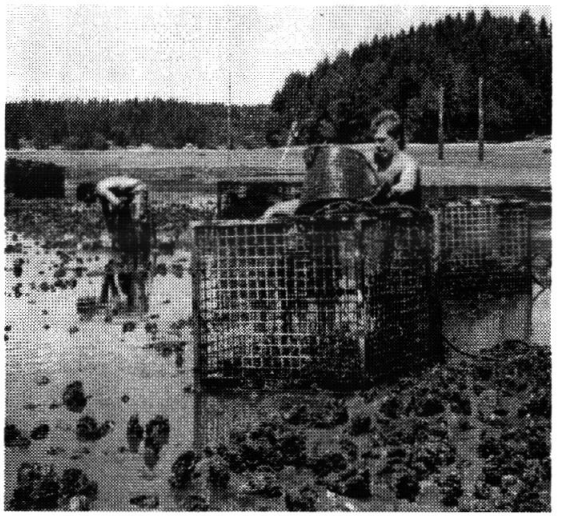
The Department of Health monitors and classifies shellfish growing areas. Tribal governments also monitor growing areas. State agencies coordinate closure response activities. Ecology runs the dairy management program.

Highlights of 1999-2001 Actions

- The departments of Health and Ecology and local agencies will provide technical and financial assistance to protect shellfish and prevent downgrades.
- Health and tribal governments will monitor water quality, classify growing areas, and identify and report on shellfish beds that are threatened with downgrades.
- Health and local governments will coordinate monitoring and classification of recreational growing areas and educate the public about safe and legal harvest.
- Health will maintain a biotoxin hotline and provide information to the general public on biotoxin alerts.
- Local governments will develop programs to prevent nonpoint sources of pollution from affecting shellfish beds.
- Tribal, state, and local governments will coordinate and respond to shellfish bed downgrades through closure-response planning and restoration activities.
- Ecology, the Conservation Commission, local conservation districts and farmers will implement the 1998 Dairy Nutrient Management Act.

1999-2001 Budget Request for State Actions

Total Provisoed Funding	$1,701,669
Total Other Funding	$0



JOINT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
The departments of Health, Ecology, Natural Resources and Fish and Wildlife, the State Parks and Recreation Commission, and Action Team support staff will cooperatively assess shellfish protection needs, develop closure-response plans, restore water quality and enhance shellfish, and assist in the development and implementation of watershed action plans.	**DEPARTMENT OF HEALTH** Participate in the development of all closure-response plans per the Memorandum of Agreement with Ecology and the Action Team. Participate in all shellfish water quality restoration and protection projects and in the implementation of watershed action plans where shellfish restoration or protection projects are included.	☑	☐	☐	DOH-02	SF-2	230
	PUGET SOUND WATER QUALITY ACTION TEAM Efforts to protect shellfish will be coordinated.	☑	☐	☐	PSAT-04	SF-2	230

TRIBAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
JAMESTOWN S'KLALLAM TRIBE						
Identify sources of fecal coliform in marine waters and implement remedies to reduce them.	The downgrade of shellfish beds will be prevented.	☑	☐	☐	SF-2	250

STATE AND FEDERAL ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
DEPARTMENT OF ECOLOGY							
Protect commercial and recreational shellfish growing areas from pollution. Provide technical assistance, including the small towns environmental program, and financial assistance to correct failing on-site septic systems. Reduce pollution from land clearing, agricultural and animal-keeping practices. Encourage the use of management practices that protect shellfish. Participate in the development of closure-response strategies when shellfish growing areas are downgraded.	Recreational and commercial shellfish growing areas will be free from contamination, particularly fecal coliform bacteria.	☑	☐	☐	DOE-05	SF-2	235
DEPARTMENT OF HEALTH							
Cooperate with the Department of Ecology and Action Team support staff and continue to implement the memorandum of agreement on shellfish-closure response planning.	Support for, and participation in the development of, closure-response plans will occur whenever a shellfish growing area is downgraded in classification.	☑	☐	☐	DOH-02	SF-0	236
Implement portions of the recreational shellfish plan. Help local health jurisdictions develop and implement recreational shellfish plans under the recreational shellfish beach regulations, Chapter 246-280 WAC. Provide funding to help local health jurisdictions conduct recreational shellfish activities.	Contracts with interested Puget Sound counties will be established to conduct recreational shellfish activities. The contracts will be monitored through activity reports and on-site visits. Recreational shellfish beaches will be classified in cooperation with local health jurisdictions, focusing on unclassified beaches with high public use. The biotoxin hotline and Internet site will be maintained to provide information to the public regarding current biotoxin closures. Shellfish growing areas with biotoxin levels that exceed the maximum acceptable level will be closed immediately.	☑	☐	☐	DOH-03	SF-4	237
Work with local health jurisdictions, state agencies and others to inform and educate the public about shellfish issues. Coordinate and facilitate meetings of the Shellfish Advisory Committee to share information and consider recommendations on program activities and enhancements.	The public will receive information and education regarding shellfish issues. Methods include brochures, presentations, data sharing and attendance at community events.	☑	☐	☐	DOH-02	SF-6	238
Continue to publish and distribute an annual inventory of commercial and recreational shellfish beds.	An annual inventory will be published and distributed by April 1 of each year.	☑	☐	☐	DOH-02	SF-5	239
Provide technical assistance to protect and restore shellfish growing areas.	Technical assistance will be provided to other agencies and stakeholders regarding water quality, pollution and shellfish sanitation.	☑	☐	☐	DOH-02	SF-0	240

STATE AND FEDERAL ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
DEPARTMENT OF HEALTH							
Identify and address water quality declines in shellfish growing areas prior to downgrades in classification. Continue to distribute data and information on growing area conditions to state agencies, tribal and local governments, shellfish growers and other stakeholders.	Water quality and pollution-source information about commercial growing areas and selected recreational areas will be distributed annually to affected state agencies, tribal and local governments, shellfish growers and other stakeholders. This information will help stakeholders address water quality declines in shellfish growing areas prior to downgrades in classification.	☑	☐	☐	DOH-02	SF-2	241
Continue to monitor water quality, assess pollution sources, identify corrective actions, and classify commercial and recreational shellfish growing areas.	Commercial and recreational shellfish growing areas will be classified, water quality in those areas will be monitored, water quality in areas where corrective actions are occurring will be reassessed. Other agencies will be helped to focus their pollution control efforts.	☑	☐	☐	DOH-02	SF-2	242
Plan, conduct and coordinate supplemental water-quality monitoring, pollution-source investigations and hydrographic assessments in threatened and downgraded shellfish areas.	Supplemental water quality and pollution-source information in priority areas for shellfish protection and restoration will be collected. The information will be provided to pollution-control agencies and stakeholders to help direct their activities.	☑	☐	☐	DOH-02	SF-2	243
Identify pollution problems in shellfish growing areas and inform agencies with regulatory authority. Monitor the status of corrective actions.	Pollution problems identified by Health will be provided to pollution-control agencies. Health will provide supplemental water-quality monitoring to reveal whether pollution-control activities have been effective and whether closed areas can be reopened for commercial or recreational harvest of shellfish.	☑	☐	☐	DOH-02	SF-2	244
Provide technical assistance on shellfish sanitation and contamination source issues.	Other agencies and stakeholders will receive assistance with shellfish sanitation issues and contamination source issues.	☑	☐	☐	DOH-02	SF-2	245
Participate on interagency committees to coordinate programs and activities associated with the protection and management of shellfish resources.	Information about shellfish area restoration and protection activities and plans will be exchanged through consultations with tribal, state and local governments and other stakeholders.	☑	☐	☐	DOH-02	SF-2	246
Assist in the development and implementation of watershed action plans where the beneficial use of shellfish resources exists or is restorable in the near future.	Watershed plans will protect or restore shellfish growing areas.	☑	☐	☐	DOH-02	SF-2	247
UNIVERSITY OF WASHINGTON, WASHINGTON SEA GRANT PROGRAM							
Provide technical assistance, local coordination and education to protect and restore commercial and shellfish beds in Puget Sound.	Local communities and decision-makers will know what actions are necessary to reclaim and keep shellfish beds from being degraded.	☑	☐	☐	UW-01	SF-0	248

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
SOUNDWIDE						
THE PUGET SOUND ACTION TEAM RECOMMENDS THAT:						
Local governments and other affected local jurisdictions should control pollution and manage land uses to protect and restore water quality in commercial and recreational shellfish areas. Measures should include: * Growth management plans and development regulations to control impacts of new development on shellfish growing areas. * Voluntary and regulatory programs to ensure proper management of nonpoint-pollution sources, such as on-site sewage systems, boats and marinas, farm animal wastes and stormwater. * Meeting with Department of Health staff when growing areas are identified as threatened to discuss the identified pollution threats to growing areas and take immediate action to address the pollution sources and prevent a downgrade. * Shellfish closure-response strategies developed and implemented by tribes, local jurisdictions and citizens, in partnership with state agencies. * Shellfish protection districts (Chapter 90.72 RCW). * Working with the Department of Health to strengthen monitoring and classification of shellfish beds and increase public education about recreational harvest of shellfish.	Water quality in shellfish growing areas will improve. The acreage of commercial shellfish beds available for harvest will remain stable or increase. The acreage of classified recreational beaches will increase. The acreage of recreational beaches approved for harvest will increase. Recreational harvesting of shellfish will occur in a safe and legal manner.	☑	☐	☐	SF-2	255
CLALLAM COUNTY						
CLALLAM COUNTY						
Analyze water quality issues related to the Dungeness River system and educate the public on these issues.	Pollution sources negatively affecting shellfish in Dungeness Bay will be identified and strategies developed for remediation.	☑	☐	☑	SF-7	256
Continue to monitor paralytic shellfish poisoning (PSP) levels in Sequim Bay. Implement PSP monitoring in Dungeness Bay.	Advising the public of unsafe shellfish harvest conditions will protect public health.	☑	☐	☐	SF-6	257
Investigate sources of fecal coliform in Johnson Creek to reduce the impact on the recreational shellfish beach at Pitship Point.	Safe opportunities for recreational harvest of shellfish will be provided.	☑	☐	☐	SF-4	258
ISLAND COUNTY						
WHIDBEY ISLAND CONSERVATION DISTRICT						
Take actions necessary to protect and restore shellfish beds.	Productive shellfish beds will be maintained.	☑	☐	☐	SF-2	259

See page 8 for key.

LOCAL GOVERNMENT ACTIONS	OUTCOMES	Priority	Non-point	Salmon	PS Plan Element	Action ID
KITSAP COUNTY						
BREMERTON-KITSAP COUNTY HEALTH DISTRICT						
Continue to implement a program to monitor, oversee and respond to shellfish downgrades in order to reopen closed areas. Educate and involve the public and regularly provide recreational shellfish information.	Twenty-four public shellfish beaches will be monitored for fecal coliform bacteria, paralytic shellfish poisoning and other applicable water quality parameters. Information and monitoring results will be routinely distributed to the public via press releases, a newsletter, the Internet, beach signage and a 24-hour hotline.	☑	☐	☐	SF-2	260
Continue to implement a program to identify and correct pollution sources. Educate and involve citizens and regular provide on-site sewage operation and maintenance information to the public. On an annual basis, evaluate and prioritize known or suspected areas with on-site system problems. Monitor and survey high-priority areas to identify and correct failing on-site sewage systems.	Public health will be protected. Downgrades or closures of recreational shellfish areas will be prevented and closed areas reopened. Existing and on-site sewage system problems will be fixed and future problems prevented. Information and monitoring results will be routinely distributed to the public via press releases, a newsletter, the Internet, public meetings, and a 24-hour hotline.	☑	☐	☑	SF-2	261
PIERCE COUNTY						
TACOMA-PIERCE COUNTY HEALTH DEPARTMENT						
Continue to refine and enhance the recreational shellfish program.	Recreational shellfish beaches will be classified and shellfish-related public health concerns will be communicated to the public.	☑	☐	☐	SF-4	262
WHATCOM COUNTY						
WHATCOM CONSERVATION DISTRICT						
Participate in and support strategies to reopen shellfish beds in Portage Bay and Drayton Harbor. Strategies will address the commercial and noncommercial agricultural practices impacting shellfish resources.	District progress, achievements and services provided to the agricultural community will be communicated to the shellfish-closure response teams. District efforts will be coordinated with other response agencies.	☑	☐	☑	SF-7	263

Management of Stormwater and Combined Sewer Overflows

Puget Sound Management Plan Goals

- Protect shellfish beds, fish habitat and other resources.
- Prevent sediment contamination from urban runoff and combined sewer overflows (CSOs).
- Achieve water and sediment quality standards.
- Reduce and eventually eliminate harm from pollutants in discharges of stormwater and combined sewer overflows.

Strategies for Achieving Goals

- All cities and counties adopt basic stormwater programs.
- Develop comprehensive stormwater programs in urbanized areas, in a phased manner.
- Incorporate stormwater requirements from the Puget Sound Management Plan into municipal stormwater National Pollution Discharge Elimination System (NPDES) permits.
- Implement appropriate management practices, assess their effectiveness and, as necessary, require further water quality controls.
- Provide technical assistance to local governments and businesses.
- CSO cities develop and implement plans to reduce sewer overflow events.

Trends in English Sole Liver Lesions from 1989 to 1996

Location	Increasing	No Trend
Commencement Bay		X
Elliot Bay	X	
Sinclair Inlet		X
Port Gardner		X
Hood Canal		X
Strait of Georgia	X	

Source: Puget Sound Ambient Monitoring Program/ Washington Department of Fish and Wildlife, 1997

English sole from urban areas of Puget Sound (especially Commencement and Elliott bays) have higher concentrations of contaminants in their muscles and more liver lesions than sole from rural areas. Liver lesions are seen in more than 20 percent of English sole from Commencement and Elliott bays. Liver lesions occur in approximately 5 percent of English sole from less developed parts of the Sound. The elevated incidence of liver lesions among English sole in urban areas is associated with high levels of sediment contaminants, especially polynuclear aromatic hydrocarbons (PAHs). Urban stormwater runoff is a significant ongoing source of PAHs to Puget Sound. Two of six monitoring stations show increases of liver lesions in English sole. Four stations do not show a trend. The Elliott Bay increase is probably due to contaminants in urban runoff. Pollutants from the Fraser River may account for the increasing trend in liver lesions at the Strait of Georgia site.

Background and Trends

Stormwater poses a serious threat to salmon, fish and other aquatic organisms and to their habitat. Sediments and the toxic contaminants in stormwater pollute and degrade rivers, streams and Puget Sound. High flows during storms can wash away important fish and other aquatic habitat or smother it with sediment. Combined sewers, which carry sewage and stormwater to treatment plants, often overflow during heavy storms, releasing untreated sewage and stormwater into surface waters and Puget Sound.

Although problems related to stormwater are pervasive and much remains to be done, state and local governments and businesses have taken significant steps to reduce damage caused by stormwater.

By June 1999, 79 percent of the basin's cities and counties had developed or were making progress in developing basic stormwater programs (see Table 2.) The Department of Ecology and Action Team support staff provide technical assistance and guidance to help cities and counties develop these programs. Urbanized cities and counties are beginning to develop comprehensive (enhanced) stormwater programs.

The goal for these local programs is to control runoff, minimize damage to water quality and habitat, ensure that stormwater systems operate properly and that existing stormwater problems are fixed. Businesses also implement a range of management practices to minimize and treat runoff from their properties.

Ecology provides technical assistance and guidance through the technical manual and issues NPDES permits to urban jurisdictions.

The Department of Transportation manages runoff from the state's highways by providing training, conducting highway runoff treatment research, funding the retrofit of stormwater outfalls and mitigating effects from highway runoff. Transportation offers up to $1 million each biennium for research grants.

The University of Washington and local governments cooperate to research the effectiveness of various stormwater management techniques.

Highlights of 1999-2001 Actions

- The Department of Ecology will provide technical assistance to cities and counties, businesses and others to help them develop basic and comprehensive stormwater programs or implement National Pollutant Discharge Elimination System (NPDES) permit conditions.
- Ecology will update the *Stormwater Management Manual for the Puget Sound Basin* (technical manual) to improve habitat and water quality protection.
- Ecology will administer industrial, construction and municipal NPDES permits for stormwater.
- The Department of Transportation will implement the state highway-runoff program.
- The Department of Transportation will train agency contractors, department personnel and local governments to control erosion and manage spills.
- Transportation will research solutions to highway-related stormwater runoff.
- Cities and counties will develop and implement basic stormwater programs.
- Urbanized cities and counties will develop comprehensive stormwater programs by June 30, 2000.
- Local governments will implement plans to reduce combined sewer overflows.
- Tribal governments will manage stormwater on tribal lands.

1999-2001 Budget for State Actions

Total Provisoed Funding	$1,503,908
Total Other Funding	$44,356,000

See page 8 for key.

STATE AND FEDERAL ACTIONS	OUTCOMES	Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
DEPARTMENT OF ECOLOGY							
Administer industrial and municipal NPDES (National Pollutant Discharge Elimination System) permits to control pollution from stormwater and wet weather flows. Provide both on-site and written technical assistance to the regulated community, local governments and others, particularly for general stormwater permits for industrial and construction activities. Provide technical assistance to cities and counties to help them develop basic and comprehensive programs for managing stormwater, including development of manuals, ordinances and education. Continue to oversee local government implementation of plans to reduce combined sewer overflows. Inspect facilities and take enforcement actions where needed.	Pollution and toxic discharges from stormwater and combined sewer overflows will be reduced.	☑	☐	☑	DOE-06	SW-1.1	265
Address habitat and water quality problems caused by stormwater runoff and update the stormwater technical manual as new information becomes available. The manual provides guidance for local governments seeking to use current technologies in addressing stormwater problems.	Compliance with and state-of-the-art guidance for local stormwater programs will be improved.	☑	☐	☑	DOE-06	SW-3	267
WASHINGTON STATE DEPARTMENT OF TRANSPORTATION							
Work in cooperation with the Department of Ecology to assess the need to revise the Highway Stormwater Runoff Rule and make necessary changes.	Necessary changes to the Highway Runoff Rule will be made.	☑	☐	☑	DOT-01	SW-5	268
Provide additional grant funds for local communities to retrofit priority outfalls in accordance with ESSHB 2031.	Stormwater projects will be supported and implemented to improve water quality of highway runoff.	☑	☐	☑	DOT-01	SW-3.2	269
Monitor compliance with National Pollutant Discharge Elimination System (NPDES) stormwater requirements and stormwater utility fees.	Best management practices for controlling stormwater will be monitored and other permit requirements will be met, including payment of fees.	☑	☐	☑	DOT-01	SW-5	270
Mitigate the impacts of stormwater runoff for all new transportation construction projects that add more than 5,000 square feet of impervious surface. Provide roadside maintenance for existing stormwater management facilities.	Water quality impacts related to development of new transportation projects will be mitigated. Existing stormwater management practices will be maintained to maximize the efficiency of water quality treatment.	☑	☐	☑	DOT-01	SW-5	271
Provide stormwater retrofits to treat highway runoff from existing facilities.	Stormwater retrofits will be implemented to treat highway runoff and improve water quality.	☑	☐	☑	DOT-01	SW-5	272

STATE AND FEDERAL ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
WASHINGTON STATE DEPARTMENT OF TRANSPORTATION							
Support research related to stormwater treatment, bioengineering, erosion and sediment control, including coagulants for detention ponds, soil additives to prevent erosion, cost-benefit analysis, ultra-urban (confined space) technologies and infiltration methods.	The knowledge base and technology designs for stormwater treatment, erosion control and bioengineering practices will be improved.	☑	☐	☑	DOT-01	SW-5	273
Train department contractors, agency personnel and local governments to control erosion and manage spills.	Knowledge among construction-site personnel will be improved concerning erosion control and spill management requirements. Water quality impacts related to erosion control failures will be reduced. On-site personnel will receive training and tools to prevent spills and to initiate appropriate response measures in the event of accidental spills. Contractor certification program for erosion control will be implemented.	☑	☐	☑	DOT-01	SW-2	274
U.S. ENVIRONMENTAL PROTECTION AGENCY							
Continue to issue National Pollutant Discharge Elimination System (NPDES) permits for controlling stormwater from federal and tribal facilities.	Stormwater discharge permits will ensure compliance with current state and tribal water quality standards.	☑	☐	☑		SW-6	275

TRIBAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
JAMESTOWN S'KLALLAM TRIBE						
Manage stormwater on tribal lands.	Pollution caused by stormwater will be reduced.	☑	☐	☑	SW-0	280
SUQUAMISH TRIBE						
Continue to manage the quality and quantity of stormwater at the Suquamish Tribal Center through biofiltration swales and other practices. Continue to remove non-native vegetation and replant native species.	Working examples of successful stormwater management will be provided. Native plants will replace aquatic nuisance plant species.	☑	☐	☑	SW-0	281

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
SOUNDWIDE						
THE PUGET SOUND ACTION TEAM RECOMMENDS THAT:						
Cities and counties should complete, implement and enforce all elements of their basic stormwater programs. Jurisdictions may need to revise portions of their current programs to meet new standards for salmon protection under the Endangered Species Act. Basic programs should contain the following elements: * Ordinances that address: - Off-site impacts. - The use of best management practices. - Effective treatment of the storm size and frequency specified in the manual. - Infiltration with appropriate safeguards. - Protection of aquatic resources. - Erosion and sediment control and enforcement. * An operation and maintenance program. * An approved stormwater management manual containing best management practices. * An education program. * Stormwater controls in comprehensive land-use plans. * Intergovernmental coordination within shared watersheds.	All jurisdictions will adopt basic programs.	☑	☐	☑	SW-1	285
Urbanized cities and counties should develop comprehensive stormwater programs by June 30, 2000. Jurisdictions may need to revise portions of their current programs to meet new standards for salmon protection under the Endangered Species Act. Local governments that have NPDES stormwater permits should continue implementing permit requirements. Comprehensive programs should contain all the elements of the basic program, plus the following: * Identification and ranking of significant pollutant sources. * Investigation and correction of problem storm drains. * Ability to respond to water quality violations. * Stable funding. * Regular inspections and enforcement.	Jurisdictions called on to develop comprehensive programs will develop them according to the Department of Ecology's schedule.	☑	☐	☑	SW-2	286

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
CLALLAM COUNTY						
CLALLAM COUNTY						
Develop a drainage manual and codes, provide education and technical assistance to the construction industry, and develop programs for operation and maintenance of stormwater facilities.	Stormwater will be better managed, the construction industry will be educated and water quality will be improved.	☑	☐	☑	SW-1	287
Control sources of pollution by continuing to implement the county's Hazardous Waste Management Plan and Comprehensive Solid Waste Management Plan.	Management of hazardous wastes in households and small businesses will be improved.	☑	☐	☑	SW-0	288
PORT ANGELES						
Continue to regulate new development and redevelopment consistent with the basic stormwater program described in the Puget Sound Management Plan.	New development and redevelopment will not degrade water and resources.	☑	☐	☑	SW-1	289
Develop and implement an operation and maintenance program for public and private stormwater facilities.	Stormwater facilities will continue to perform as designed over time.	☑	☐	☑	SW-1.2	290
SEQUIM						
Continue to regulate new development and redevelopment consistent with the Department of Ecology's stormwater manual and the city's stormwater ordinance.	New development and redevelopment will not degrade state waters and resources.	☑	☐	☑	SW-1.7	291
Develop and implement an operation and maintenance program for public and private stormwater facilities. A draft stormwater ordinance is being reviewed.	Stormwater facilities will continue to perform as designed over time with proper maintenance and funding.	☑	☐	☑	SW-1.2	292
ISLAND COUNTY						
ISLAND COUNTY						
Adopt the Comprehensive Flood and Stormwater Plan.	Problems related to regional surface water conveyance, discharge and quality will be identified and engineering solutions and financial strategies will be recommended. Adoption of new surface water and grading ordinances also will be recommended.	☑	☐	☑	SW-2	293

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
Identify damaged and failing stormwater drains using the data collected in the drainage culvert inventory. Generate a priority list for replacement.	The number of damaged stormwater drains will be reduced and this will result in fewer water quality problems during future flood events.	☑	☐	☑	SW-2	294
Develop a maintenance manual for road drainage to standardize the best management practices among the county's road construction crews.	Pollution normally associated with routine road maintenance procedures will be reduced.	☑	☐	☑	SW-2	295
COUPEVILLE						
Enforce the town's stormwater ordinance to ensure that new development will not adversely affect water quality in Penn Cove.	New development will not degrade water quality in Penn Cove.	☑	☐	☑	SW-1.1	296
Develop a funding and implementation plan for identified capital improvements in the Coupeville Integrated Stormwater Management Plan.	Deficiencies in the town's stormwater system will be identified and corrected.	☑	☐	☑	SW-1	297
OAK HARBOR						
Continue to use the Department of Ecology's stormwater manual to review new stormwater projects.	Water quality will be improved by reducing stormwater pollution.	☑	☐	☑	SW-1.3	298
Promote public education about water quality and residential discharges into storm and sewer systems.	Water quality will be improved by educating the public.	☑	☐	☑	SW-1	299
JEFFERSON COUNTY						
JEFFERSON COUNTY						
Adopt and implement the Big Quilcene River Flood Hazard Management Plan. The plan will provide a basis to prioritize funding to restore salmon habitat, mitigate flood efforts and improve water quality in an important shellfish producing area.	Projects developed under the Flood Hazard Plan will improve salmon habitat, reduce flood effects and improve water quality.	☑	☐	☑	SW-0	300
Begin a three-year process to develop a plan for managing surface water. The plan will address existing surface water problems, maintenance of existing stormwater management facilities and funding options for the plan.	Existing stormwater management facilities will continue to perform as designed. Surface water problems will be remedied. Surface water runoff will not degrade state water resources. Planning will be consistent with Jefferson County's comprehensive land-use plan and may be developed in response to federal Endangered Species Act.	☑	☐	☑	SW-1	301
Continue to regulate commercial, industrial and subdivision development consistent with Jefferson County's Stormwater Management Ordinance and standards in the Department of Ecology's stormwater management manual.	New development will not degrade state waters and resources.	☑	☐	☑	SW-1.1	302

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
PORT TOWNSEND						
Implement the city's Stormwater Master Plan, which will result in continued purchases of property in order to preserve existing wetlands and provide for opportunities for "natural" stormwater treatment.	Water quality of existing wetlands and ponds and saltwater bodies in and adjacent to the city will be improved.	☑	☐	☑	SW-1	303
Continue to maintain stormwater systems and facilities, and continue to review development activities to assure systems are properly designed, inspected and maintained.	Runoff flows will be kept at historical levels and pollution to receiving waters will be reduced.	☑	☐	☑	SW-1.2	304
KING COUNTY						
KING COUNTY						
Reduce combined sewer overflow (CSO) from the Denny Way CSO to Elliott Bay to one untreated event per year, on average, and eight to 20 treated events per year, on average. In addition, reduce the Dexter CSO to one untreated event per year on average in Lake Union.	Discharges from combined sewer overflows to fresh and saltwater bodies will be reduced to meet state standards for water quality.	☑	☐	☑	SW-9	305
Reduce combined sewer overflow (CSO) into Lake Washington from King County's Henderson and Martin Luther King Way CSO locations to one untreated event or less per year, on average. Reduce CSO discharge to one untreated event per year, on average, and two treated events per year, on average, to the Duwamish River at King County's Norfolk CSO location.	Reduced combined sewer overflows to freshwater systems will result in King County meeting state standards for water quality.	☑	☐	☑	SW-9	306
AUBURN						
Continue to regulate new development and redevelopment per Auburn design standards and review for consistency with the basic stormwater program as described in Puget Sound Management Plan. Modify the city's stormwater programs as required for compliance.	New development and redevelopment will not degrade state waters and resources.	☑	☐	☑	SW-1.1	307
Develop and implement an operation and maintenance program for public and private stormwater facilities.	Stormwater facilities will continue to perform as designed over time.	☑	☐	☑	SW-1.2	308
Update and continue to implement the Comprehensive Drainage Plan.	Additional controls will be placed on storm drainage quantity and the emphasis on water quality treatment will be increased.	☑	☐	☑	SW-2	309

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
BELLEVUE						
Continue to implement the basic and comprehensive stormwater management programs described in the Puget Sound Management Plan, including regulating new development and redevelopment, operation and maintenance programs for public and private stormwater facilities, and local funding.	New development and redevelopment will treat stormwater runoff. Drainage systems will operate in the manner intended. Effective public education and outreach programs will modify stakeholders' behavior to be more beneficial to the environment.	☑	☐	☑	SW-2	310
BURIEN						
Design and construct capital projects as called for in the approved capital improvement plan for surface water.	Management of surface water and water quality of stormwater discharges will be improved.	☑	☐	☑	SW-2	311
Begin to operate the stormwater control projects contained in the capital improvement plan for surface water.	Management of surface water and water quality of stormwater discharges will be improved.	☑	☐	☑	SW-2	312
Implement improvements to residential drainage authorized in the six-year capital improvement plan and annual budget.	The city will begin to close the numerous gaps in its existing pipe drainage and surface water detention and retention systems.	☑	☐	☑	SW-2	313
The city council will approve the first six-year capital improvement plan for surface water and drainage management.	Work will be started to solve the known surface water and drainage problems in the city of Burien.	☑	☐	☑	SW-2	314
The city council will consider and approve the comprehensive 20-year Stormwater Master Plan and related policies.	A comprehensive, long-range plan for managing stormwater and related policies affecting land use and development will be adopted.	☑	☐	☑	SW-2	315
CLYDE HILL						
Expand and maintain a stormwater system with appropriate detention requirements.	The adverse impacts of development on water quality will be eliminated.	☑	☐	☑	SW-1.1	316
DES MOINES						
Construct a regional facility to detain stormwater in wetlands that treat and detain runoff from highways and residential areas.	Fish habitat downstream and wetland areas will be enhanced and protected, and water quality will be improved.	☑	☐	☑	SW-2	317
Develop a program to operate, inspect and maintain private stormwater systems.	Private systems will be kept in good working order, preventing pollution to state waters and resources.	☑	☐	☑	SW-1.2	318
Continue to regulate new development and redevelopment consistent with the basic stormwater program described by the Puget Sound Management Plan and referenced by the King County Surface Water Design Manual.	New development and redevelopment will not degrade state waters and resources.	☑	☐	☑	SW-1	319

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
Construct a 150-acre detention facility and convert an existing sewer trunk-line into a peak storm by-pass system.	Salmon habitat downstream will be protected and water quality will be improved. New habitat will be created for fish.	☑	☐	☑	SW-7.2	320
FEDERAL WAY						
Implement elements of a comprehensive stormwater program, as will as additional actions to protect surface water resources that are not explicitly required by the Puget Sound Management Plan.	Progress in implementing the city's overall water quality plans will be continued, protecting of surface waters in the city and their corresponding receiving water bodies. The plans include acquiring and rehabilitating key natural stream channels and other sensitive areas, educating and involving the public to increase awareness and protection of city surface water systems and overall improvement in the quality of the city's surface waters.	☑	☐	☑	SW-2	321
Add one maintenance staff person to surface water division.	Operations and maintenance of surface water facilities will be enhanced.	☑	☐	☑	SW-1	322
Continue to implement the 15-year capital facilities plan for surface water.	Performance of surface water facilities for flow control and water quality will be enhanced.	☑	☐	☑	SW-2	323
Prepare for application and consistency with Phase II municipal National Pollution Discharge Elimination Service (NPDES) permit requirements.	NPDES permit requirements will be met.	☑	☐	☑	SW-2	324
Construct a regional water-quality facility serving 237 acres of the city core area.	Sediments, associated contaminants and petroleum hydrocarbons will be reduced in stormwater from this area.	☑	☐	☑	SW-2	325
Implement required elements of the comprehensive program for managing surface water.	The implementation schedule for the comprehensive stormwater program will be met.	☑	☐	☑	SW-2	326
ISSAQUAH						
Develop and implement basic and comprehensive stormwater programs consistent with the Puget Sound Management Plan and Department of Ecology guidance. Complete the comprehensive program by December 1999.	A comprehensive stormwater program that includes requirements for new developments to manage stormwater management, an operations and maintenance program, and a program to educate citizens and businesses will be developed.	☑	☐	☑	SW-2	327
Implement the Issaquah Businesses for Clean Water Program. Prevent stormwater pollution from businesses through on-site technical assistance, recommendations of good management practices and other source controls, promotion of local business efforts, and education related to stormwater management.	The amount of stormwater pollution created by the business sector will be reduced. A more informed and proactive business community will provide role models for other businesses.	☑	☐	☑	SW-1.4	328

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
KENT						
Implement a program to inspect and enforce compliance for private stormwater management facilities.	The performance of stormwater facilities and water quality conditions in the receiving waters will be improved.	☑	☐	☑	SW-1.2	329
KIRKLAND						
Upon council approval, formalize stormwater ordinances and regulations that are consistent with the basic and comprehensive stormwater programs described in the Puget Sound Management Plan.	New development and redevelopment will not degrade state waters and resources.	☑	☐	☑	SW-2	330
MERCER ISLAND						
Continue to regulate new development and redevelopment consistent with the stormwater program described in the Puget Sound Management Plan.	New development and redevelopment will not degrade water quality or habitat in Lake Washington.	☑	☐	☑	SW-1	331
Continue to enforce measures to control runoff and erosion on construction sites.	Construction activities will not degrade water quality or habitat in Lake Washington.	☑	☐	☑	SW-1.1	332
Undertake a 20-year capital improvement program to correct deficiencies and enhance the performance of the public stormwater system.	Capital improvements to the public stormwater system will help protect water quality and habitat in Lake Washington, and will help protect public and private property.	☑	☐	☑	SW-2	333
Develop an inspection program to determine whether private stormwater systems are functioning properly. Owners of systems not functioning properly will be required to complete necessary maintenance or repairs.	Private stormwater systems will better protect water quality and habitat in Lake Washington.	☑	☐	☑	SW-2.4	334
Continue to perform maintenance activities designed to ensure proper functioning of the public stormwater system.	The public drainage system on Mercer Island will help prevent degradation of water quality and habitat in Lake Washington.	☑	☐	☑	SW-1	335
Continue an annual program to repair storm drains that are not functioning properly.	The stormwater system will function as designed and help protect water quality and habitat in Lake Washington.	☑	☐	☑	SW-2.4	336
Continue to use sound management practices for city facilities as recommended in the Department of Ecology's stormwater manual.	The operation of city facilities will not degrade water quality or habitat in Lake Washington	☑	☐	☑	SW-1.1	337
Continue to maintain accurate records of public and private stormwater systems.	An accurate and up-to-date inventory and locations of public and private stormwater systems will be provided for use in construction and maintenance projects.	☑	☐	☑	SW-1.2	338

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
Locate significant infiltration and inflow in the sewer system and design and schedule corrective capital projects.	Sewer overflows during winter storms will be reduced, to the greatest extent practicable.	☑	☐	☑	SW-9	339
Carry out a series of capital projects, including installing backup generators in lift stations to help prevent sewer system overflows.	Sewer overflows during winter storms will be reduced, to the greatest extent practicable.	☑	☐	☑	SW-9	340
NORMANDY PARK						
Fix existing stormwater problems by constructing detention facilities, detention sedimentation and infiltration systems, grass swales, water separators and check dams in the 13th Avenue SW area.	Toxic discharges and negative impacts from surface water runoff will be reduced.	☑	☐	☑	SW-2	341
NORTH BEND						
Develop and fund a citywide stormwater program in compliance with the Puget Sound Management Plan.	The city will be in compliance with the Puget Sound Management Plan. A stormwater utility will be formed.	☑	☐	☑	SW-1	342
REDMOND						
Continue to regulate development and redevelopment consistent with the Department of Ecology's stormwater manual.	Degradation of state waters and resources will be reduced, and stormwater facilities will continue to perform as designed over time.	☑	☐	☑	SW-2	343
RENTON						
Adopt a stormwater comprehensive plan and associated ordinances.	The quality of receiving waters will be improved.	☑	☐	☑	SW-2	344
Update the city's Stormwater Management Program to be substantially consistent with the basic and comprehensive stormwater program requirements of the Puget Sound Management Plan.	Management of stormwater within the city will be improved, minimizing the impacts of new development on waterbodies and to minimizing impacts of existing stormwater runoff to water quality, flooding, erosion and fish habitat.	☑	☐	☑	SW-2	345
Continue to implement the city Surface Water Utility program for engineering, capital improvement and operations and maintenance.	Water quality and fish habitat will be protected and flooding and erosion will be reduced.	☑	☐	☑	SW-2	346
SEATAC						
Implement capital improvement, water quality and educational components of the city's surface water management plan.	The city's surface water management infrastructure will be improved and education and water quality programs will be continued.	☑	☐	☑	SW-1.4	347

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
Develop a plan to preserve and enhance Miller Creek.	A basin plan outlining capital improvement projects and an operation and maintenance program for the preservation and enhancement of Miller Creek will be developed.	☑	☐	☑	SW-1.2	348
As part of development review, ensure implementation of proper surface water management improvements and programs.	Water quality will be preserved and flows will be regulated to prevent damage and degradation to the downstream systems.	☑	☐	☑	SW-1.1	349
Continue to implement the city's operation and maintenance program for stormwater facilities.	Surface water management facilities will continue to operate at peak efficiency.	☑	☐	☑	SW-1.2	350
Complete the design and begin construction of the capital improvement program outlined in the Des Moines Creek Basin Plan.	Flow control will be improved. The stream corridor will be restored.	☑	☐	☑	SW-0	351
SEATTLE						
Develop and enforce the Stormwater, Grading and Drainage Code; State Environmental Policy Act; Shoreline Management Act; Growth Management Act; Critical Areas Ordinance; Side Sewer Ordinance; and Land Use Code.	The quality and quantity of stormwater will be managed by minimizing risks associated with flooding, minimizing erosion and sedimentation and minimizing environmental degradation to protect life, property and natural resources.	☑	☐	☑	SW-2	352
Collect information to support decisions regarding stormwater quality management.	Quality data will be provided to support stormwater management decisions.	☑	☐	☑	SW-7	353
Conduct on-site inspections of business to encourage implementation of best management practices, reduce spills and ensure routine maintenance of facilities to control stormwater.	Technical assistance will be provided . Water quality complaints will be addressed. The city will coordinate with other jurisdictions with similar objectives and participate in Urban Bay Action Teams. Experimental best management practices for stormwater will be researched.	☑	☐	☑	SW-1.6	354
Provide routine and corrective maintenance of the public drainage and sewerage system to ensure their proper operation.	More than 27,000 storm drain inlets and 440 miles of storm drain lines will be cleaned as needed. Clean about 30 percent of catch basins and 40 miles of ditches annually. Inspect private detention systems to ensure their proper operation and maintenance. Properly manage vactor wastes. Inspect approximately 1,000 miles of combined sewer pipes via closed-circuit TV. Conduct monthly inspections of 34 combined-sewer storage facilities. Ensure proper operation and maintenance of 70 combined sewer pump stations.	☑	☐	☑	SW-1.2	355

See page 8 for key.

LOCAL GOVERNMENT ACTIONS	OUTCOMES	Priority	Non-point	Salmon	PS Plan Element	Action ID
Construct projects to achieve state standards for controlling combined sewer overflows.	Plan, design and construct a number of projects to achieve the state standard for controlling combined sewer overflows. Comply with the NPDES (National Pollutant Discharge Elimination System) stormwater permit. Address sewer capacity problems.	☑	☐	☑	SW-9	356
Review and plan for improvements in 10 drainage basins to target flooding problems.	A computer model to predict location and frequency of flooding will be developed. Water quality problems, barriers to fish passage or habitat enhancement opportunities will be identified.	☑	☐	☑	SW-0	357
SHORELINE						
Following adoption of the city's comprehensive plan in late 1998 revisit and revise the stormwater manual to incorporate adopted city policies.	Shoreline's facilities and design standards will use the latest technology and information.	☑	☐	☑	SW-1.3	358
Annually inspect all residential, commercial and regional retention and detention facilities. Complete necessary maintenance of residential and regional facilities and notify commercial facilities of necessary maintenance.	The city's surface water facilities will work and protect water quality as designed.	☑	☐	☑	SW-1.2	359
Continue to use King County's surface water fee structure to fund surface water activities in the city.	Resources will be provided to regularly maintain the city's surface water management system.	☑	☐	☑	SW-1.2	360
SNOQUALMIE						
Continue to regulate new development and redevelopment consistent with the basic stormwater program described in the Puget Sound Management Plan.	New development will not degrade state waters and resources.	☑	☐	☑	SW-1	361
Implement a new stormwater utility for operation and maintenance of stormwater facilities.	Stormwater facilities will perform as designed over time.	☑	☐	☑	SW-1.2	362
TUKWILA						
Continue to regulate new and redevelopment projects consistent with the basic stormwater program described in the Puget Sound Management Plan.	New development and redevelopment will not degrade state waters and resources.	☑	☐	☑	SW-1.6	363
Continue to implement an operation and maintenance program for public stormwater facilities.	Stormwater facilities will continue to perform as designed over time.	☑	☐	☑	SW-1.2	364

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
PORT OF SEATTLE						
Continue to require plans -- or their equivalents – to prevent pollution of surface water from all marine tenants and port facilities. Monitor the use of best management practices and provide technical assistance and support as needed.	Water quality contamination from port facilities will be prevented.	☑	☐	☑	SW-0	365
KITSAP COUNTY						
KITSAP COUNTY						
Continue to develop a geographic information system that includes information regarding the form and location of the county's natural and constructed drainage system.	The geographic information system will be a valuable tool for scheduling and tracking maintenance activities, responding to water quality and flooding complaints, planning future capital improvements and responding to spills.	☑	☐	☑	SW-0	366
Continue to retrofit existing stormwater facilities to improve their performance.	The retrofit of stormwater systems at a minimum of 10 locations will improve flow control, water quality and fish passage.	☑	☐	☑	SW-1	367
Continue to regulate new development and redevelopment in accordance with Ecology's stormwater manual for the Puget Sound basin.	Appropriate best management practices for stormwater will be applied to new development and redevelopment projects, reducing the impact of land-based activities on the quality of receiving waters.	☑	☐	☑	SW-1.1	368
Continue to implement the capital improvement program for stormwater facilities, including projects that address flooding, water quality and fish passage.	Flood damage to public and private property will be reduced, water quality will be enhanced and fish passage barriers will be removed.	☑	☐	☑	SW-1.5	369
Construct and operate a facility to process waste from stormwater system maintenance.	Maintenance wastes will be processed and disposed of in accordance with Ecology and local health district guidance.	☑	☐	☑	SW-1.2	370
Continue the program to inspect stormwater systems.	Deficient and improperly maintained stormwater systems will be identified. Public systems will be placed on a routine maintenance schedule. Enforcement actions will be identified to ensure that private systems are maintained. Water quality will be better protected and flooding will be reduced.	☑	☐	☑	SW-1.6	371
Continue to monitor street wastes for contamination and dispose of them in a manner consistent with state and local guidance provided by Ecology and the local health district.	Wastes generated during the maintenance of the stormwater system will be properly disposed.	☑	☐	☑	SW-3.11	372

See page 8 for key.

LOCAL GOVERNMENT ACTIONS	OUTCOMES	Priority	Non-point	Salmon	PS Plan Element	Action ID
Continue to fund an operation and maintenance program for publicly maintained stormwater facilities.	More than 200 retention and detention facilities and their associated collection and conveyance systems will be maintained on a routine basis. Water quality will be better protected and flooding will be reduced.	☑	☐	☑	SW-1.2	373
Develop stream basin plans on a priority basis.	Surface water quality will be protected through identifying riparian resources and their conditions, identifying capital projects and providing input into the land-use process. The public will have an opportunity to participate in the planning process.	☑	☐	☑	SW-0	374
Continue to support research by the University of Washington Stormwater Consortium on best management practices, monitor the quality of runoff in response to citizen concerns and perform special monitoring studies, as necessary, to track pollutant sources.	Improved best management practices will be developed, citizen concerns will be addressed and sources of pollutants will be identified and corrected.	☑	☐	☑	SW-7	375
BAINBRIDGE ISLAND						
Coordinate with state Department of Fish and Wildlife to obtain information on damage caused by stormwater runoff and combined sewer overflows. Coordinate with Fish and Wildlife to receive updates on sensitive area maps and inventories.	Updates on sensitive areas will be obtained. The reasons for stormwater runoff and combined sewer overflows will be assessed.	☑	☐	☑	SW-9	376
Maintain records of public and private storm drainage systems.	Stormwater facilities will perform as designed.	☑	☐	☑	SW-1.1	377
Conduct ongoing assessments to identify and rank significant pollutant sources and their relationship to the drainage system.	Water degradation and water toxic pollutants will be eliminated.	☑	☐	☑	SW-0	378
Review the current code enforcement ordinance and pursue more non-compliant or out-of-compliance projects. Provide more control for enforcement and levying fines.	Compliance by developers will assure prevention of stormwater problems and water quality degradation.	☑	☐	☑	SW-1.7	379
Correct problem stormwater drains that have been identified as impacting water quality. Maintain storm drain data to identify drains that require additional monitoring.	Future water degradation will be prevented and toxic discharges will be reduced.	☑	☐	☑	SW-2	380
Adopt an ordinance for the maintenance and management of stormwater facilities.	Stormwater facilities will perform correctly as designed.	☑	☐	☑	SW-1.2	381
Establish a new rule requiring developers to provide proof of an NPDES (National Pollutant Discharge Elimination System) permit to the city prior to permit issuance.	Developers' compliance with the rules and regulations of the Department of Ecology will be assured.	☑	☐	☑	SW-1.7	382

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
Work with the Department of Ecology to comply with the stormwater standards. Obtain the stormwater manual from Ecology for updates, including supplemental guidelines.	Development and redevelopment will not degrade stormwater and resources.	☑	☐	☑	SW-1.3	383
Establish a plan for maintaining stormwater facilities.	Stormwater facilities will continue to perform as designed.	☑	☐	☑	SW-1.2	384
Establish a schedule for maintenance and inspection of stormwater facilities.	Stormwater facilities will continue to perform as designed.	☑	☐	☑	SW-1.2	385
BREMERTON						
Implement the stormwater program in accordance with state regulations and the city's comprehensive stormwater plan for operation, maintenance and capital facilities.	Adverse water quality impacts from the city's stormwater system will be reduced.	☑	☐	☑	SW-2	386
Continue to monitor the flow of the combined sewer system and water quality and carry out capital projects to reduce combined sewer overflows.	Adverse environmental impacts from the city's combined sewer system will be reduced.	☑	☐	☑	SW-9	387
Update the plan for reducing combined sewer overflows to reflect improved flow and water quality information, system analysis and constructed projects. Re-evaluate sewer collection system and wastewater treatment plant needs.	A plan that outlines the collection system and the most effective and efficient method by which the city can reduce overflow events and effectively treat wastewater will be developed.	☑	☐	☑	SW-9	388
PORT ORCHARD						
Develop a stormwater plan following adoption of Kitsap County's stormwater manual.	Flooding and damage to habitat will be reduced.	☑	☐	☑	SW-1	389
POULSBO						
Upgrade the stormwater and sewage disposal system in the SR 305/Fjord/Hostmark area.	Contamination of surface and groundwater in the SR 305/Fjord/Hostmark area will be reduced.	☑	☐	☑	SW-2	390
PORT OF KINGSTON						
Provide stormwater treatment and public education about best management practices for boat yard work.	Stormwater will be treated and water contamination will be reduced.	☑	☐	☑	SW-2.4	391
Continue to maintain a biofiltration system that was installed in 1998. This system naturally treats stormwater from a seven-acre of parking lot.	The biofiltration system will continue to perform as designed and all runoff water will be treated prior to entering into Puget Sound.	☑	☐	☑	SW-1	392

See page 8 for key.

LOCAL GOVERNMENT ACTIONS	OUTCOMES	Priority	Non-point	Salmon	PS Plan Element	Action ID
MASON COUNTY						
SHELTON						
Evaluate the status of public and private stormwater system maintenance programs within the city.	Audits will be conducted biennially to insure that jurisdictions comply with operation and maintenance requirements.	☑	☐	☑	SW-1.2	393
PIERCE COUNTY						
PIERCE COUNTY						
Implement federally-mandated National Pollution Discharge Elimination Service stormwater permit requirements.	The quality of water resources and the protection of fish, wildlife and human life will be improved.	☑	☐	☑	SW-2	394
Construct ponds and pipelines, sedimentation structures and constructed wetlands.	Flooding will be eliminated or minimized. Scouring flows which alter fish habitat will be attenuated. Marginal wetlands will be enhanced.	☑	☐	☑	SW-2	395
Continue to implement the comprehensive stormwater management program.	Impacts to water resources caused by new development and redevelopment will be reduced.	☑	☐	☑	SW-2	396
PUYALLUP						
Construct the Silver Lot wetland and pond to treat stormwater.	The wetland and pond will treat urban and area runoff.	☑	☐	☑	SW-2	398
Continue to regulate new development and redevelopment consistent with the Surface Water Design Manual. Work toward compliance with Ecology's requirements for managing stormwater, including modifying ordinances and changing the design manual.	Surface water degradation from new development and redevelopment projects will be reduced.	☑	☐	☑	SW-1.3	399
Continue spot inspections and responses to complaints.	Contamination to local surface waters will be reduced.	☑	☐	☑	SW-1.1	400
Train city construction and building inspectors on erosion control.	Contamination to local surface waters will be reduced.	☑	☐	☑	SW-1	401
Continue to remove Elodea from Clark's Creek.	Nutrient sources to Puyallup River will be reduced.	☑	☐	☑	SW-2.4	402
Continue annual sediment removal from Deer Creek.	Sediment discharges to Puyallup River will be reduced.	☑	☐	☑	SW-2.4	403
Upgrade the 15th Street storm sewer to include an off-line water quality treatment system.	Contamination to local surface waters will be reduced.	☑	☐	☑	SW-2.4	404

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
STEILACOOM						
Reconstruct 600 lineal feet of storm drain ditch to prevent erosion.	Erosion and the amount of oils and heavy metals entering Puget Sound will be reduced.	☑	☐	☑	SW-1	405
Continue enforcing rules and regulations for the town's stormwater management plan.	Stormwater facilities will continue to perform as designed over time.	☑	☐	☑	SW-1.7	406
TACOMA						
Complete the current plan for managing municipal stormwater and develop a new plan for the second five-year National Pollutant Discharge Elimination System permit, to be issued in July 2000.	The city will comply with its stormwater NPDES permit. Water quality will be protected and improved.	☑	☐	☑	SW-2.3	407
UNIVERSITY PLACE						
Complete a comprehensive stormwater plan.	Capital and operational stormwater improvements will be performed to protect water quality.	☑	☐	☑	SW-1	397
PORT OF TACOMA						
Continue to design and implement new development and redevelopment projects in a manner consistent with the city of Tacoma's Stormwater Management Manual.	New development and redevelopment will not degrade state waters and resources.	☑	☐	☑	SW-2	408
Continue to develop and implement the stormwater operation and maintenance program.	Stormwater facilities will continue to perform as designed over time, and the quality of receiving waters will be improved.	☑	☐	☑	SW-1.2	409
SAN JUAN COUNTY						
SAN JUAN COUNTY						
Implement the 1998 development code, with best management practices for stormwater and agriculture and standards for clearing and grading.	Properties will be developed and used in accordance with recommended practices to protect water resources and habitats.	☑	☐	☑	SW-1.7	410
Adopt an ordinance to regulate development and stormwater practices consistent with the basic stormwater program described in the Puget Sound Management Plan.	New development and redevelopment will comply with elements of the stormwater program and protect habitats and water resources.	☑	☐	☑	SW-1	411

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
SKAGIT COUNTY						
SKAGIT COUNTY						
Continue programs and services for managing flooding and stormwater. Efforts will include administration of the drainage utility, floodplain mapping and hydraulic studies for the Skagit River, flood awareness week and videos to increase flood awareness, reviews of new development for stormwater compliance, drainage complaint response and enforcement, public outreach and education, and ordinances updates for the clean water district and stormwater program. The Community Development Block Grant will continue to be administered to provide funding for local projects addressing stormwater and flooding.	Water quality degradation associated with flooding and stormwater will be avoided.	☑	☐	☑	SW-0	412
ANACORTES						
Install drainage structures and biofiltration swales along the Oakes Avenue corridor.	Runoff from upstream development will be controlled and surface water discharge to Guemes Channel will be treated.	☑	☐	☑	SW-2.4	413
Retrofit submersible pumps, replace a pump station and eliminate a combined sewer overflow at the B Avenue sewer lift station.	Operation and maintenance will be improved and a combined sewer overflow that presently discharges to the Guemes Channel will be eliminated.	☑	☐	☑	SW-9	414
Replace old sewer lines on a 100-year replacement cycle.	Integrity will be restored to the system and inflow and infiltration to sewer system will be reduced, thereby reducing capacity problems at the wastewater treatment plant during storm events.	☑	☐	☑	SW-9	415
Collect and control the flow of surface water in portions of the Clyde River basin.	Erosion and sedimentation presently occurring within the basin, particularly Burrows Bay in the vicinity of Anaco Beach, will be reduced.	☑	☐	☑	SW-2.4	416
Improve the operation and maintenance program by increasing maintenance staffing levels.	Increased maintenance will assure continued performance of existing public and private stormwater facilities.	☑	☐	☑	SW-1.2	417
Continue to regulate new development and redevelopment consistent with the city's basic stormwater quality management plan and development regulations.	New development and redevelopment will not degrade state water and resources.	☑	☐	☑	SW-1	418
Continue to construct new systems to collect surface water in specific areas, as they are identified, to separate surface water from the sanitary sewer system.	Loading at the wastewater treatment plant will be reduced and plant capacity will be extended.	☑	☐	☑	SW-9	419

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
Update the stormwater management plan to include the city's urban growth area.	Water quantity and quality problems will be identified and alternatives to mitigating problems will be developed.	☑	☐	☑	SW-1.5	420
Adjust stormwater rates to increase funds available for capital facilities and operation and maintenance.	Additional funds needed for capital facilities and operation and maintenance will be raised.	☑	☐	☑	SW-1.2	421
BURLINGTON						
Focus stormwater management on water quality of wetlands located at outfalls to the Skagit River.	Wetland functions and stormwater quality will be restored.	☑	☐	☑	SW-0	422
PORT OF SKAGIT COUNTY						
Install drainage ditches and cells near hanger areas that are being constructed.	Stormwater will be prevented from eroding the hillside and depositing sediment in nearby watershed.	☑	☐	☑	SW-1.1	423
SNOHOMISH COUNTY						
SNOHOMISH COUNTY						
Continue to regulate water resource impacts from new development and redevelopment according to local ordinances.	Water resource impacts from new development and redevelopment will be reduced.	☑	☐	☑	SW-1	424
Continue to implement actions contained in the National Pollution Discharge Elimination Service (NPDES) stormwater permit.	Water quality, drainage system function and fish habitat will be improved.	☑	☐	☑	SW-2.3	425
BOTHELL						
The city will continue to develop comprehensive stormwater management programs.	Management of stormwater will be improved.	☑	☐	☑	SW-2	426
Increase inspections and continue to enforce maintenance of private stormwater drainage facilities.	Downstream properties will be protected from flooding and pollution.	☑	☐	☑	SW-1.2	427
Continue to implement the recommendations of the city's Stormwater Master Plan.	Flooding resulting from regional growth will be prevented, controlled and reduced.	☑	☐	☑	SW-1.1	428
Continue operating a Storm and Surface Water Utility to fund capital projects, protect water quality and maintain public stormwater systems.	Funding will be provided for the stormwater management programs.	☑	☐	☑	SW-2	429
Continue to investigate stormwater problems in response to citizen complaints or emergencies.	Local drainage problems will be identified and addressed.	☑	☐	☑	SW-1.7	430

See page 8 for key.

LOCAL GOVERNMENT ACTIONS	OUTCOMES	Pri-ori-ty	Non-point	Sal-mon	PS Plan Element	Action ID
EVERETT						
Continue to regulate new development and redevelopment consistent with the basic stormwater program as described in the Puget Sound Management Plan.	Degradation of state waters and resources by new development and redevelopment will be minimized.	☑	☐	☑	SW-1.1	431
Continue to operate the city's stormwater utility and charge stormwater utility fees.	The city will continue to manage stormwater in order to control adverse impacts on water quality.	☑	☐	☑	SW-2	432
Continue to fund the stormwater program through the water and sewer utility.	Financial support for the stormwater program activities will be continued.	☑	☐	☑	SW-2	433
Continue to respond to citizen complaints, emergency spills and problem pollutant sources, and provide follow-up enforcement as authorized by an existing city ordinance.	Pollutant loading in Everett's receiving waters will be reduced.	☑	☐	☑	SW-1.7	434
Continue to provide annual reports on combined sewer overflows (CSOs) to the Department of Ecology.	The information regarding annual CSO volumes and frequencies will be used to adjust CSO project priorities, if needed.	☑	☐	☑	SW-9	435
Continue to operate the city sewer system in a way that minimizes combined sewer overflow (CSO) events at the high-volume CSOs.	The CSO frequency and volume will be reduced to maintain the city's current status of no more than one event per year.	☑	☐	☑	SW-9	436
Continue to enforce the city's stormwater manual, which is equivalent to Ecology's manual.	Degradation of state water and resources will be reduced.	☑	☐	☑	SW-2	437
Fund construction of stormwater facilities and acquisition of high-quality fisheries habitat.	Pollutant loading will be reduced, hydrology will be improved and fisheries habitat will be preserved.	☑	☐	☑	SW-2	438
Maintain as-built information for public and private stormwater facilities in the city.	Future troubleshooting of stormwater facilities will be facilitated.	☑	☐	☑	SW-2	439
Continue to commit staff time to coordinate stormwater issues with other agencies. Examples of this include participation in the Snohomish River Work Group and technical review committee for the North Creek Flood Hazard Reduction Plan.	Planning and implementation efforts will be coordinated.	☑	☐	☑	SW-2	440
Upgrade basin modeling capabilities by acquiring and training personnel and using a state-of-the-art stormwater model.	Assessment of stormwater impacts will be improved.	☑	☐	☑	SW-2	441
Identify and rank pollutant sources based on the results of water quality monitoring for further investigation, enforcement and/or correction.	Pollutant loading in Everett's receiving waters will be reduced.	☑	☐	☑	SW-2	442

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
Continue to implement a program to operate and maintain public and private stormwater facilities.	Stormwater facilities will continue to perform as originally designed.	☑	☐	☑	SW-2	443
LYNNWOOD						
Pursue a federal permit to construct a regional detention facility.	Flooding and erosive flows in Scriber Creek will decrease.	☑	☐	☑	SW-1	444
MARYSVILLE						
Continue to implement the operation and maintenance program for public and private stormwater facilities.	Stormwater facilities will continue to perform as designed.	☑	☐	☑	SW-1.2	445
Continue to regulate new development and redevelopment consistent with the city's adopted stormwater comprehensive plan and standards.	New development and redevelopment will not degrade state waters and resources.	☑	☐	☑	SW-2	446
MONROE						
Develop and implement an operation and maintenance program for public and private stormwater facilities.	Stormwater facilities will continue to perform as designed over time.	☑	☐	☑	SW-1.2	447
Continue to regulate new development and redevelopment consistent with the basic stormwater program described in the Puget Sound Management Plan.	New development and redevelopment will not degrade state waters and resources.	☑	☐	☑	SW-1	448
THURSTON COUNTY						
THURSTON COUNTY						
Carry out recommendations of adopted basin plans, develop policies to implement basin plan recommendations and ensure compliance with requirements of the stormwater ordinance.	Peak flows from development will be mitigated; water quality and stream habitat will be improved.	☑	☐	☑	SW-2	449
Design and construct capital facilities for stormwater to remediate existing stormwater problems.	Stream habitat and water quality will be improved and flooding will be reduced.	☑	☐	☑	SW-2	450
Inventory and inspect private stormwater facilities and provide technical assistance to owners of private stormwater facilities.	Stream habitat and water quality will be improved and flooding will be reduced.	☑	☐	☑	SW-1.2	451
LACEY						
Continue to regulate new development and redevelopment consistent with the basic stormwater program described in the Puget Sound Management Plan.	New development and redevelopment will not degrade state waters and resources.	☑	☐	☑	SW-1	452

See page 8 for key.

LOCAL GOVERNMENT ACTIONS	OUTCOMES	Priority	Non-point	Salmon	PS Plan Element	Action ID
Complete the Stormwater Master Plan, establishing practices and priorities which are consistent with the objectives of the Puget Sound Management Plan.	The Stormwater Master Plan will identify and prioritize capital projects and practices that promote the greatest degree of protection of our water resources. The Master Plan will promote completion of projects identified within the Henderson Inlet Watershed Plan.	☑	☐	☑	SW-1	453
OLYMPIA						
Institute a program to maintain residential stormwater ponds that is cost effective and efficient. Integrate maintenance of multi-family, public and private ponds into one program. Address issues regarding annexation of ponds in the urban growth area.	Stewardship of stormwater ponds will be improved and infiltration, water quality and habitat protection will be increased.	☑	☐	☑	SW-1.2	454
YELM						
Implement an operation and maintenance program for public and private stormwater facilities.	Stormwater facilities will continue to perform as designed over time protecting the watershed and groundwater environment.	☑	☐	☑	SW-1.2	455
THURSTON CONSERVATION DISTRICT						
Work with the building community, on a voluntary basis, to reduce sediments coming from construction sites.	Builders and agencies will receive technical assistance to reduce sedimentation.	☑	☐	☑	SW-2	456
WHATCOM COUNTY						
BELLINGHAM						
Collect field data for geographic information systems in order to improve the county's ability to locate stormwater discharge points.	Illicit discharges will be easier to find. Response and tracking problems will be improved.	☑	☐	☑	SW-2	457
Continue to comply with the comprehensive stormwater program elements. Adhere to adopted watershed plans. Continue staffing and resource allocation.	Stormwater quality will be improved.	☑	☐	☑	SW-1.6	458

Municipal and Industrial Discharges

Puget Sound Management Plan Goal

- Achieve comprehensive improvement in the control of toxic and other pollutants discharged into Puget Sound by industrial and municipal dischargers, thus reducing and eventually eliminating harm from toxic contaminants entering or accumulating in the Sound.

Strategies for Achieving Goal

- Require all permits to include monitoring and limits on toxics and other pollutants of concern.
- Develop tools to improve permits, including a permit writers' manual, data management, laboratory support, technical assistance and training.
- Provide resources to control pollution sources and clean up contaminated sites in urban bays.
- Substantially increase inspections and enforcement of permitted discharges.
- Identify and control unpermitted discharges.

Toxic Contamination in Puget Sound Mussels
Number of Stations

	Increasing Trend	No Trend	Declining Trend	% Decrease 1986-1993
Mercury	0	4	3	32 - 54%
Copper	0	4	3	24 - 44%
Zinc	0	5	2	20 - 29%
PCBs	0	5	2	79 - 96%
Butyl tin	0	5	2	70 - 92%

National Oceanic and Atmospheric Administration, 1997

Concentrations of mercury, copper, zinc, PCBs and butyl tin in mussels have declined significantly at a number of long-term stations in Puget Sound. PCBs and butyl tin show the most significant declines – these chemicals are severely regulated or banned.

Background and Trends

The Action Team's approach to reducing toxic contaminants emphasizes controlling toxic discharges from municipal and industrial facilities through state-issued permits. The permits require the treatment of wastewater prior to discharge. Untreated or poorly treated wastewater contaminates the water and sediments and degrades the health of marine life.

During the past decade, good progress has been made on decreasing the discharge of toxic chemicals to Puget Sound. Issued or re-issued permits called for enhanced treatment levels. Permit writers are better trained. Dischargers receive technical assistance. Pollution prevention programs have been improved.

Urban Bay Action Teams help industry control pollution sources and reduce toxic discharges to urban bays.

Over the years, industrial facilities have installed better treatment systems, and municipal plants have provided secondary treatment of sewage. But many effluents still exceed water quality standards at the end-of-the-pipe, where they flow into Puget Sound, and many discharges contaminate sediments and marine life. Research by the National Marine Fisheries Service has shown that fish in urban waterways are harmed by exposure to toxic chemicals.

Highlights of 1999-2001 Actions

- The Department of Ecology will administer the state and federal program for wastewater discharge permits by issuing and reissuing permits, conducting compliance inspections and upgrading control of toxic discharges to protect water quality and water uses.
- Ecology will provide technical assistance to discharges and enforce, where appropriate, violations of water quality.
- Ecology will develop strategies to control and eliminate bio-accumulating toxic chemical compounds.
- The U.S. Environmental Protection Agency will issue and reissue permits for wastewater discharges from federal facilities, consistent with state standards.
- Cities and counties will construct and expand municipal treatment plants, extend sewer lines, and construct facilities to reclaim water.
- Ecology will develop water cleanup plans (total maximum daily loads) to improve permits, achieve water quality standards and protect beneficial water uses.

1999-2001 Budget for State Actions

Total Provisoed Funding	$3,762,674
Total Other Funding	$0

STATE AND FEDERAL ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
DEPARTMENT OF ECOLOGY							
Administer state and federal wastewater discharge permits to current environmental standards, including requirements for pollution prevention in every individual permit. This includes issuing and re-issuing state and federal National Pollution Discharge Elimination System permits (NPDES). Ecology is following the five-year cycle and schedule (adopted in 1993) for re-issuing NPDES permits. Administer the permit-fee program, including working with the Permit Program Partnership on quality strategies. Manage permit data.	Federal and state permits for wastewater discharge will meet current environmental standards and, to the extent possible, emerging standards, as reviewed and re-issued on a five-year watershed schedule. Data on permits will be maintained in a database and reported to the Environmental Protection Agency.	☑	☐	☑	DOE-02	P-6-10	460
Regularly inspect permitted facilities for compliance with permit requirements. Provide technical assistance where needed and according to environmental criteria. Take enforcement actions, where necessary, based on inspections, discharge monitoring reports and identified water quality violations. Report enforcement actions to the Environmental Protection Agency in accordance with the State/EPA Environmental Performance Partnership Agreement.	Discharges will be brought into compliance with permit conditions and environmental standards.	☑	☐	☑	DOE-02	P-14	461
Continue to develop water cleanup plans (Total Maximum Daily Loads) that are in process and start developing new plans as the basis for applying conditions to water quality permits.	Allowable loadings will be established and implemented.	☑	☐	☑	DOE-02	P-6-10	462
Convene stakeholder committees to develop strategies for controlling bio-accumulative chemical compounds (BCCs). Develop and promote the BCC-elimination strategy. Develop environmental indicators and monitor the effectiveness of efforts to reduce BCC emissions and discharges.	Strategies will be developed and implemented to eliminate BCCs in new sources by 2005, eliminate BCCs in existing sources by 2020 and control discharges of BCCs from cleanup sites by 2025.	☑	☐	☑	DOE-02	P-0	463
U.S. ENVIRONMENTAL PROTECTION AGENCY							
Continue to issue National Pollutant Discharge Elimination System (NPDES) permits for federal facilities and tribes.	NPDES discharge permits will ensure compliance with current tribal and state water quality standards.	☑	☐	☑		P-11	464

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
JEFFERSON COUNTY						
PORT TOWNSEND						
Replace an undersized interceptor sewer main, and improve a key wastewater pump station.	Sewer overflows during storm events will be reduced, and water quality of receiving waters will be improved.	☑	☐	☑	P-0	470
KING COUNTY						
KING COUNTY						
Adopt the Regional Wastewater Services Plan.	Regional priorities for wastewater collection and treatment will be established.	☑	☐	☑	P-0	471
KIRKLAND						
Construct sanitary sewer extensions to serve properties with failing septic systems that are causing "emergency" health and safety conditions.	The current sanitary sewer will be extended to properties with failing septics, eliminating groundwater contamination.	☑	☐	☑	P-0	472
NORTH BEND						
Study and reduce unpermitted discharges and overflows of sewage.	Illicit discharges, spills and overflows will be reduced.	☑	☐	☑	P-20	473
SNOQUALMIE						
Complete the start-up of a new wastewater treatment facility.	Effluent discharged into the Snoqualmie River will meet Class A water quality requirements from April through October, and nitrogen and phosphorus will be reduced from wastewater.	☑	☐	☑	P-0	474
Work with King County and the King County Health District to investigate extending city sewer service to residences with failing on-site sewage systems that are polluting Kimball Creek. Sewer extensions will be funded by creating a utility local improvement district in King County adjacent to city limits.	Water quality in Kimball Creek, a tributary to the Snoqualmie Rive will be improved.	☑	☐	☑	P-0	475
KITSAP COUNTY						
POULSBO						
Continue to test water quality of the city's wastewater system.	Water quality standards will be met.	☑	☐	☑	P-0	476

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
MASON COUNTY						
MASON COUNTY						
Build a wastewater treatment plant.	Pollution from on-site sewage treatment systems will be prevented from reaching marine waters,	☑	☐	☑	P-0	477
Complete a feasibility study for wastewater treatment in south Hood Canal and Belfair.	Information necessary to determine where and how to proceed with wastewater treatment will be provided.	☑	☐	☑	P-0	478
SKAGIT COUNTY						
SKAGIT COUNTY						
Participate with the cities of Mount Vernon, Burlington and Sedro-Woolley in the proposed water pollution cleanup plan (TMDL) study for the Skagit River.	The allowable water pollution cleanup plan (TMDL) for the Skagit River will be re-evaluated by the Department of Ecology.	☑	☐	☑	P-0	479
ANACORTES						
Extend sanitary sewers to the south March Point urban growth area.	Groundwater contamination and discharge of pollutants into Fidalgo Bay will be eliminated.	☑	☐	☑	P-0	480
In three phases, install 850,000 gallons of in-line storage in the sanitary sewer collection system.	Wastewater treatment plant by-passes will be eliminated or reduced and overflows of untreated sewage from sewer covers located on Q Avenue will be prevented when flows exceed peak hourly capacity.	☑	☐	☑	P-0	481
SNOHOMISH COUNTY						
SNOHOMISH COUNTY						
Continue to systematically investigate water quality problems, including illicit discharges to the county's storm sewer, and take remedial action, including enforcement of the county's water pollution and control ordinance.	Pollution in the water bodies of Snohomish County will be reduced.	☑	☐	☑	P-20	482
EVERETT						
Investigate and enforce against illegal pollution sources on private property and investigate and correct illegal pollution sources on city-owned property.	Pollutant loading in Everett's receiving waters will be reduced.	☑	☐	☑	P-0	483

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
MARYSVILLE						
Continue to design and expand the city's sanitary sewer system within the boundary.	Sanitary sewer will be made available to additional areas within the city's urban growth area.	☑	☐	☑	P-0	484
THURSTON COUNTY						
YELM						
Complete a Class A water reclamation facility and implement initial reuse options in April 1999. This includes consumptive and non-consumptive uses. The city will fund, design and construct the remaining re-use option facilities, making Yelm a 100 percent re-use community by June 2001.	The existing secondary wastewater discharge will be removed from the Nisqually River, preserving the pristine quality of the river in accordance with the Nisqually River Management Plan.	☑	☐	☑	P-0	485

Puget Sound Management Plan Goal

- Reduce and ultimately eliminate harm from wastes generated by existing and future on-site sewage systems.

Strategies for Achieving Goal

- Establish comprehensive programs at the local level for the appropriate application of on-site sewage technology and for effective operation, maintenance and inspection, education and financial and technical assistance.
- Provide state oversight and assistance to local health jurisdictions.
- Research, demonstrate and promote alternative on-site treatment technologies, as appropriate.

In 1998, there were 411,000 on-site sewage systems in the Puget Sound basin. Failure rates for on-site sewage systems vary considerably. Sanitary surveys at near-shore homes around Puget Sound have identified failure rates ranging from 3 percent to over 50 percent of homes. Failure rates more generally ranged from 10 to 25 percent, based on a number of sanitary surveys reviewed in 1996. In Mason County, sanitary surveys found that homes on the shoreline had much higher failure rates than upland homes. (Puget Sound Notes, No. 39, June 1996)

Background and Trends

There are over 400,000 on-site sewage systems in the Puget Sound basin. When properly designed, sited, installed, operated and maintained, they effectively treat sewage in areas not served by municipal treatment plants. Improperly functioning systems can pollute Puget Sound's waters with bacteria and viruses, and are one of the main contributors to shellfish downgrades around the Sound.

A number of recent initiatives are improving the performance and management of on-site sewage systems. State regulations require that local jurisdictions develop programs to ensure on-site systems are properly operated and maintained. The departments of Health and Licensing are developing a licensing program for designers and a certification program for local health inspectors.

The state also contracted with local health jurisdictions to research and demonstrate alternative on-site treatment technologies.

Local health jurisdictions are developing and adopting operation and maintenance programs to ensure that on-site sewage systems are maintained over time and do not fail prematurely. As of 1998, 42 percent of the local health agencies in Puget Sound had adopted such programs (see Table 2.) Most of these jurisdictions also have programs for education, financial assistance and professional certification.

Highlights of 1999-2001 Actions

- The Department of Health will provide technical assistance to help local jurisdictions manage on-site sewage systems.
- Health will develop and maintain an information clearinghouse on technical standards for on-site systems. It will develop and distribute a catalog of approved alternative systems.
- Health will review and revise state technical standards and guidance for approved systems and will review and approve new alternative and experimental technologies.
- The Northwest On-site Training Center will train industry practitioners, local agency staff and others.
- Local governments will implement state regulations for managing on-site sewage. They will develop, adopt and implement on-site sewage operation and maintenance programs.

1999-2001 Budget for State Actions

Total Provisoed Funding	$1,258,430
Total Other Funding	$0

STATE AND FEDERAL ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
DEPARTMENT OF HEALTH							
Provide technical assistance to citizens, state and local agencies, interagency work groups and others. Improve the capacity of staff to provide assistance and services. Develop and maintain a clearinghouse of information on systems and technical standards and periodically distribute updates. Develop and distribute a catalog of approved alternative systems.	Citizens, private sector practitioners, and state and local agency staff will receive the information needed to make appropriate decisions regarding on-site sewage system technologies. Staff will attain more technical expertise and deliver better services and products.	☑	☐	☑	DOH-04	OS-1	492
Continue to support the Northwest On-site Training Center by serving on its management board, helping to develop curriculum and products for out-of-classroom training, and helping to enhance the training facility, including extending curriculum to new audiences, such as citizens and real estate professionals.	Training will be improved. Industry practitioners who cannot travel to the center will have access to training. Underutilized portions of the center will be used.	☑	☐	☑	DOH-04	OS-3	493
Facilitate the on-site sewage system Technical Review Committee. Review and revise existing technical standards and documents. Review and develop standards for new technologies, including alternative, experimental and proprietary systems. Review and approve tank additives. Revise interpretive policies for local governments. Develop wastewater tank standards and adopt these as rules. Establish, with the Department of Licensing, a licensing program for designers and a certification program for local agency staff. Assist local health directors develop and apply local on-site sewage program standards.	Proposed technologies will be reviewed thoroughly. Technical standards and documents will be revised. Approved technologies will meet or exceed state standards. State regulations will be implemented consistently among local jurisdictions. Tank and pump chamber standards will be improved. Practitioners will receive better training in their specialty areas.	☑	☐	☑	DOH-04	OS-5	494
Review and revise state on-site sewage regulations. Review and approve local on-site sewage regulations, including locally-approved waivers. Participate in local advisory committees. Promote development and implementation of local programs to assure proper operation and maintenance of on-site sewage systems.	Standards to protect public health and the environment will be consistent statewide, while allowing local health jurisdictions the flexibility to address specific site and regional conditions. Technical information will be shared through advisory committees. Local programs will be enhanced and systems will be better maintained through local operation and maintenance programs, resulting in lower failure rates.	☑	☐	☑	DOH-04	OS-1	495
Review engineering reports and operation and maintenance manuals for proposed large on-site systems. Issue permits and maintain a database. Develop agreements with local governments to implement programs for large on-site systems.	Proposed projects will meet minimum standards. The systems will receive adequate and timely operation and maintenance. Information on systems will be accessible through a database. Project oversight will be improved through state and local agreements.	☑	☐	☑	DOH-04	OS-4	496

STATE AND FEDERAL ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
UNIVERSITY OF WASHINGTON, WASHINGTON SEA GRANT PROGRAM							
Provide technical assistance, education and information to local decision-makers, health districts, community residents and industry members about maintaining and monitoring on-site sewage systems.	On-site sewage systems will be properly maintained and monitored.	☑	☐	☑	UW-01	OS-2	497
Provide technical assistance, education and information to local decision-makers and communities about alternative, decentralized sewer systems.	Information on alternative, decentralized sewer systems will help communities make appropriate decisions about replacing individual on-site sewage systems that are failing.	☑	☐	☑	UW-01	OS-5	498

TRIBAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
JAMESTOWN S'KLALLAM TRIBE						
Monitor on-site sewage systems owned and operated by the tribe and repair or replace failing systems.	The quality of surface and groundwater will be improved.	☑	☐	☑	OS-2	500

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
SOUNDWIDE						
THE PUGET SOUND ACTION TEAM RECOMMENDS THAT:						
Local health jurisdictions should implement the state on-site sewage regulations and collaborate with other local governments to run effective, comprehensive on-site sewage programs to protect public health and environmental quality. Local on-site sewage programs should include: * Methods to assure the proper siting, design, installation, operation and maintenance of all new on-site sewage systems. * Strategies to find and require repair of failing systems. * Public education and outreach. * Certification of industry and local government personnel. * Controlling development in sensitive areas. * low-interest loan programs. * Inspections and enforcement.	The number of failures annually documented by local health jurisdictions will decline.	☑	☐	☑	OS-2	505
CLALLAM COUNTY						
CLALLAM COUNTY						
Utilize an advisory committee to develop and codify requirements for operation and maintenance of on-site sewage systems by their owners and managers.	Contamination from on-site sewage systems will be reduced.	☑	☐	☑	OS-2	506
Distribute revolving loans to fund local low-interest or interest-free loans to repair failing septic systems and/or to improve management on agricultural lands.	Contamination will be prevented from failing septic systems and poor farm management.	☑	☐	☑	OS-2	507
SEQUIM						
Cooperate with the Clallam County Health Department to develop an operation and maintenance program for inspecting on-site sewage systems.	Users of on-site sewage systems will receive information and education on preventing contamination from failed septic systems.	☑	☐	☑	OS-2	508

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
ISLAND COUNTY						
OAK HARBOR						
Prohibit the installation of garbage grinders in new buildings. Continue to inspect grease traps and interceptors every six months under the on-site operation and maintenance program.	Water quality will be improved by reducing the discharge of nutrients and through implementing the operation and maintenance program.	☑	☐	☑	OS-2	509
JEFFERSON COUNTY						
JEFFERSON COUNTY						
Develop and implement an operation and maintenance program for on-site sewage systems, consisting of notifying property owners about maintenance needs.	All systems will be inspected at regular intervals. Systems will be properly operated and maintained to reduce failure.	☑	☐	☑	OS-2	510
Administer a low-interest loan program to allow property owners to repair or replace failing on-site sewage systems adjacent to surface waters and at high risk of contributing to pollution.	Water quality will be protected and improved by reducing the number of failing on-site systems.	☑	☐	☑	OS-2	511
KING COUNTY						
SEATTLE-KING COUNTY DEPARTMENT OF PUBLIC HEALTH						
Prepare code amendments and, if authorized and funded, implement a monitoring program to help assure proper operation and maintenance of on-site sewage systems.	More on-site sewage systems will be regularly maintained and properly operated.	☑	☐	☑	OS-2	512
Develop code amendments and, contingent upon adoption, implement a program requiring annual continuing education units for on-site sewage system industry practitioners.	A more knowledgeable industry will result in higher quality design, installation and servicing of on-site systems.	☑	☐	☑	OS-3	513
Develop standardized criteria and require that system designers complete an on-site sewage system owner's instruction and service manual to be given to the homeowner when an on-site system is installed or repaired.	An instruction and service manual will accompany new or repaired systems facilitating better understanding of how to properly operate and maintain an on-site system.	☑	☐	☑	OS-2	514

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Nonpoint	Salmon	PS Plan Element	Action ID
KITSAP COUNTY						
BREMERTON-KITSAP COUNTY HEALTH DISTRICT						
Continue to run an operation and maintenance program for on-site sewage systems through the Kitsap County Surface and Stormwater Management Program and septage tipping fees. Expand the program from a focus on residential systems to include high-priority commercial and industrial systems. Implement regulatory requirements and provide education on the use of on-site systems to homeowners, designers and installers, realtors, developers, builders, lending institutions, schools and other government agencies. Implement a testing and certification program for designers and installers of on-site systems. Develop a computer system to track on-site pumping and maintenance activities. Distribute an existing on-site sewage owner's manual to homeowners. Develop training classes and education materials, and distribute to parties interested in operation and maintenance. The operation and maintenance program is part of Chapter 400-12 WAC (the Nonpoint Rule) watershed action plans in Kitsap County.	The possibility of on-site sewage system failures will be diminished by requiring owners to periodically maintain and monitor their systems. Public responsibility for the safe operation of on-sites will be promoted. Public health and the environment will be protected from failing systems.	☑	☑	☑	OS-2	515
Investigate all public complaints related to failing on-site sewage systems and, in a timely manner, evaluate and correct systems found to be failing. Continue operation of a sanitary survey program to prioritize and investigate areas with probable on-site sewage system performance problems to identify and correct failing on-site sewage systems.	Adverse impacts to human health and the environment from failing on-site sewage systems will be eliminated.	☑	☐	☑	OS-2	516
Continue to operate a low-interest program to help homeowners repair and upgrade failing on-site sewage systems.	Water quality degradation due to failing on-site sewage systems will be reduced.	☑	☐	☑	OS-2	517
MASON COUNTY						
MASON COUNTY						
Expand the operation and maintenance program to assure routine inspection of all on-site sewage systems located within 100 feet of marine shorelines.	On-site system performance data will be collected and reported. Septic system failures along marine shorelines will be reduced. There will be greater accountability from propriety system licensees and septic system designers.	☑	☐	☑	OS-2	518

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
PIERCE COUNTY						
TACOMA						
Prepare a database of addresses for households using on-site sewage systems. Hold public meetings with on-site owners to discuss the costs and benefits of owning on-site systems and financing options for repairing or upgrading them. Begin extending sanitary sewers to serve areas currently using on-site systems, where feasible.	A database for on-site sewage systems users will be compiled.	☑	☐	☑	OS-0	519
TACOMA-PIERCE COUNTY HEALTH DEPARTMENT						
Continue the Burnett Consolidated Demonstration Project in which federal, state and local funds and volunteers are being used to repair and monitor septic systems that historically discharged to South Prairie Creek.	Long-term and viable treatment and disposal of sewage will reduce risks to human health and increase protection of habitat in South Prairie Creek.	☑	☐	☑	OS-1	520
Prevent unnecessary failure of on-site-sewage systems by requiring periodic inspection of systems and educating users.	Public exposure to sewage and contamination of water resources will be reduced. The number of costly repairs will be reduced through regular system maintenance.	☑	☐	☑	OS-2	521
Promote the repair of failing on-site-sewage systems in selected shellfish areas by funding much of the repair costs.	Water quality in selected shellfish areas will be protected and improved, thereby preventing downgrades or leading to upgrades in classification.	☑	☐	☑	OS-2	522
SAN JUAN COUNTY						
SAN JUAN COUNTY						
Provide financial assistance to repair failing on-site sewage systems through participation in state-funded, low-interest loan and grant programs.	Funding will be provided for system repairs that protect and restore water quality in priority areas.	☑	☐	☑	OS-2	523
Complete the installation of a septage handling facility on San Juan Island.	Cost-effective treatment and disposal of septage will be provided, fostering improvements in the maintenance and performance of on-site sewage systems.	☑	☐	☑	OS-0	524

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
SKAGIT COUNTY						
SKAGIT COUNTY						
Control pollution from on-site sewage systems to protect and restore shellfish areas. Educate homeowners and train appropriate industry and business groups on the proper use and maintenance of on-site sewage systems. Expand the county database to include information on system repair and monitoring. Identify priority areas and conduct sanitary surveys. Provide grants and low-interest loans, as available, to homeowners for system repairs, focusing on high-priority areas. Continue implementing the county's operation and maintenance program.	Contamination from failing or improperly managed systems will be reduced. The county database will be expanded to include information for on-site systems. Priority areas will be identified and funding will be provided for system repairs to protect and restore water quality in these areas.	☑	☐	☑	OS-2	525
SKAGIT CONSERVATION DISTRICT						
Conduct community workshops on the maintenance of on-site sewage systems, in cooperation with local entities, to encourage repair and maintenance of on-site systems.	Contamination from failing or improperly managed systems will be reduced.	☑	☐	☑	OS-2	526
SNOHOMISH COUNTY						
SNOHOMISH HEALTH DISTRICT						
Develop and implement an operation and maintenance program for on-site sewage systems.	Homeowners will be notified every three years to inspect and service their on-site sewage systems. Restaurants, food-service and other high-waste/non-residential establishments will be inspected annually.	☑	☐	☑	OS-2	527
THURSTON COUNTY						
THURSTON COUNTY						
Regularly evaluate and maintain on-site sewage systems. Inspect all systems at least every four years and pump as necessary. Distribute education materials to owners of on-site sewage systems. Enhance educational programs for certified maintenance personal.	Assurance that each sewage system in the county will be properly operated and maintained.	☑	☐	☑	OS-2	528

See page 8 for key.

LOCAL GOVERNMENT ACTIONS	OUTCOMES	Priority	Non-point	Salmon	PS Plan Element	Action ID
OLYMPIA						
The Septic Management Program will address the prevention of septic-based water pollution from three angles: policy research on, and development of, septic standards for aquifer protection; septic maintenance education and regulation; and targeted monitoring of groundwater for septic impacts.	An interagency evaluation will determine the adequacy of current septic regulatory standards in protecting aquifers. The maintenance project will create educational materials and methodologies that empower on-site users to properly maintain and monitor their systems. The monitoring project will identify area-wide aquifer degradation related to on-site sewage, enabling regulatory agencies to respond. It will also clarify correlations among septic impacts, site conditions and precipitation levels.	☑	☐	☑	OS-2	529

Local Watershed Plans

Puget Sound Management Plan Goal

- Reduce and ultimately eliminate harm from nonpoint sources of pollution to Puget Sound, including pathogens, toxic contaminants, sediments and nutrients.

Strategy for Achieving Goal

- Provide financial and technical assistance and incentives for communities and local governments to develop and implement watershed action plans in priority ranked watersheds.

Background and Trends

Watershed protection involves the entire community in reducing sources of nonpoint pollution. Cities and counties – along with their federal, tribal and state partners, residents, businesses and others – develop and implement watershed plans that identify steps to manage the cumulative effects of nonpoint pollution and habitat destruction. Sources of nonpoint pollution include failing on-site sewage systems, runoff from poorly managed agriculture and forest lands, pollutants in urban runoff, untreated sewage from boats and marinas, and other sources.

The activities causing nonpoint pollution aren't new, but rapid growth and development in the Puget Sound basin have greatly increased the severity of pollution problems. The *Puget Sound Water Quality Management Plan* and a supporting state regulation (Chapter 400-12 WAC) defined a process for watershed planning in Puget Sound. Local watershed plans address nonpoint sources of pollution and habitat restoration and protection. During the last decade, 36 watershed plans were adopted and are being implemented. Seven more are in various stages of planning or adoption. Table 3 shows the status of watershed action plans in the basin.

The 1998 Salmon Recovery Act and Watershed Planning Act address water quantity and quality, habitat protect and restoration. In addition, the federal Clean Water Act requires state and local governments to reduce inputs of nonpoint pollution to river segments that do not meet water quality standards.

The responsibilities of state agencies involved in watershed planning and salmon recovery are defined through a memorandum of understanding. Tribal, state and local governments cooperate to implement the Watershed Management Act and Salmon Recovery Act. State interagency leads coordinate policy, financial, technical and monitoring assistance to local planning efforts. Coordination includes consideration of existing watershed planning and implementation undertaken as a result of watershed planning under Chapter 400-12 WAC.

Highlights of 1999-2001 Actions

- The Conservation Commission will fund Puget Sound conservation districts to implement watershed plan actions and other actions related to the Puget Sound Management Plan.
- The Department of Ecology will provide technical assistance on nonpoint pollution and watershed characterizations.
- The U.S. Forest Service will restore degraded watersheds in the Olympic and Mount Baker National Forests and cooperate with local watershed councils.
- The Hood Canal Coordinating Council will update existing watershed plans and develop a Hood Canal Watershed Management Plan and regional performance standards.
- Tribal, state, county and city governments will implement high-priority watershed improvement projects from adopted watershed plans.

1999-2001 Budget for State Actions

Total Provisoed Funding	$73,000
Total Other Funding	$0

STATE AND FEDERAL ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
CONSERVATION COMMISSION							
Continue to provide grants to the 12 conservation districts in Puget Sound to implement the Puget Sound Plan in cooperation with the Action Team support staff.	Grants will fund conservation district projects and programs designed to address many priorities of the Puget Sound work plan.	☑	☐	☑	CC-01	WP-5.2	600
DEPARTMENT OF AGRICULTURE							
Assist local planning groups to develop and implement watershed action plans.	Assistance on the proper use of pesticides and fertilizers, and their storage and transportation, will be provided as requested. Watershed plans will be reviewed when requested by local governments. Actions required of the Department of Agriculture will be carried out, as funding and authority allow.	☑	☑	☑	DOA-01	WP-4	601
DEPARTMENT OF ECOLOGY							
Answer questions about how much water is available in a watershed. Technical specialists will help to answer questions about how the surface and groundwater interact and the effect this interaction has on watershed management decisions. The wetland assessment tool will define wetland functions and show how wetlands can be used to enhance seasonal in-stream flows. The watershed characterization teams will bring technical specialties together to create a "whole water picture" for the watershed. This will include surface and groundwaters, wetlands, water quality and water quantity. The budget enhancement for this action is part of the overall Ecology "Water for People, Farms and Fish" budget request.	Information will be provided to local planning groups on watershed hydrology, functional wetland assessment tools and the three watershed characterization teams. The new information will enable tribal, local, and state governments to solve water and salmon problems much more effectively.	☑	☐	☑	DOE-08	WP-0	602
Integrate the requirements for local watershed planning (Chapter 400-12 WAC) as required under Chapter 247, Laws of 1998 (the Watershed Management Act) into current and ongoing programs.	Programs will be coordinated and not duplicate activities of other agencies.	☑	☐	☑	DOE-03	WP-0	603
Provide technical and financial assistance to local and tribal governments on effective programs to control nonpoint sources of pollution.	Local and tribal governments will implement effective progress under Chapter 400-12 WAC (the Nonpoint Rule) and Chapter 247, Laws of 1998 (the Watershed Management Act) for water quality, water conservation and salmon recovery. Watershed plans will continue to be implemented and water quality will be improved.	☑	☑	☑	DOE-03	WP-0	604

STATE AND FEDERAL ACTIONS	OUTCOMES	Pri-ori-ty	Non-point	Sal-mon	Budget Code	PS Plan Element	Action ID
DEPARTMENT OF ECOLOGY							
Coordinate Ecology's water quality activities with the need to protect salmon and with local watershed planning under Chapter 247, Laws of 1998 (the Watershed Management Act).	Ecology's water quality program will help local governments meet water goals, examine pollution prevention, water conservation and re-use. The program will be coordinated with other agency initiatives.	☑	☐	☑	DOE-02	WP-0	605
Continue to support local watershed management efforts, including assisting lead agencies and local watershed committees; reviewing and approving watershed plans; and assisting with implementation, monitoring and evaluation under the process described in Chapter 400-12 WAC (the Nonpoint Rule).	Local watershed planning will be integrated into existing and new water initiatives.	☑	☑	☑	DOE-03	WP-7	607
U.S. FOREST SERVICE							
The Olympic and Mt. Baker National Forests will continue to restore degraded watersheds, coordinating their efforts with local watershed councils.	Fish habitat and water quality issues will be addressed and problem areas improved. Coordination with local watershed councils will result in giving priority to work in the areas of highest need.	☑	☑	☑		WP-0	608
U.S. FISH & WILDLIFE SERVICE							
Continue to restore non-federal lands, coordinating efforts with local, private, commercial, tribal, state and federal stakeholders.	Watershed benefits will be achieved for endangered species, fish, water quality and watershed stakeholders.	☑	☑	☑		WP-0	609

TRIBAL GOVERNMENT ACTIONS	OUTCOMES	Pri-ori-ty	Non-point	Sal-mon	PS Plan Element	Action ID
JAMESTOWN S'KLALLAM TRIBE						
Complete the county surface and groundwater study in WRIA 18.	Better understanding of the relationship between surface and groundwater.	☑	☐	☑	WP-0	610
LUMMI NATION						
Implement water quality standards, stormwater management, and protection ordinances for wetlands and wellheads to protect water resources critical to public health and to cultural and economic resources.	Impacts of land uses on water resources will be minimized.	☑	☐	☑	WP-0	611
SUQUAMISH TRIBE						
Conduct an analysis of the Chico Creek watershed to estimate salmon production and impacts of hydrologic alteration, identify other critical habitat variables, model hydrologic changes with various build-out scenarios and develop prescriptions to protect habitat and species from future degradation.	Wild salmon production will be maintained in the watershed.	☑	☐	☑	WP-0	612

See page 8 for key.

LOCAL GOVERNMENT ACTIONS	OUTCOMES	Priority	Nonpoint	Salmon	PS Plan Element	Action ID
SOUNDWIDE						
THE PUGET SOUND ACTION TEAM RECOMMENDS THAT:						
All local jurisdictions should complete ongoing Chapter 400-12 WAC (the Nonpoint Rule) watershed planning and implement priority actions of completed watershed action plans. Local jurisdictions should incorporate their Chapter 400-12 WAC (the Nonpoint Rule) planning into new watershed management efforts that address water and salmon.	Local watershed action plans will be completed and incorporated into new watershed management efforts. Priority actions will be implemented.	☑	☑	☑	WP-4	615
HOOD CANAL COORDINATING COUNCIL (JEFFERSON, KITSAP AND MASON COUNTIES AND SKOKOMISH AND PORT GAMBLE S'KLALLAM TRIBES)						
HOOD CANAL COORDINATING COUNCIL						
Update existing local watershed action plans, outline a work plan to develop an overall Hood Canal Watershed Management Plan that is consistent with the Puget Sound Management Plan, and develop regional performance standards to recommend to elected officials.	Inconsistencies among watershed plans will be reduced.	☑	☑	☑	WP-4	616
Coordinate with local Water Resource Inventory Area watershed planning groups.	Watershed planning will be adequate and consistent across the region.	☑	☐	☑	WP-0	617
CLALLAM COUNTY						
CLALLAM COUNTY						
With the Jamestown S'Klallam Tribe, coordinate the Dungeness River Management Team, that cooperatively manages Dungeness watershed resources.	Projects and programs will be coordinated.	☑	☐	☑	WP-0	618
Coordinate with other agencies and organizations conducting water quality activities, such as the Eight Streams project.	Monitoring, awareness and stewardship of resources will be increased. Watershed plans will be implemented.	☑	☐	☑	WP-0	619
Conduct water resource planning and assessment, including water quality, habitat and in-stream flow components, for the Elwha and Dungeness watershed areas (Water Resource Inventory Area 18).	A planning group will be organized. Watersheds will be physically assessed.	☑	☐	☑	WP-2.4	620
Assist initial coordination of water resource interests in the west end of the county (water resource inventory areas 19 and 20) toward watershed planning as called for in Chapter 247, Laws of 1998 (the Watershed Planning Act).	There will be increased dialog among watershed entities, as well as better coordination and more projects.	☑	☐	☑	WP-0	621

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Nonpoint	Salmon	PS Plan Element	Action ID
Continue to seek funding to implement the Sequim Bay, Dungeness, and the Port Angeles-area watershed plans, the Dungeness-Quilcene Water Resource Management Plan, and the Sequim-Dungeness Groundwater Protection Strategy.	Water quality will be improved and stewardship and protection will be increased.	☑	☑	☑	WP-4	622
Produce a summary of watershed action plan implementation for the county, natural resource policy makers and the public for evaluating and redirecting pollution control efforts.	Water quality improvements and areas where more effort is needed will be recognized.	☑	☑	☑	WP-7.1	623
PORT ANGELES						
Continue to work with Clallam County, the Elwha and Jamestown S'Klallam Tribes and the Agnew Irrigation District on watershed planning for Water Resources Inventory Area 18 under Chapter 247, Laws of 1998 (the Watershed Management Act).	A watershed plan will be developed and water quantity and quality within Water Resources Inventory Area 18 will be assessed.	☑	☐	☑	WP-3	624
Work with the Elwha Tribe to identify and secure adequate water supply for the tribe's salmon rearing channel on the Elwha River.	Water conditions will be improved.	☑	☐	☑	WP-0	625
ISLAND COUNTY						
ISLAND COUNTY						
Finish developing the Central/South Whidbey Watershed Action Plan, Public Involvement and Education Program activities and supporting documents.	The Central/South Whidbey Watershed Action Plan and supporting documents will be developed and adopted. The public will be better informed about nonpoint source pollution issues.	☑	☑	☑	WP-4	626
Form a water-resource advisory committee by merging three existing water-related advisory committees. Its goal will be to review existing water resource plans and recommend ways to coordinate and implement these plans.	Coordination among the water resource programs will be increased, allowing a higher rate of implementation of proposed actions in existing water resource plans.	☑	☐	☑	WP-0	627
WHIDBEY ISLAND CONSERVATION DISTRICT						
Implement priority actions from the North Whidbey Watershed Action Plan.	Ten farm conservation plans will be completed annually; nonpoint source pollution will be prevented; and habitat will be restored through best management practices.	☑	☑	☑	WP-4	628
Assist in the development, adoption and implementation of the South Whidbey Watershed Action Plan. The Supervisor and District Manager will serve on Central/South Whidbey watershed management committee.	Nonpoint-source pollution will be reduced through the development and implementation of a local watershed action plan.	☑	☑	☑	WP-4	629

See page 8 for key.

LOCAL GOVERNMENT ACTIONS	OUTCOMES	Priority	Non-point	Salmon	PS Plan Element	Action ID
JEFFERSON COUNTY						
JEFFERSON COUNTY						
Serve as lead agency on Water Resource Inventory Area 17 watershed management. Participate in watershed management efforts in water resource inventory areas 16, 20 and 21, through the Hood Canal Coordinating Council.	Water resources will be available for meeting in-stream flows necessary to support healthy salmon runs and demands for growth. Water quality and fish habitat will be assessed, and strategies for improving water quality and fish habitat will be assessed.	☑	☐	☑	WP-0	630
PORT TOWNSEND						
Continue to implement the Port Townsend/U.S. Forest Service Cooperative Watershed Management Plan in a manner that focuses on water quality.	Water quality in the Big and Little Quilcene watersheds will be improved.	☑	☐	☑	WP-4	631
Continue efforts to encourage water conservation and improvements in-stream flows on the Big Quilcene.	Habitat for fish will be improved.	☑	☐	☑	WP-0	632
KING COUNTY						
KING COUNTY						
Participate in completing plans for the governance, implementation and financing of the already completed Regional Needs Assessment (RNA). Review Endangered Species Act policy for the Regional Water Quality Committee and the RNA. Review and adopt recommendations of the Fish Habitat Committee Task Force.	Regional and local priorities will be established by ordinance; a watershed management plan will be adopted; priorities for water quality and habitat will be established in King County.	☑	☐	☑	WP-4	633
Implement priority programs and capital projects identified in adopted basin plans for Bear, Soos, Issaquah, East Lake Sammamish and Cedar basins, and the May Creek basin plan, which is expected to be adopted.	Priority habitat, headwater and flood-impacted residences will be acquired. Flood control, erosion protection and habitat improvement projects will be constructed. Basin-specific development regulations to protect stream flows and water quality will be enforced. Education will occur through stewardship activities. Coordination with other agencies will result in implementing plans and leveraging resources.	☑	☐	☑	WP-4	634

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Nonpoint	Salmon	PS Plan Element	Action ID
In partnership with SeaTac, Des Moines and the Port of Seattle, implement the Des Moines Creek Basin Plan to rehabilitate salmon habitat in urban stream systems through a series of capital improvement projects. Projects include constructing a regional stormwater facility to control stormwater flow, removing a blockage to salmon migration, habitat stabilization and habitat enhancement.	Erosion of stream banks and channels will be controlled and downstream sedimentation impacts will be avoided. Available habitat for salmon spawning and rearing will be increased. Water quality of streams and nearshore habitat will be improved,	☑	☐	☑	WP-4	635
FEDERAL WAY						
Participate in the Central Puget Sound and Green-Duwamish watershed forums in King County and in the Puyallup watershed planning process with Pierce County. Participate in development of habitat conservation plans for salmon recovery.	Regional recovery of salmonids will be supported.	☑	☐	☑	WP-4	636
Continue to levy a surcharge on garbage rates to support the local hazardous waste program, including two visits per year of the wastemobile to Federal Way.	Hazardous waste will be properly disposed.	☑	☐	☑	NP-0	637
Hold special recycling events twice a year for hard-to-recycle materials, including appliances, tires and waste oil.	Hazardous materials will be properly disposed.	☑	☐	☑	NP-0	638
Promote oil and antifreeze recycling, proper disposal of hazardous materials and yard-waste recycling and composting with brochures and mailers to all ratepayers.	Hazardous materials will be kept away from aquatic resources and out of groundwater.	☑	☐	☑	NP-0	639
Continue to implement Federal Way actions from the Lower Puyallup Watershed Plan and the Hylebos and Lower Puget Sound Basin Plan.	Aquatic resources will be protected.	☑	☑	☑	WP-4	640
MERCER ISLAND						
Continue to actively participate in the Lake Washington Watershed Forum as a means of coordinating with other jurisdictions.	The city's stormwater and other programs will complement the programs of other jurisdictions and regional programs.	☑	☐	☑	WP-4	641
NORTH BEND						
Participate in regional watershed planning forums with King County.	Local and regional watershed plans will be integrated for the Upper Snoqualmie River Valley.	☑	☐	☑	WP-3	642
RENTON						
Continue to participate in the Cedar River Basin Council, and assist in the implementation of the Cedar River Basin and Nonpoint Pollution Action Plan.	Nonpoint pollution in the Cedar River Basin will be reduced.	☑	☑	☑	WP-4	643

See page 8 for key.

LOCAL GOVERNMENT ACTIONS	OUTCOMES	Priority	Nonpoint	Salmon	PS Plan Element	Action ID
Complete the May Creek Basin Plan, in coordination with King County and the city of Newcastle, and start to implement the plan recommendations.	The basin plan will be completed and implementation of recommendations will begin.	☑	☑	☑	WP-4	644
Implement the recommendations of the East Side Green River Watershed Plan, including the replacement of Southwest 27th Street culvert on Springbrook Creek, the Springbrook Creek Improvement Project and the Springbrook Creek Riparian Planting Project.	Upstream flooding will be reduced, and fish habitat and water quality will be improved.	☑	☑	☑	WP-4	645
Continue to fund the Surface Water Utility programs for capital improvement, engineering and operations and maintenance.	The Stormwater infrastructure will be maintained (cleaned) and will function properly to protect water quality, and reduce flooding and erosion. New development will meet the city's stormwater standards.	☑	☐	☑	WP-4	646
SEATTLE						
Conduct education and enforcement activities on hazardous wastes. Provide technical assistance to businesses and the community.	The introduction of hazardous wastes into the environment will be reduced or prevented.	☑	☐	☑	NP-0	647
Implement watershed action plans under Chapter 400-12 WAC (the Nonpoint Rule), the state rule governing watershed planning in Puget Sound.	An action plan for Thornton Creek will be developed and implemented. Approved watershed action plan components will continue to be implemented in Pipers and Longfellow creeks.	☑	☑	☑	WP-4	648
SHORELINE						
Work with the city of Seattle to create a watershed management plan for Thornton Creek.	Stream habitat will be improved and actions to improve water quality in Thornton Creek will be identified.	☑	☑	☑	WP-2.4	649
SNOQUALMIE						
Participate on the Snoqualmie Watershed Forum.	Watershed priorities will achieve regular water quality and wildlife goals.	☑	☐	☑	WP-3	650
TUKWILA						
Develop the Gilliam Creek Basin Water Quality Management Plan and city-wide plan for managing water quality.	The city will have planning tools to comprehensively protect water quality citywide.	☑	☐	☑	WP-2.4	651

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Nonpoint	Salmon	PS Plan Element	Action ID
KITSAP COUNTY						
KITSAP COUNTY						
Kitsap County's Surface Storm Water Management Program intends to encourage and track progress of implementation of activities identified in existing watershed management plans developed under Chapter 400-12 WAC (the Nonpoint Rule) process.	Actions implemented through watershed plans will be tracked and implementing agencies will be encouraged to carry out identified actions.	☑	☐	☑	WP-4	652
Continue the moderate-risk waste programs which include operation of a Moderate Risk Waste Collection facility, oil and antifreeze recycling and programs for small-quantity generators.	Improper disposal of chemicals from small-quantity generators, household hazardous wastes, and oil and antifreeze waste will be reduced.	☑	☐	☑	WP-0	653
BREMERTON						
Continue to implement Dyes Inlet and Sinclair Inlet watershed action plans.	Impacts of nonpoint-source pollution will be reduced.	☑	☑	☑	WP-4	654
POULSBO						
Develop and implement a watershed plan for Dogfish Creek.	Water quality and fish habitat in Dogfish Creek will be improved.	☑	☑	☑	WP-2.4	655
Implement priority actions of the Liberty/Miller Bay Watershed Action Plan.	Water quality in Liberty and Miller bays will be improved.	☑	☑	☑	WP-4	656
Assess the sources of contamination in Liberty Bay, including stormwater outfalls and failing septic systems within the city limits.	Contamination of Liberty Bay will be reduced.	☑	☑	☑	WP-4	657
Revise the city's comprehensive plan and continue to coordinate with appropriate jurisdiction.	The impacts of development on water quality will be reduced.	☑	☐	☑	WP-0	658
Implement the city's wellhead protection plan.	Pollution of the aquifer caused by new development will be reduced.	☑	☐	☐	WP-0	659
KITSAP CONSERVATION DISTRICT						
Inform landowners about programs and practices that address recommendations in watershed action plans as they pertain to agriculture, fish and wildlife habitat, and shellfish closure areas.	At least eight education-related programs will be offered to provide information on environmental land-use issues related to livestock. An emphasis will be placed on information about the implementation and effects of a new county agricultural ordinance and its relationship to local zoning and critical areas ordinances.	☑	☐	☑	WP-4	660

See page 8 for key.

LOCAL GOVERNMENT ACTIONS	OUTCOMES	Priority	Nonpoint	Salmon	PS Plan Element	Action ID
MASON COUNTY						
MASON COUNTY						
Mason County will act as lead agency for Phase I of watershed planning for Water Resources Inventory Area 16.	Phase I of watershed planning will be completed pursuant to Chapter 247, laws of 1998 (the Watershed Management Act).	☑	☐	☑	WP-0	661
Mason County will act as lead agency for watershed planning in Water Resources Inventory Area 14.	Phase I of watershed planning will be completed pursuant to Chapter 247, laws of 1998 (the Watershed Management Act).	☑	☐	☑	WP-0	662
PIERCE COUNTY						
PUYALLUP						
Continue working with local car dealerships to install vehicle wash pads with plumbing to the city sanitary system.	Contamination of local surface waters by sources of nonpoint pollution will be reduced.	☑	☐	☑	WP-0	663
TACOMA						
Cooperate with the Puyallup River Watershed Council to implement the Lower Puyallup Watershed Action Plan.	Priority actions will be implemented and water quality will be protected.	☑	☑	☑	WP-4	664
Work toward implementing the Clover-Chambers Watershed Action Plan.	Priority actions will be implemented and water quality will be protected.	☑	☑	☑	WP-4	665
SAN JUAN COUNTY						
SAN JUAN COUNTY						
Implement the county's management plan for hazardous waste.	Pollution will be reduced through better use and disposal of hazardous wastes.	☑	☐	☑	NP-0	666
Develop and adopt a county-wide watershed management action plan by spring 1999. Involve the public through workshops and public hearings. Implement strategies in the plan on stormwater, on-site sewage systems, agricultural practices and other nonpoint- pollution sources to protect water quality and to involve and educate county residents on these issues. Coordinate these strategies with recommendations of the local Marine Resources Committee and other water resource policies.	Water quality and aquatic habitats will be better protected from nonpoint sources throughout the county. Residents will be better educated about and more involved in the protection of water quality. Policies and programs to address water quality and habitat protection will be better integrated.	☑	☑	☑	WP-4	667

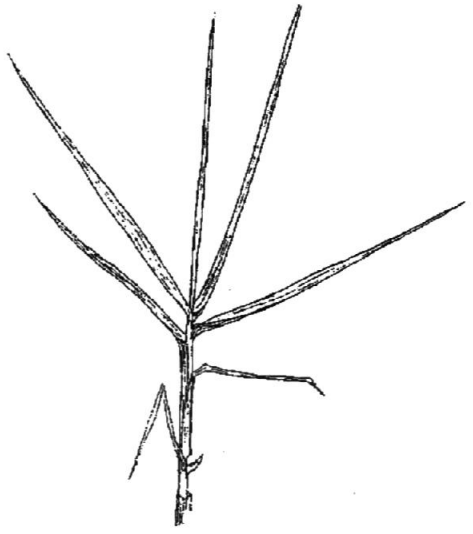
LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Nonpoint	Salmon	PS Plan Element	Action ID
SKAGIT COUNTY						
SKAGIT COUNTY						
Establish a nonpoint-pollution program to implement the watershed action plans and to address recommendations of the implementation review committee.	A Centennial Clean Water Fund request for Maddox Creek watershed plan will be submitted by February 28, 1999. Continue implementing recommended actions in the watershed plans. A new drainage ordinance will be adopted by December 31, 1999. A water quality monitoring program will be implemented by January 1, 2000. The water quality ordinance will be adopted by the second quarter of 2000.	☑	☑	☑	WP-4	668
BURLINGTON						
Implement actions associated with the total maximum daily load (TMDL) study and conduct follow-up monitoring.	TMDLs will be used to manage impacts of nonpoint-source pollution on river water quality and monitoring will occur.	☑	☐	☑	WP-0	669
SKAGIT COUNCIL OF GOVERNMENTS						
Develop watershed management needs, a technical evaluation and an assessment of water resources inventory areas 3 and 4.	Habitat conservation plans and in-stream flows will be developed, stormwater management will be improved and monitoring will be conducted.	☑	☐	☑	WP-0	670
SKAGIT CONSERVATION DISTRICT						
Continue to coordinate the ongoing activities of the Implementation Review Committee to oversee implementation of Chapter 400-12 WAC (the Nonpoint Rule) plans for the Nookachamps, Samish and Padilla Bay-Bayview watersheds.	Nonpoint-source pollution will be reduced.	☑	☑	☑	WP-4	671
Continue the Watershed Masters program which trains volunteers and provides ongoing coordination for them.	Watershed education focused on the general public will be increased.	☑	☐	☑	WP-4	672
SNOHOMISH COUNTY						
SNOHOMISH COUNTY						
Continue to develop a watershed action plan in French Creek and a master drainage plan in the Lake Stevens area.	Water quality, drainage system function and fish habitat will be improved.	☑	☐	☑	WP-2.4	673

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Nonpoint	Salmon	PS Plan Element	Action ID
BOTHELL						
Continue to support the North Creek Watershed Plan.	Nonpoint-source pollution in the watershed will be prevented, controlled or reduced.	☑	☑	☑	WP-4	674
Continue to implement recommendations of the city's Surface Water Quality Plan.	Wetlands, streams and groundwater resources will be protected from pollution.	☑	☐	☑	WP-4	675
Continue to participate in the Sammamish Watershed Forum.	Water quality will be restored and protected in the Sammamish sub-basin.	☑	☐	☑	WP-4	676
MARYSVILLE						
Adopt and implement the Quilceda Creek/Allen Creek watershed action plan.	Degradation and flooding of the Quilceda Creek/Allen Creek will be reduced.	☑	☑	☑	WP-4	677
SNOHOMISH HEALTH DISTRICT						
Upon acceptance by the Department of Ecology, implement portions of the plans developed under Chapter 400-12 WAC (the Nonpoint Rule) dealing with on-site sewage system management for the North Creek, Swamp Creek, French Creek and Quilceda/Allen watersheds.	Property owners with on-site sewage systems within the watershed boundaries will receive education and assistance.	☑	☑	☑	WP-4	678
THURSTON COUNTY						
THURSTON COUNTY						
Serve as lead agency in developing a comprehensive management plan for water resources in Water Resources Inventory Area 13.	Broad-based management of water resources addressing water quantity and quality, in-stream habitat and fisheries concerns, and human use. A common understanding of water resource conditions will be achieved among key parties based on all available data and development of analytical tools for addressing core issues, including continuity of groundwater and surface water.	☑	☐	☑	WP-0	679
Carry out watershed education and stewardship activities with schools and the general public.	Pollution from nonpoint sources will be prevented, and fish and wildlife habitat will be restored through private and volunteer efforts.	☑	☐	☑	WP-4	680
Participate in the Nisqually planning effort under Chapter 247, Laws of 1998 (the Watershed Management Act). The Nisqually Tribe is the lead agency.	A water resources report will be developed for the Nisqually Water Resource Inventory Area. The report will integrate available data, gather additional data for making decisions, and propose strategies to meet water resource needs and improve water quality and fish habitat.	☑	☐	☑	WP-0	681

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
Respond to complaints received from the public related to the county's ordinance on sources of nonpoint pollution. Provide technical assistance to property owners.	Reported sources of nonpoint pollution will be eliminated or mitigated.	☑	☐	☑	WP-4	682
Implement the 1998 Hazardous Waste Plan by promoting proper disposal, recycling and management of hazardous materials and oil by individuals and small businesses.	Use of the HazoHouse will be increased and household hazardous waste disposal at the landfill will be reduced. Small businesses will improve their management of hazardous materials and wastes. Toxic releases to surface and groundwater from contaminated sites will be reduced. The county will reduce the use of the most toxic pesticides.	☑	☐	☑	WP-0	683
LACEY						
Consolidate efforts to manage water resources into a plan that addresses the city's impacts on and uses of water, recognizing the interdependent components of Water Resource Planning and Utility Operations. The multiple planning efforts for Utilities, Land Use, Basin Drainage will be better linked and focused towards managing a collective resource.	The city will address water, as a resource, in an efficient, comprehensive manner that promotes policies and practices which avoid degradation.	☑	☐	☑	WP-0	684
Participate in watershed planning in two Water Resource Inventory Areas.	Planning activities for water resources will be coordinated and consistent within the city of Lacey, its urban growth area and water service area.	☑	☐	☑	WP-0	685
YELM						
Participate in watershed planning and assessment for water resource inventory in Water Resource Inventory Area 11.	Assessment will lead to water quality improvements and will provide necessary information to allow state agencies to determine water quantity allowances (water rights).	☑	☐	☑	WP-0	686
WHATCOM COUNTY						
BELLINGHAM						
Develop a comprehensive plan for the Lake Whatcom watershed. Identify and evaluate actions necessary to maintain water quality.	A plan to attain water quality goals will be completed and implemented.	☑	☐	☑	WP-2.4	687
WHATCOM CONSERVATION DISTRICT						
Participate with local jurisdictions to address water quality, water quantity and habitat issues associated with the Chapter 247, Laws of 1998 (the Watershed Management Act) and House Bill 2496 (the Salmon Recovery Planning Act) and related to the proposed listings of specific salmon stocks as Endangered Species.	Nonpoint source of pollution will be reduced through the implementation of farm plans, habitat projects and water quality projects.	☑	☐	☑	WP-0	688

Puget Sound Work Plan Goal

- Prevent the introduction of new aquatic nuisance species and control the spread of those that already have been introduced.



Spartina *cordgrass has invaded Puget Sound. The weed crowds out existing plants, degrades fish and wildlife habitat and can destroy essential habitat for oysters, clams, crabs, salmon, sole and lingcod.*

Background and Trends

The intentional or accidental introduction of marine species that are not native to Puget Sound can wreak havoc on the environment and economy. Not all non-native species are problems – some, such as Japanese oysters and manila clams, are valuable to the region's economy. Non-native plants and animals that threaten native marine life and habitat are called aquatic nuisance or non-indigenous invasive species.

Most non-native species are undesirable because they can outcompete and displace native species and destroy or seriously alter habitat and wetlands. If commercially important native species are displaced, local and regional economies would suffer.

Several aquatic nuisance species currently pose a threat to Puget Sound – *Spartina* (a cordgrass), European green crab and Chinese mitten crab. These species can enter Puget Sound in many ways, including releases from research institutions, aquaculture operations, the aquarium trade and public and private aquaria, discharge of ballast water from vessels, and the distribution of seafood commodities.

To effectively prevent harm from non-native species, a Puget Sound/Georgia Basin International Task Force work group recommended a coordinated approach that involves education, controlling pathways of introductions, response planning, monitoring and research. Washington's management plan for aquatic nuisance species incorporates actions that the task force recommended for Puget Sound.

Currently, steamships entering Puget Sound from outside of the 200-mile economic zone voluntarily comply with guidelines of the U.S. Coast Guard's ballast water exchange program. The guidelines recommend replacing ballast water outside of the California current, off of Washington's coast. This minimizes the introduction of non-native species from ballast taken on at foreign ports. In addition, the U.S. Coast Guard encourages compliance through a multilingual education program for all vessel owners and their crews.

Highlights of 1999-2001 Actions

- The Department of Agriculture will control the spread of *Spartina* and work toward eradicating known *Spartina* infestations.
- State agencies and the University of Washington's Sea Grant program will provide technical assistance, local coordination, education and information on aquatic nuisance species.
- The U.S. Coast Guard will implement the voluntary ballast water exchange program for vessels entering Puget Sound.
- Federal agencies will support efforts to prevent the spread and introduction of green crab and zebra mussels to the Puget Sound basin.
- Department of Fish and Wildlife will take action to control the spread of European green crab in Puget Sound, including early detection, control, integrated management, education and preventing transfer.

Adjustment from 1997-1999: $248,000

1999-2001 Budget for State Actions:

Total Provisoed Funding	$248,000
Total Other Funding	$0

STATE AND FEDERAL ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
DEPARTMENT OF FISH AND WILDLIFE							
Manage infestations of European green crab in Puget Sound through intensive monitoring of the presence of green crab and, as appropriate, provide education and prevent unwanted transfers of this species into the region.	The spread of green crab infestations will be minimized.	☑	☐	☐	DFW-23	ANS-0	690
DEPARTMENT OF AGRICULTURE							
Employ a full-time, statewide Spartina Control Coordinator. Continue to use integrated pest management methods to control the spread of Spartina and work toward eradicating known infestations. Administer a general water quality permit with Ecology so that landowners can obtain coverage for treating Spartina infestations with pesticides provided they meet certain conditions. Participate in manual and mechanical control efforts.	The spread of Spartina will be minimized and work will occur toward the eradication of known infestations.	☑	☑	☑	DOA-0	ANS-0	691
Use several integrated pest management techniques to help landowners control the spread of purple loosestrife. Contract with Washington State University to raise insects for biological control of purple loosestrife. Administer a general water quality permit with Ecology so that landowners can obtain coverage under permit to treat purple loosestrife infestations with herbicides, provided they meet certain conditions. Provide boats to counties so that they can access infestations. Participate in manual control efforts.	The spread of purple loosestrife will be minimized and work will occur toward the eradication of known infestations.	☑	☐	☑	DOA-0	ANS-0	692
DEPARTMENT OF ECOLOGY							
Provide maritime expertise and suggest knowledgeable contacts within the maritime community to the commercial shipping subcommittee of the Zebra Mussel and Green Crab Task Force. This task force is proposed under the Aquatic Nuisance Species Management Plan approved by the Governor.	The introduction of aquatic nuisance species to Washington waters will be decreased.	☑	☐	☑	DOE-09	ANS-0	693
Provide public education and technical assistance to control the introduction and spread of invasive aquatic nuisance species, particularly aquatic weeds. Provide financial assistance (grants) for the control of freshwater aquatic weeds. Within resource constraints, support others' efforts to control Spartina, green crab, zebra mussels and other aquatic nuisance species.	The public will be better informed and efforts will be improved to control introduction of aquatic nuisance species into the waters of Washington state.	☑	☐	☑	DOE-0	ANS-0	694

See page 8 for key.

STATE AND FEDERAL ACTIONS	OUTCOMES	Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
UNIVERSITY OF WASHINGTON, WASHINGTON SEA GRANT PROGRAM							
Provide technical assistance, local coordination, education and information on non-indigenous species threatening our waterways. Actions will include: Coordinating a conference on non-indigenous species; producing a series of fact sheets on established and new non-indigenous species; and developing a traveling exhibit on the issue and impact of non-indigenous species in the state of Washington.	Local communities, decision-makers and industries will be educated and become better able to recognize non-indigenous species' threats to our waterways.	☑	☐	☑	UW-01	ANS-0	695
U.S. COAST GUARD							
Implement mandatory regulations for record keeping related to ballast water exchange for vessels with ballast tanks arriving form outside the U.S. Exclusive Economic Zone. Records would quantify total volume and the origin of foreign ballast water.	A valid scientific baseline will be established for the amount untreated ballast water coming into the U.S. Two years after implementation, this information will be used to determine if mandatory ballast water exchange program is necessary.	☑	☐	☑		ANS-0	696
Educate vessel owners and operators about problems associated with the discharge of foreign ballast water. Encourage vessel owners and operators to voluntarily exchange ballast water exchange in accordance with International Maritime Organization guidelines prior to arriving from outside the U.S. Exclusive Economic Zone.	The amount of untreated ballast water entering U.S. waters will be significantly reduced and the chance of biological invasion will be reduced.	☑	☐	☑		ANS-0	697
The Thirteenth District of the U.S. Coast Guard will continue to participate in the Canada/U.S. Ballast Water Exchange Working Group (West Coast). This forum is dedicated to addressing ballast water issues between ports on the west coast of Canada and the U.S.	Ballast water issues will be better coordinated.	☑	☐	☑		ANS-0	698
U.S. FISH & WILDLIFE SERVICE							
Assist with outreach, inventory and eradication activities related to aquatic nuisance species.	The spread of aquatic nuisance species will be minimized.	☑	☐	☑		ANS-0	699

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
KING COUNTY						
FEDERAL WAY						
Use volunteers to remove invasive plants in riparian areas and wetlands.	Invasive species, like purple loosestrife, Himalayan blackberry and Japanese knotweed, will be controlled and native plantings will be established.	☑	☐	☑	ANS-0	700
Continue diver surveys of Steel Lake for early detection of Eurasian milfoil and other invasive aquatic plants.	Eurasian milfoil will be controlled and eradicated from public access lakes.	☑	☐	☑	ANS-0	701

Puget Sound Management Plan Goals

- Inform, educate and involve individuals, groups, businesses, industry and government in the cleanup and protection of Puget Sound.
- Increase understanding of the Sound's ecosystem.
- Create the commitment necessary to sustain efforts to improve and protect water quality and habitat over the long term.

Strategies for Achieving Goals

- Agencies and local governments follow a public involvement policy.
- Increase resources for tribal and state governments to coordinate interagency programs related to habitat, water quality and volunteer education and involvement.
- Field agents coordinate local and regional education and public involvement programs.
- Support public and private education and involvement efforts through the Public Involvement and Education Fund.

Background and Trends

Protecting water quality requires an ongoing commitment from the Puget Sound community – individuals, businesses and community groups, as well as government. Education and public involvement are vital components of a long-term management strategy for the Sound because they enable us to make informed choices.

Since 1987, the legislature has funded an effective tool for protecting and improving the region's water quality – the Public Involvement and Education (PIE) Fund. Administered by the Action Team, the PIE Fund has provided more than $4.35 million for 290 projects, reaching about three million people with the message of clean water. The 13-year legacy of this program is a better informed and more involved public and enhanced stewardship of Puget Sound.

During the 1997-1999 Biennium, the Action Team funded 27 projects. Each addressed one or more of the priorities identified in the 1997-1999 work plan.

Federal, tribal and s1tate governments support local governments by providing financial and technical assistance on issues related to implementing the work plan. The Action Team coordinates technical assistance to help cities, counties and others implement actions in the work plan.

Field agents from the Washington State University Cooperative Extension and University of Washington Sea Grant programs help carry out the goals of this program through education and involvement activities primarily in Mason, Kitsap, Jefferson, Pierce and Thurston counties.

In addition, Action Team support staff coordinates water quality education and involvement activities with those of local governments, the Governor's Council on Environmental Education and the Government Council on Natural Resources' work in protecting and restoring salmon.

Highlights of 1999-2001 Actions

- The Washington State University Cooperative Extension and University of Washington Sea Grant programs will continue the water quality field agent program and coordinate local education and stewardship programs.
- Action Team support staff will administer the Public Involvement and Education (PIE) Fund to support projects related to work plan priorities.
- Action Team support staff will coordinate technical assistance to local governments, upon request.
- The Department of Fish and Wildlife will provide public education, outreach and involvement for the Groundfish Management Plan and the policy on marine protected areas.
- Tribal and local governments will carry out education activities relating to water quality, habitat, hazardous wastes, salmon, invasive species, stormwater, wastewater, wellhead protection, controlling nonpoint pollution, watershed planning, and volunteer projects.

1999-2001 Budget for State Actions

Continued Provisoed Funding	$2,944,494
Continued Other Funding	$0

STATE AND FEDERAL ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
PUGET SOUND WATER QUALITY ACTION TEAM							
Collect and distribute information on sources of funding for local governments.	Local governments will receive accessible, comprehensive and timely information on funding sources.	☑	☐	☑	PSAT-01	EPI-9	707
Use the Public Involvement and Education Fund to support local projects that educate and involve the public in issues related to work plan priorities, with an emphasis on those related to salmon.	Puget Sound residents will receive increased environmental education from local governments, tribes, schools, nonprofit groups and trade associations. The level of knowledge about, and the number of people involved in, protection and restoration of Puget Sound and salmon in the region will increase.	☑	☐	☑	PSAT-05	EPI-8.1	708
Coordinate education about Puget Sound and educate the public about water quality issues in the Puget Sound Management Plan and work plan, including encouraging media coverage of findings from the Puget Sound Ambient Monitoring Program and reports on Puget Sound's health.	Audiences will become better educated about environmental issues. Environmental education will be better coordinated. Media will be provided with information on the health and management of Puget Sound.	☑	☐	☑	PSAT-05	EPI-9	709
Publish the Sound Waves newsletter and periodically survey readers.	Information on Puget Sound and opportunities to become involved in protecting it will be provided to more than 15,000 readers.	☑	☐	☐	PSAT-05	EPI-9	710
Use the Action Team web site as a key extension of the education program, providing easy access to information about water quality and biological resources.	Residents of the Puget Sound basin will be aware of and involved in issues related to protecting the Sound.	☑	☐	☐	PSAT-05	EPI-9	711
Coordinate technical assistance and other state agency activities in local watersheds and encourage coordination of local efforts to protect water quality and resources. Educate work plan implementers about Puget Sound water quality issues, the Puget Sound Management Plan and work plan, and salmon recovery plans.	Work plan implementers will be better informed about management of Puget Sound and will receive coordinated technical assistance and support. Support staff will complete 250 consultations per year. Educational materials and fact sheets will be distributed.	☑	☐	☑	PSAT-03	EPI-9	712
UNIVERSITY OF WASHINGTON, WASHINGTON SEA GRANT PROGRAM							
Provide local coordination, information and education on sources of nonpoint pollution to communities, industries and local decision-makers.	Industries, local decision-makers and citizens will understand which sources of nonpoint pollution are affecting them as well as understanding the accumulated effects of their actions.	☑	☐	☑	UW-01	EPI-2	713
Provide marine and aquatic educational curricula and information that reflects a multi-disciplinary knowledge base and focuses on issues important to local communities and ecosystems.	Participants of festivals and other events will learn more about water quality and the marine environment.	☑	☐	☑	UW-01	EPI-2.1	714

STATE AND FEDERAL ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
WASHINGTON STATE UNIVERSITY, COOPERATIVE EXTENSION							
Provide regional water quality specialists and extension educators to coordinate local educational programs with regional, state and national efforts.	Educational programs of local communities, state agencies, community groups, organizations and interest groups will have a greater impact and use less resources through enhanced coordination and improved delivery.	☑	☑	☑	WSU-01	EPI-2.1	716
Provide regional water quality specialists and extension educators to assist outreach by the Action Team.	Action Team outreach and education staff and the water quality field agents will share information, coordinate programs and facilitate the transfer of successful programs among Puget Sound counties.	☑	☐	☑	WSU-01	EPI-8.2	717
Provide regional water quality specialists and extension educators to help local governments, schools and community groups educate and involve the public, use volunteers to monitor water quality and encourage citizen participation related to Puget Sound water quality issues.	The education and public involvement programs of local governments, regional organizations, schools, watershed councils and community groups will have greater impacts through support and expertise provided.	☑	☑	☑	WSU-01	EPI-2.1	718
Provide regional water quality specialists and extension educators to educate the public on priority water quality and salmon related issues.	Area residents will change their behaviors to help protect the health of Puget Sound waters and resources.	☑	☑	☑	WSU-01	EPI-2.1	719
Encourage and assist other Washington State University Cooperative Extension educators and specialists to develop educational programs throughout the Puget Sound basin that address water quality issues.	WSU Cooperative Extension programs throughout the Puget Sound basin will better support protection of water quality.	☑	☑	☑	WSU-01	EPI-2.1	720
U.S. FISH & WILDLIFE SERVICE							
Educate the public about the Endangered Species Act.	Public understanding of the connection between human actions and lifestyles and endangered species needs, listing and recovery will be increased.	☑	☐	☑		EPI-3	721

TRIBAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
JAMESTOWN S'KLALLAM TRIBE						
Carry out education activities and projects related to water quality.	The public and other agencies will be better informed about water quality.	☑	☐	☑	EPI-0	730

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
HOOD CANAL COORDINATING COUNCIL (JEFFERSON, KITSAP AND MASON COUNTIES AND SKOKOMISH AND PORT GAMBLE S'KLALLAM TRIBES)						
HOOD CANAL COORDINATING COUNCIL						
Carry out an effective regional educational program for outreach on water quality and salmon habitat issues.	Public awareness, involvement and support for watershed planning, protection of water quality and recovery of salmon habitat will be improved.	☑	☐	☑	EPI-0	730
CLALLAM COUNTY						
CLALLAM CONSERVATION DISTRICT						
Hold regular meetings of entities that provide education in Clallam County to better coordinate public education on natural resource issues.	Education projects about natural resources targeting a variety of audiences will be coordinated. This will help people become better stewards.	☑	☐	☑	EPI-2	731
KING COUNTY						
FEDERAL WAY						
Provide funding support and other assistance for integration of education about water resources into the school district's curriculum.	Awareness and understanding of urbanized watershed issues will be raised and stewardship of aquatic resources will be promoted.	☑	☐	☑	EPI-2	738
Continue to sponsor a catch basin stenciling program.	Stewardship of aquatic resources will be encouraged.	☑	☐	☑	EPI-2	739
Continue to place stream crossing and other signage to educate the public about water resource protection.	Stewardship of aquatic resources will be encouraged.	☑	☐	☑	EPI-2	740
Hire 0.4 FTE staffperson to conduct public education and involvement activities for the surface water division.	Awareness and understanding of urbanized watershed issues will be raised and stewardship of aquatic resources will be promoted.	☑	☐	☑	EPI-2	741
ISSAQUAH						
Develop, fund and present educational materials to residents. Education will promote sound management practices for preventing residential sources of stormwater pollution.	The amount of household-generated water pollution will be reduced. Citizens living within the watershed will be educated. The public will have a broader understanding of how people's behavior affects water quality.	☑	☐	☑	EPI-3	737

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
MERCER ISLAND						
Continue to teach residents and businesses about protecting water quality and habitat in Lake Washington	Residents and businesses will gain a thorough understanding of how and why water quality and habitat in Lake Washington are being protected.	☑	☐	☑	EPI-0	732
NORTH BEND						
Develop, fund and implement major programs to educate the public about water resources, local funding needs, habitat protection, the Endangered Species Act, stormwater management, growth management, flood control and watershed planning..	Support and local funding for these activities will be increased.	☑	☐	☑	EPI-0	736
RENTON						
Continue to educate the public about ways they can protect water quality and water resources through the city's Solid Waste Utility, Hazardous Waste Reduction and Recycling Program, the Water Utility Aquifer Protection Program and Surface Water Utility Public Education and Involvement Program.	The public will be educated about ways they can protect water resources.	☑	☐	☑	EPI-4	742
SEATTLE						
Provide equipment and training to teachers in 105 schools on raising salmon. Provide educational activities for 4th and 5th graders. Give presentations on protecting water quality. Conduct outreach to non-native English-speaking communities. Sponsor a traveling educational display featuring the resources of Puget Sound.	Awareness of the relationship between human behavior and water resources will be increased.	☑	☐	☑	EPI-0	735
SHORELINE						
Train environmental volunteers, work with local schools and offer community environmental programs through the city parks department. Education about salmon and the control of invasive species in Shoreview Park will be action components.	Citizens will learn to be stewards of the environment. An environmental volunteer base within the city will be educated and trained to aid city programs. Water quality in Shoreline's water bodies, and Puget Sound, will be improved.	☑	☐	☑	EPI-0	734
TUKWILA						
Establish a citizen's advisory committee to oversee and evaluate implementation of the city's growing water quality management plans. Continue the stenciling program to educate the public on drains and how to handle hazardous waste. Continue to offer free surveys of businesses to help them eliminate sources of pollutants. Develop and distribute brochures on water quality and fish habitat.	All neighborhoods will be stenciled with the "Do not dump, drains to stream" message. Over 1,500 brochures on water quality and fish habitat will be distributed.	☑	☐	☑	EPI-1	733

See page 8 for key.

LOCAL GOVERNMENT ACTIONS	OUTCOMES	Priority	Nonpoint	Salmon	PS Plan Element	Action ID
KITSAP COUNTY						
KITSAP COUNTY						
Continue the Stream Team.	Volunteer projects to protect riparian corridors and enhance and restore fish habitat will involve and educate the public.	☑	☐	☑	EPI-4	743
Kitsap County's Surface and Stormwater Management Program intends to continue to promote outreach and education through public presentations, advertisements, brochures, community workshops, water quality signage and classroom and adult education. Many of these tasks originated from Chapter 400-12 WAC (the Nonpoint Rule) watershed planning.	Citizens of the county will become more aware of nonpoint sources of pollution and modify their behavior over time to reduce them. Degradation of water quality will be minimized.	☑	☐	☑	EPI-2	744
BREMERTON						
Continue to educate Bremerton residents about wastewater and stormwater.	Customers will be more informed. Support for utility projects will be increased and pollution caused by daily activities of city residents will be reduced.	☑	☐	☑	EPI-3	745
POULSBO						
Develop and implement a program to increase water quality awareness among businesses and the public. The program will make a Soundwash unit available to local car washes, and distribute brochures and other forms of media to the public.	Sources of nonpoint pollution to surface waters will be reduced.	☑	☐	☑	EPI-2	746
BREMERTON-KITSAP COUNTY HEALTH DISTRICT						
Continue to maintain the Health District's 800 number (1-800-2BE-WELL) to provide updated information on shellfish harvesting, swimming beaches, sanitary surveys and other water quality monitoring information.	The public will be better informed regarding water quality issues in the county.	☑	☐	☐	EPI-4	747
PIERCE COUNTY						
STEILACOOM						
Begin an assertive public involvement and education program.	The amount of chemicals, oils and other hazardous substances entering the waterways will be reduced.	☑	☐	☑	EPI-0	748

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
TACOMA						
Support the Stream Team in conducting educational activities in association with Natural Resources Damage Assessment projects. Continue other educational efforts, such as promoting the use of the charity car wash kits, public education in the Foss Watershed, and partnerships with Metro Parks, the Tacoma School District and the Water Quality Consortium.	The public will be effectively educated about water quality.	☑	☐	☑	EPI-3	749
SAN JUAN COUNTY						
SAN JUAN COUNTY						
Along with other organizations and local agencies, support and contribute to the local PIE-funded project to increase stewardship.	There will be a more effective and better coordinated network of citizens, non-profit organizations and government agencies involved in stewardship and environmental monitoring activities.	☑	☐	☑	EPI-0	750
SAN JUAN COUNTY CONSERVATION DISTRICT						
Conduct a series of educational programs on water quality issues.	The public will learn about conservation planning, forestry planning, wetlands preservation and prevention of nonpoint pollution. Management of on-site sewage systems will also be addressed.	☑	☐	☑	EPI-0	751
SKAGIT COUNTY						
SKAGIT CONSERVATION DISTRICT						
Coordinate and implement a comprehensive education program with activities targeted at the general public, including schools and civic organizations.	Sources of nonpoint pollution will be reduced as changes are made in personal lifestyles.	☑	☐	☑	EPI-2	752
SNOHOMISH COUNTY						
SNOHOMISH COUNTY						
Continue to implement programs to educate the public about nonpoint source pollution, best management practices for urban streams, wetland enhancements and other issues related to natural resource protection and enhancement in urban areas.	Water quality, the drainage system and fish habitat will be improved.	☑	☐	☑	EPI-2	753

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
EVERETT						
Continue to partner with public schools, the business community and interested citizens to promote lifestyles and business practices that minimize impacts to water quality and fisheries resources.	Discharge of pollutants will be reduced and fish habitat will be enhanced.	☑	☐	☑	EPI-3	754
THURSTON COUNTY						
THURSTON COUNTY						
Provide public outreach on the prevention of water quality degradation and offer assistance to enhance water quality. Create a web site for a clearinghouse of watershed information.	The public will be more aware of water quality issues and ways in which actions and selected activities can make a positive difference to the quality of the surface and groundwater in the county.	☑	☐	☑	EPI-0	755
OLYMPIA						
Work with businesses in the wellhead protection area to reduce contamination of surface and groundwater.	Businesses will become aware that they are operating on top of an aquifer and need to use good management practices to reduce the risk of contamination.	☑	☐	☐	EPI-5	756
THURSTON CONSERVATION DISTRICT						
Provide educational and informational opportunities through programs like South Sound GREEN, the Dobbs Creek Farm, displays, publications, television and partnerships with other agencies.	Residents will have a better understanding of natural resource issues, enabling them to make individual changes toward the goal of better resource management.	☑	☐	☑	EPI-0	757
WHATCOM COUNTY						
BELLINGHAM						
Participate in the annual Northwest Washington Fair by assisting with a multi-agency booth on water quality.	Public awareness of water-related issues will be increased.	☑	☐	☑	EPI-3	758
Loan stencils, safety vests and paint to schools and citizen organizations to stencil "Dump No Waste" messages on storm drains throughout Whatcom County.	Nonpoint-source pollution will be reduced.	☑	☐	☑	EPI-3	759
Conduct a three-day comprehensive watershed, water treatment and wastewater treatment education program for 5th grade students.	Specific behavioral changes will be encouraged, such as water conservation, pet waste handling, increased use of alternative cleaners, home composting and hazardous waste disposal. A heightened environmental stewardship by students and their families will be fostered.	☑	☐	☑	EPI-6	760

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Nonpoint	Salmon	PS Plan Element	Action ID
Conduct a Lake Whatcom poster contest in which each participating class collaborates to produce one word to be collaged into a poster of a selected goal from the Lake Whatcom Joint Resolution. Prizes will be awarded to the top three classes and each student will receive a copy of the finished poster.	Students will benefit from the process and the poster will be displayed at various community events to increase public awareness of efforts to protect Lake Whatcom.	☑	☐	☐	EPI-6	761
Provide field-based programs titled "Secrets of Seashore Survival" for elementary-aged children visiting local beaches and the Marine Life Center.	Stewardship of the marine environment will be increased. Specific behavior outcomes will include appropriate waste disposal and the rules, regulations and techniques for harvesting shellfish and visiting beaches	☑	☐	☑	EPI-6	762
Provide field-based experiences using a salmon hatchery and urban stream to teach conservation, protection and restoration concepts for salmon and their habitat.	An environmentally aware and involved citizenry will be developed.	☑	☐	☑	EPI-3	763
WHATCOM CONSERVATION DISTRICT						
Coordinate with school and volunteer and community groups to plan and implement educational programs that target agricultural practices, riparian and wetland restoration, fish and shellfish resources and water quality.	Impacts from nonpoint sources of pollution will be reduced by educating watershed residents and encouraging them to make changes in personal living habits.	☑	☐	☑	EPI-3	764

Washington/British Columbia Environmental Cooperation

Puget Sound Work Plan Goal

- Promote and coordinate mutual efforts in Washington and British Columbia to ensure the protection, conservation and enhancement of the shared inland marine environment.

Background and Trends

The governor of Washington and premier of British Columbia created the Environmental Cooperation Council in 1992 to address a wide range of shared environmental issues between the state and province. In 1993, the council formed the Puget Sound/Georgia Basin International Task Force to address protection of the shared inland marine waters.

Representing Washington and the United States on the task force are the state departments of Ecology, Fish and Wildlife and Natural Resources, the Puget Sound Water Quality Action Team, the U.S. Environmental Protection Agency, the National Marine Fisheries Service, the U.S. Fish and Wildlife Service and the Northwest Indian Fisheries Commission.

The task force works on priority issues in the shared waters, including the loss of nearshore habitat, establishing marine protected areas, protecting marine plants and animals, and minimizing the introduction of non-native species.

The task force is also working on toxics, nonpoint source pollution and other issues. Much of the work is accomplished through topical work groups.

Highlights of 1999-2001 Actions

- Federal, tribal, state and local governments will coordinate and enhance protection efforts with British Columbia through the Puget Sound/Georgia Basin International Task Force.
- The Action Team support staff will support the international task force and oversee the implementation of work group recommendations.
- San Juan County will work with Canadian jurisdictions and organizations on transboundary water quality and habitat issues.

1999-2001 Budget Request for State Actions

Total Provisoed Funding	$0
Total Other Funding	$0

There is no separate state agency budget for work on this program. Actions to implement work group recommendations are included under other programs.

See page 8 for key.

ACTIONS	OUTCOMES	Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
JOINT ACTIONS The U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, Coast Guard, National Marine Fisheries Service, Northwest Indian Fisheries Commission and state departments of Ecology, Fish and Wildlife, Health, and Natural Resources will continue to participate on the Puget Sound/Georgia Basin International Task Force and/or its work groups to improve coordination with British Columbia and enhance protection of the shared marine waters.	Recommendations will be developed and implemented.						
	DEPARTMENT OF NATURAL RESOURCES	☑	☐	☑	DNR-06	WB-0	765
	DEPARTMENT OF ECOLOGY	☑	☐	☑	DOE-04	WB-0	765
	DEPARTMENT OF HEALTH	☑	☐	☑	DOH-0	WB-0	765
	U.S. FISH & WILDLIFE SERVICE	☑	☐	☑		WB-0	765
PUGET SOUND WATER QUALITY ACTION TEAM							
Serve on and support the Puget Sound/Georgia Basin International Task Force and work groups. Oversee implementation of recommendations made by the task force and work groups. Facilitate improved coordination between British Columbia and Washington on marine ecosystem issues.	Protection of Puget Sound and Georgia Basin will be coordinated. Recommendations of the task force will be implemented. Information will be shared on problems, programs, management practices and standards.	☑	☐	☑	PSAT-04	WB-0	770
SAN JUAN COUNTY							
Foster good communication and collaborate with Canadian jurisdictions and organizations on transboundary water quality and habitat issues and projects.	Joint work will strengthen working relationships and progress made on issues and projects affecting the shared waters.	☑	☐	☑		WB-0	775

Spill Prevention and Response

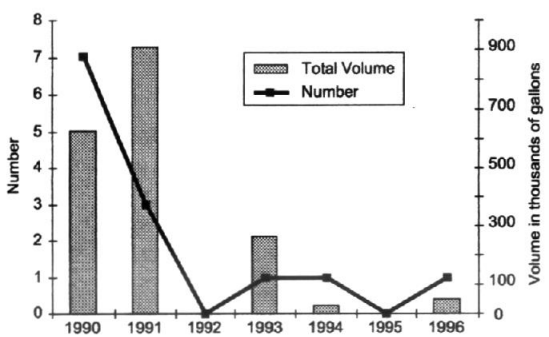
Puget Sound Management Plan Goal

- Emphasize spill prevention strategies and enhance response capability in Puget Sound and its tributaries, and ensure that spill prevention and response actions of state agencies are coordinated with other federal, tribal, state, local and private efforts.

Strategies for Achieving Goal

- Identify tools and resources needed to protect Puget Sound from spills.
- Implement a comprehensive program to prevent and respond to spills.

Volume and Number of Major Spills
(over 10,000 gallons)



Source: Department of Ecology, 1997

Oil spills pose a significant threat to the health of Puget Sound. The amount of oil spilled annually in Puget Sound is declining.

Background and Trends

Puget Sound is one of the country's primary centers for refining petroleum. Refineries at Cherry Point and Anacortes, in northern Puget Sound, import 550,000 barrels of unrefined oil each day. Oil is delivered by vessels through the Strait of Juan de Fuca and via the Trans-Mountain Pipeline from Canada. Daily, about 300,000 barrels of refined products are exported by tanker vessels to other domestic locations and via the Olympic Pipeline to Oregon.

The huge volume of oil moving through the basin necessitates a strong program to prevent and respond to spills. Oil products can cause tremendous environmental damage when spilled or released to the land or water.

During the last decade, Washington has significantly improved its capabilities to prevent and respond to spills and has passed new laws to specifically address these issues. The state trains local emergency response personnel to prevent and respond to spills. There has also been an emphasis on educating boaters, operators of fishing fleets, harbor masters and other marine industry personnel. Washington coordinates its efforts with British Columbia.

Highlights of 1999-2001 Actions

- The Department of Ecology will continue the state's program for managing spills, including spill prevention, preparedness, response and restoration.
- Ecology will review spill prevention plans for vessels, facilities and pipelines.
- Ecology will inspect vessels entering Puget Sound, screening them for spill risks.
- Ecology and the University of Washington Sea Grant Program will educate and provide technical outreach to local governments, the tanker industry and others in the maritime trades.
- Cities and counties will respond to spills and take appropriate cleanup action.

1999-2001 Budget for State Actions

Total Provisoed Funding	$2,240,000
Total Other Funding	$0

JOINT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
The Department of Ecology will continue to participate as a co-lead with the U.S. Coast Guard and U.S. Environmental Protection Agency in the annual review and update of the Northwest Area Contingency Plan, geographic response plans and related planning documents.	The response to significant spills of oil and hazardous materials will be rapid, effective and well-coordinated.						
	DEPARTMENT OF ECOLOGY	☑	☐	☑	DOE-09	SP-1	780
	U.S. ENVIRONMENTAL PROTECTION AGENCY	☑	☐	☑		SP-1	780
	U.S. COAST GUARD	☑	☐	☑		SP-1	780

STATE AND FEDERAL ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
UNIVERSITY OF WASHINGTON, WASHINGTON SEA GRANT PROGRAM							
Provide workshops to help ports, marinas, commercial fishers, ferries and cruise ships prevent small oil spills.	Ports, marinas, commercial fishers, ferries and cruise ship operators will learn about and use good management practices to reduce and eliminate small oil spills.	☑	☐	☑	UW-02	SP-4	792
Coordinate activities to prevent oil spills with various industry and agency staff and organizations, such as the National Oceanic and Atmospheric Administration, U.S. Coast Guard, Department of Ecology, Waste Information Network, Washington Public Ports Association, Pacific Coast Congress of Harbormasters and Port Managers, Pacific Oil Spill Prevention Education Team and Puget Soundkeeper Alliance.	Workshops, preparation and distribution of materials, and educational events will be better coordinated.	☑	☐	☑	UW-02	SP-4	793
Develop educational materials, fact sheets, oil-spill prevention kits, and other items that address prevention of small oil spills by using best management practices	Educational materials will be distributed to boaters and the boating industry, resulting in use of good management practices and ultimately in the reduction or elimination of small oil spills.	☑	☐	☑	UW-02	SP-4	794

STATE AND FEDERAL ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
DEPARTMENT OF ECOLOGY							
Develop, adopt and implement a North Puget Sound Risk Management Plan, with the U.S. Coast Guard as a co-sponsor. The project will focus on preventing oil spills from marine vessels in the major transportation corridor from the entrance to the Strait of Juan de Fuca through the San Juan Islands. Adopt interagency agreements with the Coast Guard as appropriate. Convene a consensus decision-making process involving all stakeholders.	The frequency and risk of major and catastrophic oil spills in north Puget Sound will be reduced.	☑	☐	☑	DOE-09	SP-1	785
Continue to review, approve and maintain oil-spill prevention plans for tank vessels (oil tankers and barges) and for oil handling facilities in Puget Sound.	The frequency and risk of oil spills from vessels and major facilities will be reduced.	☑	☐	☑	DOE-09	SP-1	786
Continue to inspect cargo, passenger and fishing vessels, tank vessels (oil tankers and barges), and marine fuel transfer operations (bunkering).	Approximately 380 vessel inspections will be conducted each year, helping to reduce the frequency and risk of oil spills.	☑	☐	☑	DOE-09	SP-1	787
Continue to review, approve and maintain oil-spill contingency plans for vessels, facilities and pipelines for the 50-plus Puget Sound plan holders. Participate in the annual oil spill drill required of each plan holder.	The response to significant spills of oil and hazardous materials will be rapid, effective and well coordinated .	☑	☐	☑	DOE-09	SP-1	788
Continue to educate the public and provide technical outreach to the regulated community. Improve communication with stakeholders by developing an Internet web site, and/or establishing an oil-spill advisory committee and/or holding forums in communities with specific interests. Continue to publish a newsletter and produce three bulletins on oil spill prevention each year. Ecology's marine vessel inspectors will continue to provide educational handouts during each boarding.	Spill prevention and response activities will be well coordinated with the public and industry.	☑	☐	☑	DOE-09	SP-4	789
Continue to maintain around-the-clock spill response capability in regional offices. Respond to significant spills of oil and hazardous material in inland and marine waters.	The response to significant spills of oil and hazardous materials will be rapid, effective and well coordinated.	☑	☐	☑	DOE-09	SP-1	790
UNIVERSITY OF WASHINGTON, WASHINGTON SEA GRANT PROGRAM							
Coordinate with boaters, marina and port operators, and commercial boating associations to identify the causes and sources of persistent small oil spills and develop educational strategies to eliminate these spills.	Small oil spills from port, marina and commercial boat operations will be reduced.	☑	☐	☑	UW-02	SP-4	791

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
KING COUNTY						
FEDERAL WAY						
Continue to provide 24-hour, on-call response to reports of spills and coordinate response efforts.	The impacts of spills to local aquatic systems will be minimized.	☑	☐	☑	SP-0	795
MERCER ISLAND						
Respond promptly to reports of spills and related water-quality problems and take appropriate action.	The impacts of spills and related water quality problems on Lake Washington will be minimized.	☑	☐	☑	SP-0	796
RENTON						
Continue to respond to reported spills and water quality problems, implement Hazardous Waste Reduction programs through the city's Solid Waste Utility and Aquifer Protection Program, and educate the public to reduce, properly handle and store hazardous wastes.	Water quality will be protected by reducing the potential for an accidental spill.	☑	☐	☑	SP-0	797
THURSTON COUNTY						
LACEY						
Implement an internal review of city activities, such as spill prevention and city vehicle fueling operations, to promote practices that are consistent with the objectives of the Puget Sound Management Plan.	The city's practices will serve as an example and protect water resources.	☑	☐	☑	SP-0	798

Monitoring, Research and Laboratory Support

Puget Sound Management Plan Goals

- Implement the Puget Sound Ambient Monitoring Program.
- Establish and maintain a system of priorities and funding for research and dissemination of research findings.
- Assure the quality and timeliness of physical, chemical and biological laboratory testing.

Strategies for Achieving Goals

- Assess the health of Puget Sound and its resources and provide information to measure the success of environmental programs.
- Coordinate and fund research, maintain a list of priorities and help make research results available to decision makers.
- Review the capability of environmental laboratories to generate quality data and assure adequate laboratory support for sampling programs in agencies and other organizations, and develop and encourage the use of uniform quality assurance guidelines.
- Develop and update protocols and guidelines to standardize the collection, analysis and transfer of data.

Background and Trends

Resource managers need good, scientifically based information to make effective decisions about protecting Puget Sound.

The Puget Sound Ambient Monitoring Program is a long-term effort to comprehensively monitor and assess the condition of the Puget Sound ecosystem. Coordinated by this program, federal, state and local agencies monitor marine and fresh waters, sediments, marine biological resources, nearshore habitat, and assess the effects of contaminants on fish. This program also uses studies conducted by other government agencies and programs. Every two years, the Action Team publishes a Puget Sound Update report summarizing the findings of the monitoring program and related studies.

Research improves our understanding of Puget Sound and helps decision-makers evaluate options for protection. Since 1987 the research program has provided a regional focus for disseminating research findings.

Six hundred people attended the fourth Puget Sound Research Conference in 1998, which focused on applying research findings to environmental management and decision making.

The Department of Ecology has certified public and private laboratories since 1987. Laboratories conducting analyses in Puget Sound are accredited to ensure that they can produce consistent data of a known quality. The agency audits these laboratories to maintain the highest possible standards of analysis and data reporting.

Puget Sound protocols were updated in 1997 for sampling and analyzing of organic pollutants and metals and for quality assurance and quality control.

Highlights of 1999-2001 Actions

- Federal, state and local agencies will conduct long-term monitoring through the Puget Sound Ambient Monitoring Program.
- Federal, state and local agencies will provide information on the health of Puget Sound for the next Puget Sound Update report.
- The Action Team and partners will host a conference on Puget Sound/ Georgia Basin environmental research and management.
- Tribal and local governments will conduct long-term water quality monitoring and use data to evaluate the success of projects and programs.
- The Department of Ecology will continue to provide laboratory accreditation services.
- The Department of Natural Resources will complete an inventory of nearshore habitat using a methodology developed in tandem with the British Columbia provincial government.

Adjustments from 1997-1999 **$80,000**

1999-2001 Budget for State Actions

Total Provisoed Funding	$6,407,228
Total Other Funding	$0

See page 8 for key.

JOINT ACTIONS	OUTCOMES	Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
The state departments of Ecology, Fish and Wildlife, Health, and Natural Resources; Action Team support staff; the King County Department of Natural Resources; U.S. Fish and Wildlife Service; and U.S. Environmental Protection Agency will coordinate operation and evaluation of the Puget Sound Ambient Monitoring Program (PSAMP).	**DEPARTMENT OF NATURAL RESOURCES** PSAMP reports and other products will be delivered on time. Monitoring activities will be adapted as indicated by decisions from the program review. External recommendations will be obtained for program improvements.	☐	☐	☑	DNR-01	M-2	800
	DEPARTMENT OF ECOLOGY PSAMP reports and other products will be delivered on time.	☐	☐	☑	DOE-01	M-2	800
	DEPARTMENT OF HEALTH Health will participate in the steering committee, actively coordinate monitoring activities, and assist in the developing an integrated, comprehensive monitoring strategy.	☐	☐	☑	DOH-01	M-2	800
	PUGET SOUND WATER QUALITY ACTION TEAM PSAMP reports and products will be delivered on time. Changes in monitoring activities will be made to meet recommendations from program reviews.	☐	☐	☑	PSAT-02	M-2	800
	U.S. FISH & WILDLIFE SERVICE Contaminant monitoring activities will be coordinated and an integrated, comprehensive monitoring strategy will be developed with other members of the PSAMP.	☐	☐	☑		M-2	800

See page 8 for key.

STATE AND FEDERAL ACTIONS	OUTCOMES	Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
DEPARTMENT OF FISH AND WILDLIFE							
Annually monitor the distribution and abundance of marine birds and mammals and contaminants in the tissues of marine mammals.	Spatial and temporal trends of marine bird and mammals and chemical contaminants in harbor seals will be reported and analyzed. Databases, atlases and geographic information system products will be developed for agencies, researchers, local jurisdictions and others. Data will be provided for Action Team performance measures.	☑	☐	☐	DFW-01	M-2	805
Annually monitor chemical contaminants in Puget Sound fish and the effects of contaminants on the health of fish.	Spatial and temporal trends of contaminant levels and associated indicators of fish health in fish species will be assessed. Biennial reports for each species monitored will provide information on the status and trends of contaminant levels in fish tissues. The database will be updated as new data become available and information will be shared with agencies, researchers and others. Data will be provided for Action Team performance measures.	☑	☐	☑	DFW-02	M-2	806
DEPARTMENT OF NATURAL RESOURCES							
Complete a rapid Soundwide inventory of the types, conditions and distribution of nearshore aquatic habitat. Coordinate with the Department of Fish and Wildlife using Harper methodology.	Data will be provided in the form of maps, GIS coverages and documentation.	☑	☐	☑	DNR-01	M-2	812
Inventory the floating kelp resources of the Strait of Juan de Fuca.	Data will be provided in the form of maps, GIS coverages and documentation for kelp coverage in 1999 and 2000.	☑	☐	☑	DNR-01	M-2	813
Monitor trends in nearshore habitat.	Data will be provided in the form of maps, GIS coverages and documentation.	☑	☐	☑	DNR-01	M-2	814
Perform high-resolution mapping of nearshore vegetation and other habitat elements in priority areas for resource management.	Data will be provided in the form of maps, GIS coverages and documentation.	☑	☐	☑	DNR-01	M-2	815
DEPARTMENT OF ECOLOGY							
Continue to provide laboratory accreditation services that support both new accreditation applications and accreditation renewals for private, federal, tribal and state laboratories.	Private, federal, tribal and state laboratories will be accredited following application and completion of all requirements.	☐	☐	☐	DOE-01	L-1	816
Continue to review agency Quality Assurance Project Plans and help agency staff and others to apply the principles of quality assurance and quality control.	Agency Quality Assurance Project Plans will be reviewed and technical assistance will be provided to agency staff and others.	☐	☐	☐	DOE-01	L-4	817

See page 6 for key.

STATE AND FEDERAL ACTIONS	OUTCOMES	Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
DEPARTMENT OF ECOLOGY							
Continue to operate long-term monitoring networks for freshwater quality, marine water quality and marine sediments. This will provide baseline characterization of environmental conditions in Puget Sound.	Results of monitoring programs will be presented in annual or biennial reports. Data will be provided to support watershed planning, environmental indicators, 305(b) and 303(d) reports and the Puget Sound Update. Data will be managed in long-term databases and access to data provided via Ecology's web site.	☑	☐	☑	DOE-01	M-2	818
Conduct special studies targeting key questions, and analyze current and historical data to evaluate spatial and temporal trends in selected environmental variables.	Reports, conference presentations and data will be provided examining spatial and temporal trends in dissolved oxygen, chlorophyll concentration, salinity or other significant water quality variables in portions of Puget Sound. The spatial extent of sediment contamination and associated toxic bioeffects will be evaluated for northern and central Puget Sound. Pollutant loadings from selected streams will be measured. The condition of biological communities in marine sediments will be evaluated.	☑	☐	☑	DOE-01	M-2	820
DEPARTMENT OF HEALTH							
Monitor shellfish for paralytic shellfish poisoning to identify trends and potential impacts to public health	All PSAMP sampling sites will be monitored for levels of biotoxins per the specified frequency. Results will be used to identify potential effects on public health and trends in toxin levels.	☑	☐	☐	DOH-01	M-2	821
Monitor shellfish growing areas for fecal coliform bacteria and to identify trends and potential impacts to public health.	All PSAMP growing areas will be monitored for fecal coliform bacteria per the specified frequency.	☑	☐	☐	DOH-01	M-2	822
Continue to involve volunteers and citizen monitoring groups in PSAMP activities.	Volunteers will be recruited and trained to collect samples for biotoxin monitoring.	☑	☐	☐	DOH-01	M-3	823
Prepare an annual report that compiles data, interprets results, and recommends changes in the design of the monitoring program.	Annual PSAMP reports will be completed and submitted to the Action Team within established guidelines and timeframes.	☑	☐	☐	DOH-01	M-1	824
PUGET SOUND WATER QUALITY ACTION TEAM							
Synthesize and communicate findings of the PSAMP.	The Puget Sound Update will be published in February 2000. A regular feature on monitoring the health of Puget Sound will appear in the Sound Waves newsletter. Puget Sound Notes will be produced at least twice year. Annual science meetings will be held.	☑	☐	☑	PSAT-02	M-2	826
Convene a conference on research in Puget Sound and the Georgia Basin. Work with Canadian partners to the extent possible.	Scientists and resource managers who attend the conference will gain knowledge about research concerning Puget Sound..	☑	☐	☑	PSAT-02	R-4	827

STATE AND FEDERAL ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
PUGET SOUND WATER QUALITY ACTION TEAM							
Maintain and enhance a directory of monitoring data and research information.	Citizens and scientists will have access to monitoring data and research results. The usefulness of a monitoring directory will be evaluated.	☑	☐	☑	PSAT-02	R-5	828
Publish and distribute the Puget Sound Protocols and Guidelines and convene a committee to evaluate protocols and obtain agency approvals of new and revised protocols.	Protocols will be provided to scientists in agencies, consulting firms, and academic instructors. Protocols will be revised to meet agency needs for comparability and consistency in data collection	☐	☐	☐	PSAT-02	L-3	829
U.S. FISH & WILDLIFE SERVICE							
Participate in sampling projects in the shared waters with British Columbia counterparts. Continue to evaluate data, store data and report on chemical contaminants in surf scoters.	Appropriate sampling projects in the shared waters will be identified and conducted. A determination will be made whether surf scoters are an appropriate monitoring species for the PSAMP.	☐	☐	☐		M-2	830
Monitor restoration projects to evaluate the success.	Knowledge of restoration tools will be improved.	☑	☐	☑		M-0	831
Cooperate with other federal and state agencies to investigate and monitor the presence and prevalence of fish pathogens in salmon and trout in selected drainages of Puget Sound.	Information on the health of fish will be provided to management agencies in Puget Sound for management and recovery purposes.	☑	☐	☑		M-0	832
U.S. GEOLOGICAL SURVEY							
With the Department of Ecology and King County, quantify pesticide concentrations in urban watersheds during storm runoff and relate observed concentrations to pesticide sales data and land-use factors. Educate the public about the effects of pesticides through preparation of a report and a fact sheet, and by posting the information on the agency's web site.	Water quality will be protected by educating the public about the appropriate use of pesticides in urban and suburban areas.	☑	☐	☑		R-0	833
Summarize monitoring data for stream temperatures. Publish a summary and make the data available on a web site.	Data from many agencies and the tribes will be available from one location.	☑	☐	☑		M-2	834

TRIBAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
JAMESTOWN S'KLALLAM TRIBE						
Monitor water bodies in the tribe's Usual and Accustomed Fishing Area.	Better information on the quality of marine and fresh water will guide restoration efforts.	☑	☐	☑	M-0	835
STILLAQUAMISH TRIBE						
Monitor approximately 30 freshwater sites and 12 marine sites on a monthly basis for pH, dissolved oxygen, temperature, total suspended solids, fecal coliform, hardness and alkalinity.	Better information about marine and fresh water will guide restoration efforts.	☑	☐	☑	M-0	836

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
CLALLAM COUNTY						
CLALLAM COUNTY						
Monitor restoration projects to evaluate the success of restoration.	Knowledge of restoration techniques will be improved.	☑	☐	☑	M-0	840
Develop an integrated database of surface and ground water data from local agency and volunteer monitors.	Data for resource managers and the public will be easily accessible.	☑	☐	☑	M-0	841
KING COUNTY						
FEDERAL WAY						
Continue monitoring of steam water quality and flow for long-term trends. Add monitoring of benthic macroinvertebrates, temperature and other variables.	Long-term trends in water quality will be detected. Resource conditions and responses to enhancement projects and regional stormwater retention/detention facilities will be assessed.	☑	☐	☑	M-0	842
Continue to support volunteer monitoring of rainfall and aquatic resources.	Aquatic resource monitoring will continue and be enhanced.	☑	☐	☑	M-3	843
ISSAQUAH						
Develop and implement a monitoring program to assess aquatic resources within the city and evaluate the success of implementation efforts for flood control, water quality and habitat improvements.	The monitoring program will be used to identify baseline conditions, detect changes in resource conditions and water quality resulting from development and resource enhancement, and examine trends over time.	☑	☐	☐	M-0	844
Through the city's monitoring program, involve and train citizens to monitor aquatic resources (may include water quality testing, benthic macroinvertebrate, vegetation, fish, habitat, sediment deposition, flooding and stream flow monitoring).	The city's comprehensive monitoring program will be augmented by data from volunteers; residents will be educated to provide enhanced stewardship of aquatic resources.	☑	☐	☑	M-3	845
MERCER ISLAND						
Develop a water-quality monitoring program that measures the effectiveness of maintenance activities, capital projects and other programs intended to protect water quality and habitat in Lake Washington.	The maintenance program, capital projects and other programs intended to protect water quality and habitat in Lake Washington will provide the maximum possible benefit.	☑	☐	☑	M-0	846

See page 6 for key.

LOCAL GOVERNMENT ACTIONS	OUTCOMES	Priority	Non-point	Salmon	PS Plan Element	Action ID
RENTON						
Develop monitoring programs for the May Creek Basin and Cedar River Basin in coordination with the other jurisdictions within the Basin to ensure that adequate data is collected in a way that minimizes cost, but allows for good watershed management.	Watershed management successes will be assessed and the need for new watershed actions will be explored.	☑	☐	☑	M-0	847
Construct property owner-initiated sanitary sewer extensions to serve areas with failing septic systems and upgrade a city sanitary sewer lift station to prevent overflows.	Fecal coliform contamination of water bodies will be reduced.	☑	☐	☑	M-0	848
KITSAP COUNTY						
BREMERTON-KITSAP COUNTY HEALTH DISTRICT						
Continue to implement the county's program for monitoring, identifying and correcting pollution sources. Provide education through citizen involvement and the regular distribution of water quality and health advisory information to the public. Also address local water bodies on the state's Clean Water Act 303(d) list. The condition of water, shellfish tissue and public swimming beaches will be tracked countywide to determine compliance with applicable federal and state standards. Areas with water quality problems will be identified and priorities set for intensive investigation and correction of pollution sources.	Public health and habitat for fish, shellfish and wildlife will be protected. Downgrades and closures of recreational shellfish areas will be prevented and closed areas reopened. Water bodies currently listed on the state's 303(d) list will be removed through correction of pollution sources. Information and data collection will also be coordinated with federal, state and local salmon enhancement programs. Information and monitoring results will be routinely distributed to the public via press releases, a newsletter, the Internet, public meetings and a 24-hour hotline number.	☑	☐	☑	M-0	849
KITSAP CONSERVATION DISTRICT						
Inspect and evaluate best management practices at ten sites to review operation and maintenance agreements and effectiveness of the practices. This monitoring program will emphasize areas affected by shellfish closures and areas designated high priority for follow-up.	The effectiveness of the conservation district's monitoring program will be monitored and evaluated.	☑	☐	☑	M-0	850
PIERCE COUNTY						
TACOMA-PIERCE COUNTY HEALTH DEPARTMENT						
Continue to implement the long-term water monitoring program which tracks the quantity and quality of the surface and ground waters of Pierce County.	A database will be developed on the quality and quantity of surface and groundwater over time in Pierce County. This database will guide management of the county's water resources.	☑	☐	☑	M-0	851

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Nonpoint	Salmon	PS Plan Element	Action ID
SKAGIT COUNTY						
SKAGIT CONSERVATION DISTRICT						
Coordinate a citizen-based program, the Skagit Stream Team, to monitor water quality in priority watersheds.	Baseline information and evaluation information will help determine the effectiveness of current water quality programs.	☑	☐	☑	M-3	852
SNOHOMISH COUNTY						
SNOHOMISH COUNTY						
Continue to conduct monitoring of the quality of water bodies, including water chemistry, biomonitoring and physical assessment.	Water quality, the drainage system and fish habitat will be improved.	☑	☐	☐	M-0	853
EVERETT						
Conduct chemical and biological monitoring of the city's receiving waters.	An enhanced database on water quality status and problems in Everett's receiving waters will be developed.	☑	☐	☑	M-0	854
THURSTON COUNTY						
THURSTON COUNTY						
Collect data on precipitation and water quality in streams.	Data needed to track water quality and provide benchmarks for the county's storm and surface water program will be gathered.	☑	☐	☑	M-0	855
If the county approves a water resources utility under RCW 36.94, staff will monitor 25 streams and eight lakes to determine compliance with water quality standards, assess trophic state, and assess the stream's ability to support fish based on biological indicators.	Long-term data will be provided to assess the effectiveness of activities to reduce nonpoint pollution, the operation and maintenance program and the stormwater program.	☑	☐	☑	M-0	856

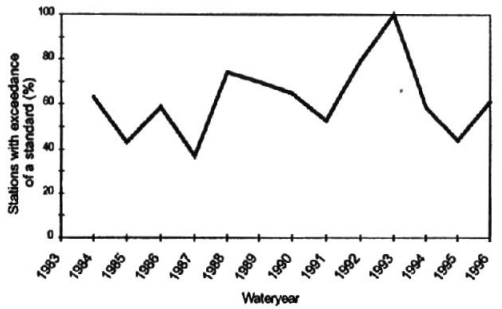
Puget Sound Management Plan Goal

- Reduce and ultimately eliminate harm from pollution stemming from agricultural practices on commercial and noncommercial farms, including animal wastes, pesticides, sediments and nutrients.

Strategy for Achieving Goal

- Implement comprehensive programs to develop effective farm management plans and carry out management practices through state and local agencies. The program should involve education, financial and technical assistance and, as necessary, regulation and enforcement.

Percent of Long-term River and Stream Stations that Exceed Fecal Coliform Standards



Source: Puget Sound Ambient Monitoring Program (Washington Department of Ecology, 1997)

Since 1984, more than half the river stations monitored for fecal coliform bacteria have violated state standards. Bacterial contamination of Puget Sound's rivers have not significantly improved or declined.

Background and Trends

The Puget Sound basin's fertile soil lends itself to a wide range of commercial and noncommercial farming. Agriculture is an important part of the basin's economy and culture. Controlling pollution from agricultural lands is largely voluntary, with an emphasis on education. Enforcement is a last resort, used only when technical assistance and education fail to result in voluntary compliance.

The Dairy Nutrient Management Act of 1998 created a new program within the Department of Ecology for managing dairy wastes. This program uses a cooperative process of registration, inspection and technical assistance to control farm wastes generated by the state's commercial dairies. All dairy farms are required to develop an approved dairy nutrient management plan by July 1, 2002.

Riparian setbacks to protect salmon will be required in all plans developed under the Dairy Nutrient Management Act. The federal Natural Resources and Conservation Service and partner agencies are reviewing riparian setback standards to ensure they are adequate under the Endangered Species Act. These standards will likely be adopted as regulations during this biennium.

The 1998 legislature provided money for the state Conservation Commission to fund the continued operation of the 12 Puget Sound conservation districts and to implement projects to restore and protect water quality and habitat, consistent with the Puget Sound Management Plan.

Highlights of 1999-2001 Actions

- The Conservation Commission will fund the conservation districts to implement Puget Sound Management Plan activities, including farm management plans.
- Local conservation districts will provide technical and financial assistance to the agricultural community to protect water quality.
- The Department of Ecology will implement the 1998 Dairy Nutrient Management Act.
- The U.S. Environmental Protection Agency will inspect dairies and help Ecology develop and implement the dairy nutrient management program.

Adjustments from 1997-1999: ($830,000)

1999-2001 Budget for State Actions

Total Provisoed Funding	$1,338,511
Total Other Funding	$0

STATE AND FEDERAL ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
CONSERVATION COMMISSION							
Continue to provide technical assistance and cost-share grants to local conservation districts to address dairy waste management.	Conservation districts will provide technical assistance and cost-share money to dairy farmers to fully implement plans to manage dairy waste.	☑	☐	☑	CC-01	AG-2	860
Continue to provide grants to the 12 Puget Sound conservation districts as part of their statewide water quality program and their water quality competitive grant program.	Grants will fund conservation district projects and programs designed to address many priorities of the Puget Sound Management Plan.	☑	☐	☑	CC-01	AG-1	861
DEPARTMENT OF AGRICULTURE							
Provide technical assistance to local governments and the public on the proper use of pesticides.	All referred complaints regarding pesticide use will be investigated. Annual summaries of complaints and responses to them will be prepared. Pesticide applicators will be licensed and recertified. The department will help Washington State University train pesticide applicators. Training on the safe use and disposal of pesticides will be provided in English and Spanish. The department will restrict use of pesticides to protect endangered species. Waste pesticides will be collected and safely disposed of, as laws and funding allow. Routine enforcement activities will be conducted to enforce the legal use of pesticides.	☑	☐	☑	DOA-01	AG-0	862
DEPARTMENT OF ECOLOGY							
Reduce pollution from dairy operations statewide by implementing the 1998 Dairy Nutrient Management Act. Conduct a program to register dairy farms and identify potential sources of nutrient pollution from dairy cattle. Inspect all dairies by October 1, 2000, and maintain a database with information on inspection and compliance. Encourage implementation of best management practices. Provide technical assistance and, where needed, issue wastewater discharge permits and take enforcement actions.	Fecal coliform, nutrient and other pollution from dairy operations will be reduced.	☑	☐	☑	DOE-03	AG-2	863
Provide continued technical assistance, education and other support to conservation districts and individual operators on water quality problems resulting from poor agricultural practices.	Compliance with water quality laws and water quality will be improved.	☑	☐	☑	DOE-03	AG-1	865

STATE AND FEDERAL ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
U.S. ENVIRONMENTAL PROTECTION AGENCY							
Continue to implement dairy inspection initiative and work with Ecology as they conduct their dairy nutrient program. The dairy inspection initiative will address dairy operations in parts of the Puget Sound watershed where water quality degradation is attributed to animal wastes.	This initiative will reduce nutrient loading to surface and groundwaters and improve water quality.	☑	☐	☑		AG-2	866

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
SOUNDWIDE						
THE PUGET SOUND ACTION TEAM RECOMMENDS THAT:						
Conservation districts should continue to help farmers develop and implement farm plans.	Farm plans will be developed and implemented in all appropriate cases.	☑	☐	☑	AG-1	870
Conservation districts should assist dairy producers in developing dairy nutrient management plans and begin reviewing, approving and certifying implementation of those plans under Section 6 of the 1998 Dairy Nutrient Management Act.	Commercial dairy producers will have nutrient management plans that meet the minimum elements established by the Conservation Commission.	☑	☐	☑	AG-2	871
Conservation districts, local governments and the Washington State University Cooperative Extension should collaborate to provide comprehensive education and assistance to commercial and noncommercial farmers and other landowners.	Landowners will be better informed and able to make better land-use decisions to protect water quality.	☑	☐	☑	AG-1	872
CLALLAM COUNTY						
CLALLAM CONSERVATION DISTRICT						
Respond to more than 300 requests for information concerning water quality, native vegetation, planting, streambank stabilization, irrigation, soils, wetlands, best management practices, conservation planning and related activities. Develop five conservation plans annually.	Awareness of individual contributions to water quality and fish declines will be increased. The public will be able to make more informed decisions.	☑	☐	☑	AG-1	873
ISLAND COUNTY						
WHIDBEY ISLAND CONSERVATION DISTRICT						
Implement the small-farm program for all of Whidbey Island.	Landowners and producers will be better educated, more aware and able to exercise good stewardship. Best management practices will be implemented on Whidbey Island.	☑	☐	☑	AG-1	874
Provide technical assistance to landowners, write conservation plans and recommend implementation of best management practices in targeted watersheds of central and south Whidbey Island.	Ten conservation plans will be developed annually. Two community meetings will be held to promote district programs and educate landowners and land users. Two field days will be sponsored in the watersheds. Water quality pollution will be prevented.	☑	☐	☑	AG-1	875

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
Provide technical assistance to landowners, write conservation plans and recommend implementation of best management practices on Whidbey Island.	Twenty conservation plans for small farms and eight plans for dairy farms will be developed annually. Water pollution will be reduced through the implementation of best management practices.	☑	☐	☑	AG-1	876
JEFFERSON COUNTY						
JEFFERSON COUNTY CONSERVATION DISTRICT						
Provide educational, technical and financial assistance to the agricultural community to foster the implementation of best management practices. Monitor water quality to document changes.	Five dairy farms and other farms will implement practices that improve and protect water quality.	☑	☐	☑	AG-1	877
KING COUNTY						
KING COUNTY						
Provide technical assistance to help landowners develop and implement ecologically sound management plans. Offer classes and workshops on forest management topics. Encourage the conservation of forestland through incentive programs.	The retention of tree cover and sound forest management will protect stream systems.	☑	☐	☑	AG-1	878
FEDERAL WAY						
Provide farm planning and technical assistance to landowners to reduce pollution from agricultural practices.	Agriculture-related impacts to surface waters will be reduced.	☑	☐	☑	AG-1	879
KITSAP COUNTY						
BREMERTON-KITSAP COUNTY HEALTH DISTRICT						
Research and develop a new ordinance or amend an existing one (through the Kitsap County Surface and Stormwater Management Program and Centennial Clean Water Fund Grant for Port Gamble Bay) to empower the health district to address agriculture-related water pollution.	Agriculture-related sources of pollution will be illegal (locally). The health district will have legal authority to require the correction or elimination of agriculture-related sources of pollution.	☑	☐	☑	AG-2	880

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Nonpoint	Salmon	PS Plan Element	Action ID
KITSAP CONSERVATION DISTRICT						
Provide farm planning and technical assistance to county landowners to reduce and, if possible, eliminate nonpoint pollution from agricultural practices. Priority will be placed on providing technical assistance to shellfish closure response plans, sites with Department of Ecology or Bremerton-Kitsap County Health District complaints filed against them, and priority areas identified by Endangered Species Act and Kitsap County Surface and Stormwater Management programs.	Sound management practices to protect water quality will be implemented on 40 farms in Kitsap County.	☑	☐	☑	AG-1	881
Provide financial assistance in the form of cost-share funding for materials and labor to landowners who agree to implement farm management plans.	Twenty miles of stream habitat and 200 acres of fish and wildlife will be protected or restored. For non-agriculture projects, priority will be given to fish passage barriers on private property.	☑	☐	☑	AG-3	882
MASON COUNTY						
MASON CONSERVATION DISTRICT						
Provide technical and financial assistance to landowners to reduce, and if possible, eliminate pollution from agricultural practices and their impacts on fish and wildlife habitat.	Landowners will use sound management and water quality will be improved.	☑	☐	☑	AG-0	883
PIERCE COUNTY						
PIERCE COUNTY CONSERVATION DISTRICT						
Write and implement conservation plans to address nonpoint-source pollution on small hobby farms throughout the county.	Annually, 36 conservation plans will be developed and best management practices will be implemented by 36 different landowners. Practices will meet or exceed standards of the Natural Resources Conservation Service.	☑	☐	☑	AG-1	884
Provide technical and financial assistance to dairy operators for implementing best management practices in Pierce County.	All dairy farms in Pierce County will have approved plans for managing dairy waste. Dairy farms will receive cost-share funding assistance.	☑	☐	☑	AG-1	885
SAN JUAN COUNTY						
SAN JUAN COUNTY CONSERVATION DISTRICT						
Develop a county-wide Watershed Management Action Plan in spring 1999 and begin involving the public through workshops and public hearings.	These projects will be used as models to help educate other landowners with similar property.	☑	☐	☑	AG-1	886

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
SKAGIT COUNTY						
SKAGIT CONSERVATION DISTRICT						
Provide technical assistance and cost-share funding to plan and implement resource management systems on dairy farms.	Participating dairy farms will meet state mandates for zero discharge to surface and groundwater, while developing resource management systems to protect fish and wildlife habitat.	☑	☐	☑	AG-2	887
Provide conservation planning and implementation assistance to owners of noncommercial farms.	Eighty small farms will begin using sound management practices to control and eliminate pollution. Stream fencing will protect 10 miles of riparian area.	☑	☐	☑	AG-1	888
Provide technical and financial assistance to crop-farm operations.	Water pollution from crop farming activities will be reduced. Riparian areas associated with farmed cropland will be protected and restored.	☑	☐	☑	AG-3	889
THURSTON COUNTY						
THURSTON CONSERVATION DISTRICT						
Through voluntary cooperation of landowners, develop and implement conservation plans.	Approximately 100 conservation plans will be drafted with further assistance provided to implement best management practices.	☑	☐	☑	AG-1	890
Assist landowners with conservation planning to protect groundwater on small farms and commercial vegetable operations.	Thirty-two conservation plans will be developed and, with assistance, best management practices will be implemented.	☑	☐	☑	AG-1	891
WHATCOM COUNTY						
WHATCOM CONSERVATION DISTRICT						
Provide technical and financial assistance to dairy operators for the development and implementation of management systems for dairy waste.	Water quality and fish habitat in major drainages of Whatcom County will be improved. Groundwater, surface water and riparian areas from will be protected from degradation.	☑	☐	☑	AG-2	892
Assist small farms in developing and implementing conservation plans in the Dakota, California, Ten Mile, Fishtrap and Bertrand Creek watersheds. Offer educational programs for landowners. Provide cost-share funding to implement best management practices.	Adverse impacts to water quality from small-farm pollution will be reduced and riparian habitat will be enhanced.	☑	☐	☑	AG-1	893

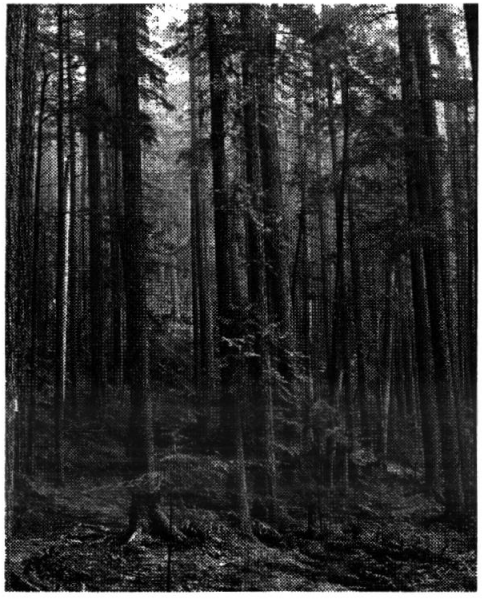
Forestry Practices

Puget Sound Management Plan Goal

- Restore and protect water quality and fish habitat from the effects of improper forest practices on federal, state and private lands

Strategies for Achieving Goal

- Continue using the Timber/Fish/Wildlife Agreement approach on forest management issues.
- Implement new rules for forest practices.
- Develop and implement local programs to address the effects of private forestland conversions and small forestry operations.



Background and Trends

Much of the Puget Sound basin's 16,000 square miles is forested, particularly in the upper watersheds. Federal and state governments, in partnership with industry and non-profit organizations, developed and are implementing programs to restore watersheds. The state regulates non-federal forest practices through the Forest Practices Act. The Timber/Fish/Wildlife Agreement (TFW) created a forum for key agencies and organizations to coordinate their activities.

The TFW approach continues to result in consensus on forestry management issues. To address the Endangered Species Act and protect salmon and other fisheries, key players are using TFW to work toward an agreement to improve habitat protection, address existing and abandoned roads, improve the use of watershed analyses and apply forest practices rules to small landowners. In addition, a number of local governments are developing and implementing local programs to address the effects of forestland conversions and manage small forestry operations.

In western Washington alone, 332,000 acres of non-industrial private forests were converted to non-forest uses between 1979 and 1989. Urban expansion was responsible for 48 percent of these conversions, rights-of-way accounted for about 28 percent, and agricultural uses made up the remaining 24 percent. It could cost as much as $2.4 billion statewide to build a stormwater system equivalent to the runoff benefits provided by forests converted to other uses in the last decade. (Source: Department of Natural Resources, 1998 *Our Changing Nature: Natural Resource Trends in Washington State)*

Highlights of 1999-2001 Actions

- The Department of Natural Resources will provide technical assistance to counties and cities for developing forest practices ordinances to manage small woodlots and forestland conversions.
- Cities and local conservation districts will help landowners develop ecologically sound forest management plans.

1999-2001 Budget for State Actions

Total Provisoed Funding	$0
Total Other Funding	$0

STATE AND FEDERAL ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
DEPARTMENT OF NATURAL RESOURCES							
Review, in consultation with the Department of Ecology, and approve jurisdictional transfer of Class IV General forest practices to cities and counties that have ordinances or regulations meeting or exceeding state forest practices rules. Provide technical assistance to those cities and counties to which Natural Resources has transferred jurisdiction until January 1, 2002.	All counties and cities will have ordinances or regulations for Class IV General forest practices by December 31, 2001.	☑	☐	☑	DNR-0	FP-3	895

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
ISLAND COUNTY						
WHIDBEY ISLAND CONSERVATION DISTRICT						
Provide forestry assistance for landowners and land users on Whidbey Island.	Ten conservation plans will be completed annually. Implementation of best management practices will reduce sedimentation in streams.	☑	☐	☑	FP-0	900
KING COUNTY						
KING COUNTY						
Provide technical assistance to landowners. Assist landowners in developing and implementing ecologically sound management plans. Offer classes and workshops on forest management topics. Encourage forestland conservation through incentive programs.	Stream systems will be protected through the retention of tree cover and sound forest management.	☑	☐	☑	FP-2	901
SAN JUAN COUNTY						
SAN JUAN COUNTY CONSERVATION DISTRICT						
Provide funding for farm and forestry plans to allow several landowners to demonstrate best management practices.	These plans will be used as models to help educate other landowners with similar property.	☑	☐	☑	FP-0	902
SKAGIT COUNTY						
SKAGIT CONSERVATION DISTRICT						
Assist owners of non-industrial, private forestlands to plan and implement sound management practices.	Sedimentation in waterways will be reduced and fish and wildlife habitat will be improved.	☑	☐	☑	FP-2	903

Marinas and Boaters

Puget Sound Management Plan Goal

- Reduce and ultimately eliminate harm from wastes generated by recreational boating activities and products, including sewage, petroleum products and other pollutants from the maintenance and repair of boats.

Strategies for Achieving Goal

- Coordinate implementation of the Puget Sound Marinas and Boaters Program.
- Install waste-disposal facilities.
- Educate boaters and marina operators.
- Provide financial and technical assistance.
- Assess the need for regulation and enforcement.
- Evaluate effectiveness of these strategies in changing boater behavior and water quality.

Untreated sewage from boats can contaminate water and shellfish growing areas. Bacterial contamination is a particular problem in bays with slow water circulation.

Background and Trends

Boating is a popular pastime in Puget Sound. Puget Sounders own more than 165,000 power boats, 21,500 sailboats, 43,500 canoes and kayaks, and numerous sailboards, inflatable boats and other personal watercraft. Public and private marinas provide moorage for thousands of boats. As a group, boaters can affect water quality. Untreated sewage pumped overboard contains bacteria and viruses that can close shellfish beds and beaches and make people who eat contaminated shellfish sick. A small amount of oil can contaminate many gallons of water. Paint scrapings and many boat solvents and cleaners are toxic to fish and wildlife.

A task force of state agencies coordinates the Puget Sound Marinas and Boaters Program. Members of the task force provide grants for sewage-disposal pumpouts and other waste-disposal facilities at marinas and other facilities. Other grants improve boater access. Members also develop educational materials for boaters and partner with others to participate in the annual National Boating Campaign, a national effort to promote clean boating practices. Much of this activity is enhanced through partnerships with trade associations and environmental groups.

Since 1994, 43 new pumpout stations have been installed in the Puget Sound basin under the Clean Water Act Pumpout Grants Program, and 15 more are under contract to be installed.

Highlights of 1999-2001 Actions

- The State Parks and Recreation Commission will install new or renovate existing waste disposal facilities at marinas, launch ramps, state parks and other boating facilities.
- State Parks will develop and distribute boater education materials through public and private partnerships.
- State Parks will develop educational materials for teachers to use in conjunction with boater safety classes.
- State Parks will install interpretative signs at state parks and at marinas where new pumpouts are installed.
- An interagency task force and advisory committee will coordinate program activities and discuss issues and needs.
- Kitsap County will implement a marina waste control ordinance.

1999-2001 Budget for State Actions

Total Provisoed Funding	$189,000
Total Other Funding	$525,000

JOINT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
The State Parks and Recreation Commission, the departments of Health, Natural Resources and Ecology, the Interagency Committee for Outdoor Recreation, and Action Team support staff will participate on the State Agency Marina/Boater Task Force to promote and coordinate the installation of waste-disposal facilities at new and existing, and public and private marinas, launch ramps and other boating facilities, and to promote other clean boating practices.	Efforts to protect Puget Sound from recreational boating activities will be coordinated and focused.						
PUGET SOUND WATER QUALITY ACTION TEAM		☑	☐	☑	PSAT-04	MB-1	905

STATE AND FEDERAL ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
STATE PARKS & RECREATION COMMISSION							
Promote and coordinate the installation of waste-disposal facilities at all public and private marinas, launch ramps and other boating facilities.	The number and use of facilities will increase as demonstrated by an increase in gallons of sewage collected annually.	☑	☐	☑	PRC-01	MB-1	910
Coordinate and promote federal grants to construct and/or renovate facilities for boat sewage in Puget Sound.	Funds will be awarded to construct or renovate up to 26 facilities for disposal of boat sewage.	☑	☐	☑	PRC-02	MB-5	911
In cooperation with the Action Team and the Marina/Boater Task Force, continue partnerships with state and local agencies, environmental groups and boater organizations to increase availability of educational materials.	Boaters will receive a variety of educational materials.	☑	☐	☑	PRC-03	MB-1.1	912
In cooperation with the Action Team and interested groups, develop and produce specialized information for recreational boaters that describes the relationship between boating and existing and potential aquatic nuisance species.	Boaters' knowledge of ways to prevent and remediate habitat degradation caused by aggressive aquatic nuisance species will be increased.	☑	☐	☑	PRC-03	MB-1.2	913
Install two pumpout stations at selected state parks.	Of the 26 pumpouts to be funded, two pumpouts will be installed in state parks in Puget Sound.	☑	☐	☑	PRC-04	MB-5	914
Provide educational materials for teachers to use in conjunction with classes on boating safety. These materials will be reviewed and updated regularly.	This ongoing educational program will continue.	☑	☐	☑	PRC-03	MB-4	915
Provide interpretive signs to marine state parks and marinas that install pumpouts.	State Parks will continue to provide interpretive materials to state marine parks and marinas.	☑	☐	☑	PRC-04	MB-4	916
Update the comprehensive plan for boat sewage disposal in Washington state in conjunction with U.S. Fish and Wildlife Service. The updated plan will include a section on the operation and maintenance of existing brands of pumpout equipment.	Sites for future pumpout installation will be identified. Information will be provided to marina owners and operators on the expected maintenance and repair needs of the various types of pumpout.	☑	☐	☑	PRC-01	MB-5	917

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
KITSAP COUNTY						
BREMERTON-KITSAP COUNTY HEALTH DISTRICT						
Implement actions pursuant to the Marina Waste Control Ordinance (currently in development) to protect public health, prevent downgrades or closures of recreational shellfish areas and reopen closed areas, and educate and involve the public.	Boat-generated sewage will be controlled and managed. Fecal coliform impacts to marine embayments will be minimized. The quality of marine water in Kitsap County will improve. Information will be routinely distributed to the public via press releases, the Internet and a 24-hour hotline.	☑	☐	☑	MB-3	920
PORT OF BROWNSVILLE						
Continue to emphasize sound management as outlined in the port's instruction for best management practices.	On-site sewage disposal systems and boats will be maintained in an accepted, environmentally safe manner.	☑	☐	☐	MB-3	921
PORT OF KINGSTON						
Continue to educate boaters about discharging sewage by offering free use of the sewage pumpout machine and the porta-potty dump station, enforcing port policy and by installing signs that discourage dumping of sewage.	Contaminants in water around the Port of Kingston will be reduced.	☑	☐	☐	MB-0	922

Puget Sound Management Plan Goal

- Reduce and ultimately eliminate adverse effects of contaminated sediments on biological resources and humans by reducing or eliminating discharges of toxic contaminants and by capping, treating or removing contaminated sediments.

Strategies for Achieving Goal

- Classify sediments that cause adverse biological effects and pose human-health risks.
- Control sources of pollution that cause sediment contamination.
- Provide rules and sites to dispose of dredged materials.
- Provide additional resources to control pollution sources and clean up contaminated sites in urban bays.

Contaminated Sediments in Puget Sound	
Area surveyed	13,854 acres
Area contaminated (not meeting standards)	5,083 acres
Number of cleanup sites	49

Source: Department of Ecology, 1997

A 1997 survey of known or suspected areas of sediment contamination revealed that 37 percent of Puget Sound sediments are contaminated and don't meet standards for sediment quality. Twenty-three percent of the surveyed area exceeded cleanup trigger levels and are potential cleanup sites.

Background and Trends

Many toxic chemicals build up in Puget Sound's sediments. Aquatic animals that live in or on the sediments are exposed to these chemicals, as are the fish, birds and mammals that eat them. This exposure harms aquatic life and poses risks to human health. In addition, difficulties in disposing of contaminated sediments cause delays and increased costs for development.

Almost all sediments show the chemical fingerprint of past and current discharges of wastewater and stormwater runoff. Concentrations of contaminants are highest in urban bays and other shallow areas that have received discharges. Research has shown that juvenile salmon from contaminated bays are affected by the pollution. Less than one percent of the total area of Puget Sound sediments were surveyed. About 5,000 acres of this area was contaminated to levels that exceed sediment standards. Forty-nine sites were targeted for cleanup.

Many accomplishments during the last decade helped reduce toxic contamination. The state developed, and is now updating, standards for sediment quality. Areas with potential contamination were surveyed. The state is working to establish multi-user disposal sites in Puget Sound. Many sites are scheduled for cleanup under the Superfund program.

Highlights of 1999-2001 Actions

- Federal and state agencies will manage the open-water disposal of clean dredged material.
- Federal and state agencies will coordinate sediment cleanup policies under the Cooperative Sediment Management Program.
- Federal, tribal, state and local governments will clean up sediments and restore habitat through the Bellingham Bay demonstration project.
- Federal, tribal, state and local governments and ports will study and develop a multi-user disposal site for contaminated sediments.
- The Department of Ecology will inventory contaminated sediment areas, clean up contaminated sites and support Urban Bay Action Teams, Natural Resource Damage Assessment evaluations and pollution control plans.
- The Department of Transportation will control the release of toxic contaminants from transportation projects, help restore Eagle Harbor, and develop contingency plans for spills.
- Some ports and cities will clean up contaminated sediment sites and mitigate habitat loss.

Adjustments from 1997-1999 ($150,000)

1999-2001 Budget for State Actions

Total Provisoed Funding	$1,696,551
Continued Other Funding	$580,000

JOINT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
The departments of Ecology, Transportation and Natural Resources, the Action Team support staff, the Environmental Protection Agency, the U.S. Army Corps of Engineers, and other federal, tribal, state, and local governments will continue to carry out the Bellingham Bay Demonstration Pilot Project to clean up contaminated sediments and restore and enhance aquatic habitats.	Sediment quality will be improved and other aquatic habitat will be enhanced in Bellingham Bay	☑	☐	☑	**DOT-02 DNR-05 DOE-07**	**S-8**	**925**
The departments of Ecology, Transportation and Natural Resources; Action Team support staff, the Environmental Protection Agency; and the U.S. Army Corps of Engineers will continue to coordinate policies for cleaning up sediments as part of the Cooperative Sediment Management Program.	Agencies will be informed of each other's activities and will develop uniform and complementary policies.	☑	☐	☑	**DOT-02 DNR-05 DOE-07 PSAT-04**	**S-7**	**926**
The U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, the state departments of Ecology and Natural Resources, and Action Team support staff will continue to manage open-water disposal of dredged material, including making permit decisions, and managing and monitoring disposal sites through the Dredged Material Management Program.	Open-water disposal sites that meet adopted environmental goals will continue to be available.	☑	☐	☑	**DNR-05 DOE-07**	**S-3**	**927**
The U.S. Army Corps of Engineers, the Environmental Protection Agency, the departments of Ecology and Natural Resources, the Washington Public Ports Association and the Action Team support staff will continue the study effort to develop a multi-user disposal site for contaminated sediments.	Recommendations for a multi-user site will be completed.	☑	☐	☑	**DNR-04 DOE-07 PSAT-04**	**S-6**	**928**

See page 6 for key.

STATE AND FEDERAL ACTIONS	OUTCOMES	Priority	Non-point	Salmon	Budget Code	PS Plan Element	Action ID
DEPARTMENT OF ECOLOGY							
Continue to clean up priority sediment sites. Cleanup of sediment sites in Puget Sound is included in the overall contaminated-site cleanup activities of Ecology and will not be tracked separately. Progress on cleaning up contaminated sites in Puget Sound is described in the bimonthly site register.	Contaminated sites (including sediment sites) will be cleaned up, reducing toxic impact to the waters and general environment in Puget Sound.	☑	☐	☑	DOE-07	S-8	930
Develop and update the sediment management rule and technical policy guidance in support of sediment cleanup, source control and dredging activities. Train field staff and consultants to implement new and updated guidance.	New scientific information will be incorporated into an updated sediment management rule and policy guidance for programs that address source-control, sediment cleanup and dredging.	☑	☐	☑	DOE-07	S-1	931
Maintain a database on the quality of Puget Sound sediments. Use geographic information systems to provide information to the Action Team and the public. Annually publish an updated list of sites with contaminated sediments.	An updated list of sites with contaminated sediments will be updated and published annually. This information will be given to the Action Team and the public upon request.	☑	☐	☑	DOE-07	S-8.1	932
Conduct fieldwork and laboratory studies, as requested, to support cleanup of contaminated sediments, source control investigations, Natural Resource Damage Assessment evaluations, Total Maximum Daily Load plans (pollution control plans) and the work of Urban Bay Action Teams.	Interpretive reports that describe results of investigations will be produced and recommendations will be provided to managers for follow-up actions.	☑	☐	☑	DOE-07	S-8.4	933
WASHINGTON STATE DEPARTMENT OF TRANSPORTATION							
Develop and implement programs to reduce and control the impacts of toxic compounds on sensitive habitats associated with transportation projects.	The department will continue to develop and implement strategies to control sources, clean up contamination, and repair damages to natural resources resulting from the release of toxic compounds into the environment. Statewide strategies will be integrated with highway and ferry transportation projects. Funding mechanisms will be developed for the cleanup of contaminated sediments, particularly those surrounding ferry terminals. Statewide strategies will be developed to integrate the cleanup of toxics with watershed planning. Federal "brownfields" policies on toxics will be incorporated into state transportation plans.	☑	☐	☑	DOT-02	S-1	934
Continue to support restoration activities in Eagle Harbor, including monitoring of eelgrass plantings and estuary restoration related to the Eagle Harbor Superfund Site. Develop contingency plans for spills at Washington State Ferry sites and during highway projects. Sample sediment at ferry terminals.	Permit compliance and successful restoration will be carried out at the Eagle Harbor Superfund site. Spill management plans will be developed to improve prevention and response to accidental spills. Sediment sampling will be completed at selected ferry terminals.	☑	☐	☑	DOT-02	S-0	935

LOCAL GOVERNMENT ACTIONS	OUTCOMES	See page 8 for key. Priority	Non-point	Salmon	PS Plan Element	Action ID
KING COUNTY						
RENTON						
Secure state and federal funding for cleanup of the Port Quendall site through a public/private partnership. Work will include removing serious contamination from the shore and property along Lake Washington and to allow redevelopment of the site and return the of shoreline to public use.	Fish and wildlife will benefit from sediment cleanup and enhancement of lake shoreline habitat.	☑	☐	☑	S-8.6	940
PIERCE COUNTY						
TACOMA						
Complete technical design of construction activities for remediation on the Foss and Wheeler-Osgood waterways, which are federal Superfund sites.	Contaminated sediments in Tacoma waterways will be cleaned up.	☑	☐	☑	S-8	941

The *Puget Sound Water Quality Management Plan* calls for local governments to develop programs to manage stormwater, protect and restore wetlands and habitat, manage on-site sewage systems and control nonpoint pollution. Table 2 shows the status of selected local programs as of July 1999. Information for this table was collected from various sources. More detail on the recommended contents of these programs can be found in the *Puget Sound Water Quality Management Plan* and in the program sections of this work plan.

Local governments are invited to review the table and to inform the Action Team of any needed corrections.

Stormwater Programs

Basic stormwater programs

- Y: All basic stormwater program elements called for in the Puget Sound Management Plan adopted.
- P: Most of the basic program elements called for in the Puget Sound Management Plan adopted.
- N: Few or none of the program elements called for in the Puget Sound Management Plan adopted.
- (blank): No data available.

Comprehensive stormwater programs

- Y: The jurisdiction is currently implementing a stormwater program under a National Pollutant Discharge Elimination System (NPDES) permit issued by the Department of Ecology.
- SA: The jurisdiction's implementation schedule has been approved by Ecology and the comprehensive stormwater program is being developed.
- N: The jurisdiction is behind schedule for developing a comprehensive stormwater program.
- --: The jurisdiction is not called on to develop a comprehensive stormwater program at this time.

On-site Sewage Management

Operation and Maintenance

- Y: The local health jurisdiction is implementing an operation and maintenance program.
- D: The local health jurisdiction is developing an operation and maintenance program.
- --: On-site systems within city jurisdictions are managed by the local health entity.

Assistance

- Y: The local health jurisdiction provides some or all of the following: public education, professional certification and training, and homeowner technical and financial assistance.
- N: The local health jurisdiction provides none of the above services.
- --: The local health entity provides on-site system services within city jurisdictions.

Watershed Action Plans

Name Name of Chapter 400-12 WAC watershed action plan.

Status

- P - Plan is being developed.
- I - Plan is being implemented.
- P/I - Still in the planning phase, but some elements are being implemented.

Table 2. Ongoing City and County Programs (as of July 1, 1999) ***See key on preceeding page.***

	Stormwater Management		On-site Sewage Systems		Watershed Action Plans (Chapter 400-12 WAC)	
	Basic Program	Comprehensive Program	Operation & Maintenance Program	Technical Assistance	Name	Status
Clallam County	N	--	D	Y		
Port Angeles	N	--	--	--	Dungeness River	I
Sequim	Y	--	--	--	Port Angeles	I
					Sequim	I
Island County	N	--	Y	Y		
Coupeville	P	--	--	--	North Whidbey	I
Langley	P	--	--	--	South Whidbey	P
Oak Harbor	P	--	--	--		
Jefferson County	P	--	D	Y		
Port Townsend	P	--	--	--	Discovery Bay	I
					Quilcene/Dabob bays	I
					Port Ludlow	I
King County	P	Y	D	Y		
Algona	P	--	--	--	East Lake Sammamish	I
Auburn	P	SA	--	--	Green/Duwamish	I
Beaux Arts Village	Y	N	--	--	Issaquah Creek	I
Bellevue	Y	SA	--	--	Lower Cedar River	I
Black Diamond	Y	--	--	--	Pipers Creek	I
Bothell	Y	SA	--	--	Thornton Creek	P/I
Burien	P	N	--	--	Longfellow Creek	I
Carnation	Y	--	--	--		
Clyde Hill	P	N	--	--		
Covington	N	--	--	--		
Des Moines	P	SA	--	--		
Duvall	Y	--	--	--		
Enumclaw	N	--	--	--		
Federal Way	P	SA	--	--		
Hunts Point	P	N	--	--		
Issaquah	P	SA	--	--		
Kent	Y	SA	--	--		
Kenmore	P	--	--	--		
Kirkland	P	SA	--	--		

	Stormwater Management		On-site Sewage Systems		Watershed Action Plans (Chapter 400-12 WAC)	
	Basic Program	Comprehensive Program	Operation & Maintenance Program	Technical Assistance	Name	Status
King County cont.						
Lake Forest Park	Y	N	--	--		
Maple Valley	N	--	--	--		
Medina	P	N	--	--		
Mercer Island	Y	SA	--	--		
Newcastle	Y	--	--	--		
Normandy Park	N	N	--	--		
North Bend	P	--	--	--		
Pacific	P	N	--	--		
Redmond	Y	SA	--	--		
Renton	P	N	--	--		
Sammish	N	--	--	--		
SeaTac	Y	N	--	--		
Seattle	P	Y	--	--		
Shoreline	P	N	--	--		
Skykomish	N	--	--	--		
Snoqualmie	P	--	--	--		
Tukwila	Y	SA	--	--		
Woodinville	Y	N	--	--		
Yarrow Point	P	N	--	--		
Kitsap County	Y	N	Y	Y		
Bainbridge Island	Y	--	--	--	Bainbridge Island	I
Bremerton	Y	SA	--	--	Sinclair Inlet	I
Port Orchard	P	SA	--	--	Dyes Inlet	I
Poulsbo	Y	--	--	--	Upper Hood Canal	I
					Liberty/Miller bays	I
Mason County	Y	--	D	Y		
Shelton	P	--	--	--	Oakland Bay	I
					Totten/Little Skookum	I
					Lower Hood Canal	I
Pierce County	P	Y	Y	Y		
Bonney Lake	P	SA	--	--	Lower Puyallup River	I
Buckley	Y	--	--	--	Chambers/Clover Creek	I

	Stormwater Management		On-site Sewage Systems		Watershed Action Plans (Chapter 400-12 WAC)	
	Basic Program	Comprehensive Program	Operation & Maintenance Program	Technical Assistance	Name	Status
Pierce County cont.						
Carbonado	Y	--	--	--	Key Peninsula/Gig Harbor	P/I
Du Pont	Y	SA	--	--	Upper Puyallup River	P
Eatonville	P	--	--	--		
Edgewood	P	N	--	--		
Fife	Y	N	--	--		
Fircrest	P	N	--	--		
Gig Harbor	N	--	--	--		
Lakewood	N	SA	--	--		
Milton	Y	SA	--	--		
Orting	Y	--	--	--		
Puyallup	N	N	--	--		
Roy	Y	--	--	--		
Ruston	N	N	--	--		
South Prairie	Y	--	--	--		
Steilacoom	P	N	--	--		
Sumner	P	N	--	--		
Tacoma	P	Y	--	--		
University Place	P	N	--	--		
Wilkeson	Y	--	--	--		
San Juan County	N	--	D	Y		
Friday Harbor	P	--	--	--	San Juan Islands	P
Skagit County	P	--	D	Y		
Anacortes	P	--	--	--	Nookachamps Creek	I
Burlington	P	--	--	--	Samish Bay	I
Concrete	N	--	--	--	Padilla Bay/Bayview	I
Hamilton	N	--	--	--		
La Conner	Y	--	--	--		
Lyman	N	--	--	--		
Mount Vernon	P	--	--	--		
Sedro Woolley	Y	--	--	--		
Snohomish County	P	Y	Y	Y		
Arlington	Y	--	--	--	Stillaguamish River	I

	Stormwater Management		On-site Sewage Systems		Watershed Action Plans (Chapter 400-12 WAC)	
	Basic Program	Comprehensive Program	Operation & Maintenance Program	Technical Assistance	Name	Status
Snohomish County cont.						
Brier	N	N	--	--	North Creek	I
Darrington	N	--	--	--	Swamp Creek	I
Edmonds	P	SA	--	--	French Creek	P/I
Everett	Y	SA	--	--	Quilceda/Allen Creeks	I
Gold Bar	N	--	--	--		
Granite Falls	Y	--	--	--		
Index	Y	--	--	--		
Lake Stevens	P	--	--	--		
Lynnwood	P	SA	--	--		
Marysville	P	N	--	--		
Mill Creek	P	N	--	--		
Monroe	Y	--	--	--		
Mount Lake Terrace	P	N	--	--		
Mukilteo	P	N	--	--		
Snohomish	N	--	--	--		
Stanwood	Y	--	--	--		
Sultan	N	--	--	--		
Woodway	P	N	--	--		
Thurston County	Y	SA	D	Y		
Lacey	Y	SA	--	--	Totten/Little Skookum	I
Olympia	Y	SA	--	--	Eld Inlet	I
Rainier	Y	--	--	--	Budd/Deschutes	I
Tumwater	P	SA	--	--	Henderson Inlet	I
Yelm	P	--	--	--		
Whatcom County	P	SA	D	Y		
Bellingham	P	SA	--	--	Kamm Creek	I
Blaine	N	--	--	--	Tenmile Creek	I
Everson	N	--	--	--	Silver Creek	I
Ferndale	P	--	--	--	Drayton Harbor	I
Lynden	P	--	--	--		
Nooksack	N	--	--	--		
Sumas	N	--	--	--		

Budget for the 1999-2001 Puget Sound Water Quality Work Plan

Table 3
Final Budget by Agency

Table 3 on the following pages presents the final budget for implementing the *1999-2001 Puget Sound Water Quality Work Plan*.

Key to Table 3

Budget Code: Funding under each budget code supports one or more related actions in the work plan. Each action in the work plan that is supported with dedicated state funding is referenced to a budget code.

Title: Short description of the budget category.

Continued 1997-1999 Proviso Funds: Funds that were provisoed by the legislature to implement the *1997-1999 Puget Sound Water Quality Work Plan* during the 1997-1999 biennium. "Provisoed" means funds that the legislature appropriated solely for implementation of the work plan.

Priority to Enhance: The priority the Action Team assigned to each recommended budget enhancement.

Recommended Adjustments for 1999-2001: Recommended changes to the 1997-1999 Biennium funding levels.

Recommended Total for 1999-2001: The total recommended funding for the work plan.

Final Adjustments for 1999-2001: Actual changes the legislature made in the Puget Sound Work Plan budget.

Final Total Provisos for 1999-2001: The total provisoed funds available for implementing the Work Plan.

Non-Proviso Funds Being Reported: Funds not provisoed that agencies have offered to include in the work plan.

Fund Source Acronynms:

GF-S	General Fund-State
GF-F	General Fund-Federal
ALEA	Aquatic Lands Enhancement Account
CAP	Capital Account
FHWA	Federal Highway Administration
LTCA	Local Toxic Control Account
MVF	Motor Vehicle Fund
OSAA	Oil Spill Administration Account
RMCA	Resource Management Cost Account
SBCA	State Building Construction Account
STCA	State Toxic Control Account
WQA	Water Quality Account
WQPF	Water Quality Permit Fees

Table 4
Final 1999-2001 Budget by Program

Table 4 presents the budget information sorted by work plan program.

Table 3. Final Budget, by Agency for the 1999-2001 Puget Sound Water Quality Work Plan

Budget Code	Title	Continued 1997-1999 Proviso Funds	Action Team Recommendations for 1999-2001			Final Budget Provisos for 1999-2001		Non-Proviso Funds Being Reported by Agencies	Fund Source
			Priority to Enhance	Adjustment	Total	Adjustment	Total		
DEPARTMENT OF AGRICULTURE									
DOA-01	Watershed Technical Assistance	$73,000			$73,000		$73,000		GF-S
Total	**Department of Agriculture**	**$73,000**			**$73,000**		**$73,000**		**GF-S**
DEPARTMENT OF COMMUNITY, TRADE AND ECONOMIC DEVELOPMENT									
DCTED-01	Technical Assistance	$123,000			$123,000		$123,000		GF-S
Total	**Department of Community, Trade and Economic Development**	**$123,000**			**$123,000**		**$123,000**		**GF-S**
CONSERVATION COMMISSION									
CC-01	Technical assistance and funding for water quality projects of Puget Sound Conservation Districts	$364,000			$364,000		$364,000		GF-S
		$130,000			$130,000		$130,000		WQA
		$830,000			$830,000	($830,000)			WQA Capital
Total	**Conservation Commission**	**$1,324,000**			**$1,324,000**	**($830,000)**	**$494,000**		
DEPARTMENT OF ECOLOGY									
DOE-01	Ambient monitoring and laboratory certification	$3,018,769			$3,139,769		$3,018,769		GF-S
		$244,000			$244,000		$244,000		GF-F
	Habitat report card		low	$121,000					GF-S
DOE-02	Waste water discharge permits	$3,686,000			$3,686,000		$3,686,000		WQPF
	Waste water discharge permits	$76,674			$2,810,674		$76,674		GF-S
	Conduct total maximum daily loads (TMDLs)		high	$867,000					GF-S
	Implement Substitute House Bill 2514		medium	$1,867,000					GF-S
DOE-03	Watershed assistance	$844,511			$1,184,511		$844,511		GF-S
	Increased nonpoint pollution enforcement		high	$340,000					GF-S
	Nonpoint pollution control grants			$6,667,000	$6,667,000				SBCA
DOE-05	Shellfish protection	$109,534			$109,534		$109,534		GF-S
DOE-06	Stormwater program	$1,503,908			$1,770,908		$1,503,908		GF-S
	Stormwater manual and staff		high	$267,000					GF-S
DOE-07	Contaminated sediments and dredging	$819,000			$819,000		$819,000		STCA
	Contaminated sediments and dredging	$9,000			$9,000		$9,000		GF-F
	Contaminated sediments and dredging	$865,260			$318,260		$715,260		GF-S
	Sediment cleanup and management technical assistance for multi-user disposal sites.			($547,000)		($150,000)			GF-S
DOE-08	Wetland protection and restoration	$141,000			$141,000		$141,000		GF-F
	Wetland protection and restoration	$601,344			$1,701,344		$601,344		GF-S
	Wetlands functional assessment		medium	$433,000					GF-S
	Grant funding for local governments to develop or redevelop shoreline master programs and critical areas ordinances to protect shoreline and nearshore habitat.		high	$667,000					GF-S
DOE-09	Oil spill prevention and response	$2,070,000			$2,477,000		$2,070,000		OSAA

Table 3. Final Budget, by Agency for the 1999-2001 Puget Sound Water Quality Work Plan

Budget Code	Title	Continued 1997-1999 Proviso Funds	Action Team Recommendations for 1999-2001			Final Budget Provisos for 1999-2001		Non-Proviso Funds Being Reported by Agencies	Fund Source
			Priority to Enhance	Adjustment	Total	Adjustment	Total		
DOE-09 *cont.*	Provide additional staff to review and approve oil spill plans, conduct drills, develop spill prevention improvements in North Puget Sound and develop education and outreach materials		medium	$296,000					OSAA
	Emergency spill response		medium	$111,000					OSAA
	Emergency spill response		medium	$111,000	$111,000				STCA
	Match industry and federal grants for on-call tug and equipment and to develop a North Puget Sound Risk Management Plan.		high for on-call tug	$1,500,000	$1,500,000				LTCA
DOE-10	Grants to local governments for on-site sewage system projects and programs.		high	$1,000,000	$1,000,000				WQA-Capital
Subtotal	Department of Ecology	$7,020,000		$4,015,000	$11,035,000	($150,000)	$6,870,000		GF-S
Subtotal	Department of Ecology	$394,000			$394,000		$394,000		GF-F
Subtotal	Department of Ecology			$1,500,000	$1,500,000				LTCA
Subtotal	Department of Ecology			$6,667,000	$6,667,000				SBCA
Subtotal	Department of Ecology			$1,000,000	$1,000,000				WQA-Capital
Subtotal	Department of Ecology	$2,070,000		$407,000	$2,477,000		$2,070,000		OSAA
Subtotal	Department of Ecology	$819,000		$111,000	$930,000		$819,000		STCA
Subtotal	Department of Ecology	$3,686,000			$3,686,000		$3,686,000		WQPF
Total	**Department of Ecology**	**$13,989,000**		**$13,700,000**	**$27,689,000**	**($150,000)**	**$13,839,000**		
DEPARTMENT OF FISH AND WILDLIFE									
DFW-01	Marine bird and mammal monitoring	$427,400			$427,400		$427,400		GF-S
DFW-02	Fish contaminant monitoring	$914,600			$914,600		$914,600		GF-S
DFW-03	Soundwide technical assistance for water quality and habitat	$283,000			$283,000		$283,000		GF-S
DFW-04	Soundwide technical assistance for wetlands	$249,000			$249,000		$249,000		GF-S
DFW-05	Local area technical assistance for water quality and habitat	$622,000			$622,000		$622,000		GF-S
DFW-06	Provide technical assistance in local areas on ESA-related salmon habitat recovery and conservation planning		medium	$134,100	$134,100				GF-S
DFW-07	Coordinate an interagency process to expedite salmon enhancement project permits (required by HB 2879)		high	$134,100	$134,100				GF-S
DFW-08	Assess harbor seal diet competition with salmon and marine fish and accumulation of chemical contaminants in seal tissue		medium	$205,000	$205,000				GF-S
DFW-09	Enhance public education opportunities on Spencer Island in coordination with Snohomish County		low	$188,800	$188,800				GF-S
DFW-10	Marine protected areas		high	$577,796	$577,796				GF-S
DFW-11	Provide, through an expanded Master Watershed Stewards program, opportunities for citizen action on salmon recovery in Puget Sound		medium	$506,040	$506,040				GF-S
DFW-12	Provide public access to Hydraulics Project Applications, Puget Sound Ambient Monitoring Program findings and other program data		high	$300,000	$300,000				GF-S

Table 3. Final Budget, by Agency for the 1999-2001 Puget Sound Water Quality Work Plan

Budget Code	Title	Continued 1997-1999 Proviso Funds	Action Team Recommendations for 1999-2001			Final Budget Provisos for 1999-2001		Non-Proviso Funds Being Reported by Agencies	Fund Source
			Priority to Enhance	Adjustment	Total	Adjustment	Total		
DFW-13	Provide technical assistance on major marine projects sponsored by public ports, local jurisdictions and other development groups		medium	$134,100	$134,100				GF-S
DFW-14	Evaluate data related to populations of common murre and marbled murrelet to improve habitat management, restoration and watershed planning		medium	$231,500	$231,500				GF-S
DFW-15	Develop a programmatic environmental impact statement for bulkhead construction projects in Puget Sound to address loss of nearshore habitat and cumulative effects on fish spawning beaches		high	$229,500	$229,500				GF-S
DFW-16	Survey and document critical habitat for intertidal spawning forage fish, including smelt, sandlance and others		high	$216,026	$216,026				GF-S
DFW-17	Develop and distribute user-friendly maps and videos of shoreline habitat to support management decisions		medium	$138,400	$138,400				GF-S
DFW-18	Collect information on depressed fish populations in Puget Sound and help develop management recovery plans		high	$328,940	$328,940				GF-S
DFW-19	Develop and distribute maps of Puget Sound nearshore and offshore habitat to aid state and local decision-making on area planning and harvest management		medium	$140,344	$140,344				GF-S
DFW-20	Assess the extent of PCB accumulation in chinook and coho salmon and potential effects of PCBs on reproductive success		medium	$300,000	$300,000				GF-S
DFW-21	Expand monitoring of diving bird populations to improve the timing and management of salmon gill-net fisheries to minimize incidental capture of diving ducks		high	$113,000	$113,000				GF-S
DFW-22	Assess productivity changes in Puget Sound and their relationship to declines in animal populations in the Sound		medium	$60,000	$60,000				GF-S
DFW-23	Puget Sound green crab control		high	$248,235	$248,235	$248,000	$248,000		GF-S
DFW-24	Guidance for protecting and restoring salmon habitat: develop tools for selecting techniques to ensure salmon recovery and coordinate with governments, landowners and developers		high	$788,354	$788,354				GF-S
Total	**Department of Fish and Wildlife**	**$2,496,000**		**$4,974,235**	**$7,470,235**	**$248,000**	**$2,744,000**		**GF-S**
DEPARTMENT OF HEALTH									
DOH-01	Monitoring, data management and reporting	$520,435	high	$263,693	$784,128		$520,435		GF-S
DOH-02	Protection and restoration of shellfish beds	$920,710			$920,710		$920,710		GF-S
DOH-03	Recreational shellfish program	$671,424			$671,424		$671,424		GF-S
DOH-04	On-site sewage management	$1,258,430			$1,258,430		$1,258,430		GF-S
Total	**Department of Health**	**$3,371,000**		**$263,693**	**$3,634,693**		**$3,371,000**		**GF-S**

Table 3. Final Budget, by Agency for the 1999-2001 Puget Sound Water Quality Work Plan

Budget Code	Title	Continued 1997-1999 Proviso Funds	Action Team Recommendations for 1999-2001			Final Budget Provisos for 1999-2001		Non-Proviso Funds Being Reported by Agencies	Fund Source
			Priority to Enhance	Adjustment	Total	Adjustment	Total		
DEPARTMENT OF NATURAL RESOURCES									
DNR-01	Nearshore habitat monitoring	$824,708			$904,708		$904,708		ALEA
	Rapid mapping of nearshore habitat		high	$80,000		$80,000			ALEA
DNR-02	Management of wetlands	$36,000			$36,000		$36,000		GF-S
DNR-04	Multi-user disposal site program	$153,292			$153,292		$153,292		ALEA
Subtotal	Department of Natural Resources	$978,000		$80,000	$1,058,000	$80,000	$1,058,000		ALEA
Subtotal	Department of Natural Resources	$36,000			$36,000		$36,000		GF-S
Total	**Department of Natural Resources**	**$1,014,000**		**$80,000**	**$1,094,000**	**$80,000**	**$1,094,000**		
STATE PARKS AND RECREATION COMMISSION									
P&RC-01	State Agency Marina and Boating Task Force	$70,000			$70,000		$70,000		ALEA
								$25,000	GF-F
P&RC-02	Sewage disposal facility grant program							$400,000	GF-F Capital
P&RC-03	Environmental education for boaters	$119,000			$119,000		$119,000		ALEA
								$50,000	GF-F
P&RC-04	Sewage Disposal In State Parks							$50,000	GF-F Capital
Subtotal	State Parks and Recreation Commission	$189,000			$189,000		$189,000		ALEA
Subtotal	State Parks and Recreation Commission							$75,000	GF-F
Subtotal	State Parks and Recreation Commission							$450,000	GF-F Capital
Total	**State Parks and Recreation Commission**	**$189,000**			**$189,000**		**$189,000**	**$525,000**	
DEPARTMENT OF TRANSPORTATION									
DOT-01	Stormwater							$44,356,000	MVF
DOT-02	Contaminated sediments							$580,000	MVF
DOT-03	Wetlands							$6,262,000	MVF
DOT-04	Habitat							$12,766,000	MVF
DOT-05	Education and public involvement								
Subtotal	Department of Transportation - MVF							$63,964,000	MVF
Total	**Department of Transportation**							**$63,964,000**	
UNIVERSITY OF WASHINGTON									
UW-01	Water quality agents	$273,261			$573,261		$273,261		GF-S
	Add two additional field agents		high	$300,000					GF-S
UW-02	Oil spill prevention education	$170,000			$170,000		$170,000		OSAA
Total	**University of Washington**	**$443,261**		**$300,000**	**$743,261**		**$443,261**		
WASHINGTON STATE UNIVERSITY									
WSU-01	Water quality agents	$331,000			$677,000		$331,000		GF-S
	Add two additional field agents		high	$346,000					GF-S
Total	**Washington State University**	**$331,000**		**$346,000**	**$677,000**		**$331,000**		**GF-S**

Table 3. Final Budget, by Agency for the 1999-2001 Puget Sound Water Quality Work Plan

Budget Code	Title	Continued 1997-1999 Proviso Funds	Action Team Recommendations for 1999-2001			Final Budget Provisos for 1999-2001		Non-Proviso Funds Being Reported by Agencies	Fund Source
			Priority to Enhance	Adjustment	Total	Adjustment	Total		
PUGET SOUND WATER QUALITY ACTION TEAM									
PSAT-01	Work plan and management plan	$636,841			$636,841		$636,841		GF-S
		$40,341			$40,341		$40,341		GF-F
PSAT-02	Puget Sound ambient monitoring and research	$355,200			$355,200		$355,200		GF-S
		$22,115			$22,115		$22,115		GF-F
PSAT-03	Regional technical assistance	$997,788			$997,788		$997,788		GF-S
		$69,019			$69,019		$69,019		GF-F
PSAT-04	Technical programs	$673,198			$673,198		$673,198		GF-S
		$41,072			$41,072		$41,072		GF-F
PSAT-05	Public information, education and involvement actions	$536,973			$536,973		$536,973		GF-S
		$36,453			$36,453		$36,453		GF-F
	Public Involvement and Education (PIE) Fund	$700,000	high	$1,300,000	$2,000,000		$700,000		WQA
PSAT-06	Establish the Governor's Council on Environmental Volunteers and Education to assist volunteers for salmon restoration and protection efforts. (Pass-through)		medium						WQA
Subtotal	Puget Sound Water Quality Action Team	$209,000			$209,000		$209,000		GF-F
Subtotal	Puget Sound Water Quality Action Team	$3,200,000			$3,200,000		$3,200,000		GF-S
Subtotal	Puget Sound Water Quality Action Team	$700,000		$1,300,000	$2,000,000		$700,000		WQA
Total	**Puget Sound Water Quality Action Team**	**$4,109,000**		**$1,300,000**	**$5,409,000**		**$4,109,000**		
ALL AGENCIES									
Subtotal	All Agencies GF-S	$17,287,261		$9,898,928	$27,186,189	$98,000	$17,385,261		
Subtotal	All Agencies GF-F	$603,000			$603,000		$603,000	$75,000	
Subtotal	All Agencies GF-F Capital							$450,000	
Subtotal	All Agencies ALEA	$1,167,000		$80,000	$1,247,000	$80,000	$1,247,000		
Subtotal	All Agencies WQPF	$3,686,000			$3,686,000		$3,686,000		
Subtotal	All Agencies STCA (State Toxics Control Account)	$819,000		$111,000	$930,000		$819,000		
Subtotal	All Agencies LTCA			$1,500,000	$1,500,000				
Subtotal	All Agencies MVF							$63,964,000	
Subtotal	All Agencies OSAA	$2,240,000		$407,000	$2,647,000		$2,240,000		
Subtotal	All Agencies SBCA			$6,667,000	$6,667,000				
Subtotal	All Agencies WQA	$830,000		$1,300,000	$2,130,000		$830,000		
Subtotal	All Agencies WQA Capital	$830,000		$1,000,000	$1,830,000	($830,000)			
Total	**All Agencies. All Funds**	**$27,462,261**		**$20,963,928**	**$48,426,189**	**($652,000)**	**$26,810,261**	**$64,489,000**	

Table 4. 1999-2001 Biennium Budget, by Program

WORK PLAN PROGRAM	Continued 1997-1999 Proviso Funds	Action Team Recommendations for 1999-2001		Final Budget Provisos for 1999-2001		Non-Proviso Funds Being Reported by Agencies
		Adjustment	Total	Adjustment	Total	
Puget Sound Estuary Management	$1,391,452		$1,391,452		$1,391,452	
Washington/British Columbia Environmental Cooperation						
Management of Aquatic Nuisance Species		$248,235	$248,235	$248,000	$248,000	
Wetlands and Fish and Wildlife Habitat Protection	$2,055,344	$4,313,020	$6,368,364		$2,055,344	$19,028,000
Spill Prevention and Response	$2,240,000	$2,018,000	$4,258,000		$2,240,000	
Puget Sound Monitoring, Research and Laboratory Support	$6,327,228	$1,471,633	$7,798,861	$80,000	$6,407,228	
Education and Public Involvement	$2,944,494	$2,452,040	$5,396,534		$2,944,494	
Local Watershed Plans	$73,000	$6,667,000	$6,740,000		$73,000	
On-site Sewage Systems	$1,258,430	$1,000,000	$2,258,430		$1,258,430	
Forestry Practices						
Agricultural Practices	$2,168,511	$340,000	$2,508,511	($830,000)	$1,338,511	
Marinas and Boaters	$189,000		$189,000		$189,000	$525,000
Shellfish Protection	$1,701,669		$1,701,669		$1,701,669	
Contaminated Sediments and Dredging	$1,846,551	($547,000)	$1,299,551	($150,000)	$1,696,551	$580,000
Municipal and Industrial Discharges	$3,762,674	$2,734,000	$6,496,674		$3,762,674	
Stormwater Management and Combined Sewer Overflows	$1,503,908	$267,000	$1,770,908		$1,503,908	$44,356,000
Total - All Programs	**$27,462,261**	**$20,963,928**	**$48,426,189**	**-$652,000**	**$26,810,261**	**$64,489,000**

Table 4. Final 1999-2001 Biennium Budget, by Program

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