



Introduction

The legislature finds that:

Puget Sound and related inland marine waterways of Washington state represent a unique and unparalleled resource. A rich and varied range of marine organisms, comprising an interdependent, sensitive communal ecosystem reside in these sheltered waters. Residents of this region enjoy a way of life centered around the waters of Puget Sound, featuring accessible recreational opportunities, world-class port facilities and water transportation systems, harvest of marine food resources, shoreline-oriented life styles, water-dependent industries, tourism, irreplaceable aesthetics, and other activities, all of which to some degree depend upon a clean and healthy marine resource.”

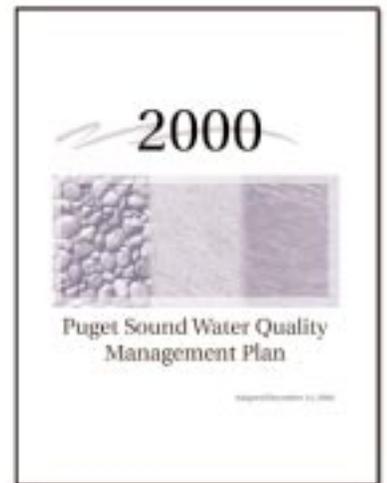
~ *Puget Sound Water Quality Protection Act 1996 (Chapter 90.71 RCW)*

What is the *Puget Sound Water Quality Management Plan*?

The *Puget Sound Water Quality Management Plan* is Washington State’s long-term strategy for protecting and restoring Puget Sound. The management plan provides the framework for managing and protecting the Sound and coordinating the roles and responsibilities of federal, state, tribal and local governments.

To coordinate government actions for protecting and restoring the Sound, the 1996 legislature established the Puget Sound Water Quality Action Team, the Puget Sound Council and a governor-appointed chair who manages both of these. Together, the Action Team and Council periodically review and update the management plan to reflect changing issues, advances in technology, public expectations, and political and budgetary concerns.

The management plan also serves as the federally approved Comprehensive Conservation and Management Plan (CCMP) for Puget Sound under Section 320 of the federal Clean Water Act, which established the National Estuary Program.



What does “shall” mean?

The Action Team has determined that the actions in this plan are needed to protect and restore Puget Sound. Consistent with the importance of these actions, this plan says that appropriate implementers “shall” perform the actions. However, implementation of many of these actions is a long-term process. The Action Team’s work plans will identify the actions that need to be taken each biennium to implement this management plan. Implementation of actions in the work plans is subject to the availability of funds and public input into the decision-making processes of implementing entities. When an action is included in a biennial work plan, the Action Team expects that it will be implemented in accordance with the relevant provisions of the Puget Sound management plan, in accordance with Chapter 90.71 RCW.

It is...the policy of the state to implement the Puget Sound water quality management plan to the maximum extent possible.

~ RCW 90.71.005

The Goal

The goal of the *Puget Sound Management Plan* is to restore and protect the biological health and diversity of Puget Sound by:

- preserving and restoring wetlands and aquatic habitats and the natural processes and functions that created them;
- preventing increases in the introduction of pollutants to the Sound and its watersheds; and
- reducing and ultimately eliminating harm from the entry of pollutants to the waters, sediments and shorelines of Puget Sound.

The management plan's emphasis on prevention recognizes that it will cost us far more to clean up pollution later than to prevent it now. The management plan recognizes that we all share responsibility for the Puget Sound region and that fish, wildlife, water and pollutants cross jurisdictional lines. It establishes a framework based on a partnership among levels of government, each having a defined set of responsibilities in different program areas. And it recognizes and includes actions of federal, state, local and tribal governments, the private sector and citizens.

The Approach

This management plan guides the efforts of federal and state agencies as well as tribal and local governments in Clallam, Island, Jefferson, King, Kitsap, Mason, Pierce, San Juan, Skagit, Snohomish, Thurston and Whatcom counties. In total, 122 cities and counties and hundreds of special districts are involved in implementing the management plan. Federal, provincial and municipal agencies and First Nations in British Columbia are also active in protecting the shared inland marine waters associated with Puget Sound—the Strait of Juan de Fuca and the Strait of Georgia.

The management plan gives governmental entities specific assignments based on the nature of their missions and authority. These governments work with businesses, community organizations and citizen groups to achieve the goals of reducing pollution and protecting biological resources in Puget Sound.

Every two years, the Action Team and Council develop a *Puget Sound Water Quality Work Plan* to identify actions to maintain and improve Puget Sound's health during the next two-year state funding cycle. Work plan actions are guided by the management plan's long-term goals for restoring and protecting the Sound.

This management plan takes a strategic approach to improving and adding programs to protect and restore Puget Sound. This plan acknowledges existing programs and calls for necessary enhancements and additions. Throughout the years the following considerations guided development of enhanced or new programs:

- What is the magnitude of harm for the environment and human health?
- What is the persistence of the threats to the health of the Sound and the difficulty of mitigating or resolving them?
- Is there a loss that could be construed as irreversible?
- Are all threats to the Sound being addressed?
- Are the significant threats in each portion of the Sound being addressed adequately?

The work plan shall be implemented consistent with the legislative provisos of the biennial appropriation acts.

~ RCW 90.71.050

Local governments are required to implement local elements of the work plan subject to the availability of appropriated funds or other funding sources.

~ RCW 90.71.070

- How adequate are existing management programs?
- What is the most cost-effective approach to address a problem?
- Which programs have long start-up periods, and have these programs begun yet?
- What funding sources exist to implement programs and are they being fully used?

Geographic Scope of This Plan

This management plan addresses the waters of Puget Sound, the Strait of Juan de Fuca and all waters flowing into them. For convenience in this management plan, marine waters will be referenced as “Puget Sound” and the total land area that drains into Puget Sound as the “Puget Sound basin.”

Figure 1 also shows the Puget Sound basin and waters in the Province of British Columbia that are considered “shared waters.” The jurisdiction of this management plan covers only the Puget Sound basin.

However, implementation of this management plan is coordinated with various entities within British Columbia to address the integrity of the entire shared waters ecosystem.

The Puget Sound basin covers more than 16,000 square miles of which 80 percent is land and 20 percent is water. Two-thirds (3,915,000) of Washington State’s population lives in this area.

As an ecosystem, the Puget Sound basin boasts a diverse collection of habitats and species. The local marine environment alone supports more than 220 species of fish; 26 species of marine mammals; 100 species of seabirds, shorebirds, and waterfowl; and numerous invertebrate and plant species.



Figure 1. The Puget Sound basin (above) and the shared waters (left).

History of the Management Plan

During the 1960s and 1970s, there was increasing concern that the health of Puget Sound was deteriorating. This came in spite of many efforts to protect the Sound at every level of government. By 1985, there was general agreement that better coordination among programs would improve program effectiveness and efficiency—and ultimately improve the health of Puget Sound. That year, the Washington State Legislature created the Puget Sound Water Quality Authority to develop and oversee implementation of a management plan for the Puget Sound basin and Puget Sound. (RCW 90.70).

The Authority developed the first *Puget Sound Water Quality Management Plan* in 1987. Updates were prepared in 1989, 1991, 1994 and 1996. During this time, the management plan evolved along with the issues. Some plan elements (actions) were completed, some were revised and new programs and elements were added.

Responding to similar concerns at the national level, Congress established the National Estuary Program as Section 320 of the Clean Water Act in 1987. The Environmental Protection Agency approved the *Puget Sound Management Plan* as the federal Comprehensive Conservation and Management Plan for the basin in 1991.

In July 1996, the authorizing legislation for the Puget Sound Water Quality Authority expired. That year, the Washington State Legislature enacted the Puget Sound Water Quality Protection Act (RCW 90.71). Under this law, the Puget Sound Water Quality Action Team and Puget Sound Council assumed the Authority's responsibilities, including review and adoption of the *Puget Sound Management Plan*.

Benefits of Puget Sound

Citizens of Washington depend on the Sound for a variety of benefits.

Culture—The natural beauty and abundant wildlife of Puget Sound are essential to the northwest experience. Puget Sound environmental values are fundamental to the culture of tribal communities.

Ecosystem Functions—The natural functions of the Puget Sound ecosystem are vital to the welfare of animals, plants and humans. Forests and wetlands provide wildlife habitat, and they reduce flooding and sedimentation by slowing down surface runoff and helping water soak into the ground. They also return water to the atmosphere through evaporation and transpiration. Erosion of sediments and woody debris from marine bluffs help maintain the habitat for nearshore fish and other species. The turbulent marine waters support rich plankton communities that feed hundreds of species through a complex food web from geoducks to whales.

Shipping and Transportation—In 1998, Puget Sound ports imported and exported almost 96 percent of the total value of all commodities moved through Washington ports—totaling more than \$50 billion. The Port of Seattle ranked fifth out of the top 10 U.S. ports in total dollar value for waterborne trade. The Sound's waterways are also important transportation links among the coastal communities. Ferries carry nine million

vehicles across the Sound each year.

Fishing and Shellfish Harvesting—The fish and shellfish of Puget Sound are important parts of the region's heritage and valuable economic resources. The state's fishing and aquaculture industries rely on salmon, clams and oysters. Cod, halibut, perch, smelt, sole, dogfish and flounder are also harvested from the Sound. In 1998, total revenue from commercial fish harvesting in Puget Sound was more than \$12 million, and the industry employed nearly 900 people. Revenues from commercial shellfishing that year hit the \$40-million mark, and that industry employed approximately 1,800 people. Many tribes in the region rely on harvest of fish and shellfish as an important part of their food supplies and economies.

Recreational Fishing and Shellfish Gathering—Recreational activities also benefit the state's economy. The Puget Sound region accounts for well over 50 percent of the state's recreational salmon catch. Annually, recreational clam diggers collect about three million pounds of hard-shell clams from around the Sound.

Boating—Thousands of residents and tourists enjoy the Puget Sound waters through various boating activities. Puget Sounders own more than 165,000 powerboats, 21,000 sailboats, and 43,000 canoes and kayaks. Almost 80 percent of the state's 350 marinas and more than 85 percent of the state's 39,400 moorage slips are located along the shores of Puget Sound.

Tourism—In 1998, spending on travel in the Puget Sound basin exceeded \$7 billion (80 percent of statewide expenditures) and the number goes up every year. The Puget Sound region accounts for 75 percent of the state's tourism-related jobs.

Status and Trends

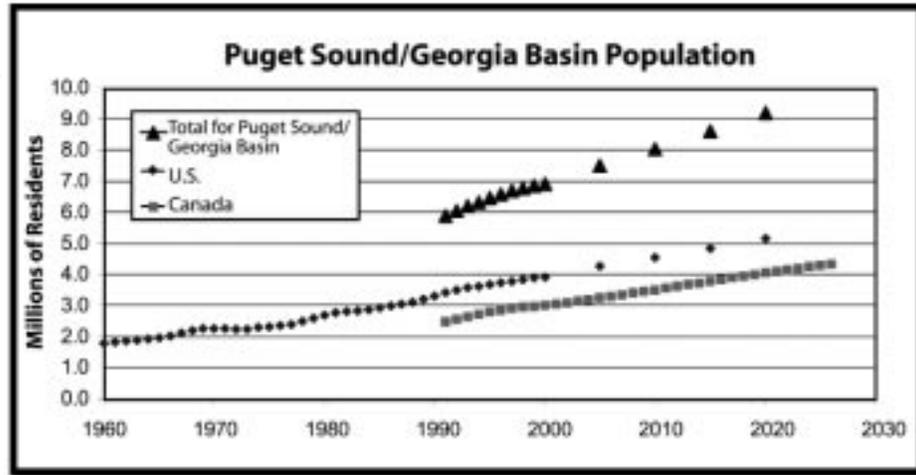
We can't take the benefits of Puget Sound for granted. Some of Puget Sound's resources are already in trouble and there are signs that the future will be even more challenging.

- Puget Sound chinook, Hood Canal summer chum and bull trout are listed as threatened under the Endangered Species Act.
- Numerous other species that live in Puget Sound are declining, including Pacific herring, rockfish, coho salmon, scoters, Western grebes and great blue herons.
- An estimated 70 percent of tidally influenced wetlands in Puget Sound have been lost in the past century and 33 percent of marine shorelines have been modified.
- Since 1980, roughly one-quarter of the area classified for commercial shellfish harvesting has been downgraded and taken out of production.
- Of 15,300 surveyed acres of tidelands and submerged marine beds in the urban portion of Puget Sound, 38 percent of sediments failed to meet state standards for acceptable levels of contamination.

For more information about the health of Puget Sound, refer to the Puget Sound Action Team's report *Puget Sound's Health 2000* at http://www.wa.gov/puget_sound/Publications/Pub_Master.htm.

Figure 2. Puget Sound's population, 1991-2020

What changes will we see in the future? The population of the Puget Sound and the Georgia Basin is expected to grow by two million in the next 20 years. This is equivalent to adding more than 20 new cities the size of Everett or more than 10 Tacomas, with all the houses, businesses, roads, water supplies, sewer discharges, industries and recreation areas this growth will demand.



British Columbia Stats (tabulated for the Georgia Basin Ecosystem Initiative) and Washington State Office of Financial Management (tabulated by Puget Sound Water Quality Action Team staff.)

Accomplishments

During the 13-year history of the *Puget Sound Management Plan*, we've seen significant improvements in programs to protect and restore the Sound. Here are some examples:

Managing stormwater and protecting habitat: Almost half of the local governments in the Puget Sound basin have developed stormwater programs that are called out in the *Puget Sound Management Plan*, and many have created utilities to fund those programs. Local programs to enhance wetlands have been developed and incorporated into critical areas ordinances required under the state's Growth Management Act. Marine reserves and marine protected areas have been designated.

Preventing sewage pollution from homes and boats: All 12 Puget Sound counties are developing or enhancing programs to ensure proper operation and maintenance of on-site sewage systems. Puget Sound boaters now have access to sewage disposal facilities around the Sound.

Restoring shellfish beds: Together, state agencies, tribal and local governments, and community and industry groups have restored a number of commercial shellfish growing areas around the Sound. In addition, nearly 150 recreational shellfish areas have been classified as either open or closed for public harvest.

Reducing toxic pollutants: During the past decade, progress has been made to decrease the discharge of toxic chemicals to Puget Sound. Issued or re-issued permits require enhanced treatment levels and monitoring. Facility inspectors and permit writers are better trained. Permit backlogs have been reduced or eliminated. Dischargers receive technical assistance, and pollution prevention programs have been improved.

Cleaning up contaminated sediments: Washington was the first state to adopt standards for sediment quality and, in some areas of the Sound, contaminated sediments have been cleaned up.

Tracking the vital signs of Puget Sound: The Puget Sound Ambient Monitoring Program, coordinated by the Action Team, has measured trends in water quality, habitat and biological resources for the last 10 years. Monitoring results are a key consideration in developing actions to protect the Sound.

Building new partnerships: Groups that may not have worked together in the past have cooperated on finding and implementing solutions. These include businesses, environmentalists, farmers shellfish growers, and others.

Getting people involved: The Action Team has funded more than 250 projects to educate and involve the public in taking action to enhance Puget Sound. Five field agents (from both University of Washington Sea Grant and Washington State University Cooperative Extension Service) provide direct education to community groups, schools and business groups.

Working with Canada to protect the Shared Marine Waters: Since 1992, the Puget Sound/Georgia Basin International Task Force has worked to protect the shared marine waters between the two countries. Washington State produced and implements forage and ground fish management plans for the area and has established marine reserves.

Working in the watershed: With help from the Action Team's local liaisons and technical assistance from Action Team agencies, 44 watershed plans have been developed.

Preventing spills of oil and hazardous substances: The number and volume of oil spills greater than 10,000 gallons has remained relatively low since 1992 with the exception of a 277,000 gallon spill in Bellingham in June 1999.

What's New in the 2000 Management Plan?

The Action Team and Council decided to update the management plan in order to address new issues and improve existing programs. In recent years, new issues have come to the forefront, such as threats to wild salmon stocks and invasions of aquatic nuisance species. The Environmental Protection Agency is developing new federal guidance for stormwater programs. Researchers are emphasizing the importance of land-use decisions to protect water quality. The new Northwest Straits Commission is working to protect waters of the Strait of Juan de Fuca and northern Puget Sound. Existing programs for coordinating management of shared waters with British Columbia are being strengthened.

For the 2000 management plan update, the Action Team decided to add two new programs, to review and amend three existing programs, and to edit the balance of the 1994 management plan. This decision balanced the need to update the plan with available resources and time.

The two programs added for 2000 are the Puget Sound/Georgia Basin Shared Waters Program and the Aquatic Nuisance Species Program. The Shared Waters Program embraces the work already underway by the Puget Sound/Georgia Basin International Task Force. The new program promotes and coordinates efforts in Washington and British Columbia to ensure the protection, conservation and enhancement of the shared marine waters and resources. The Aquatic Nuisance Species Program

enhances the efforts of state and local governments to prevent nonnative aquatic species from entering Puget Sound and to control those already present. The new program identifies gaps in existing management programs and recommends steps to correct them.

Three programs in the 1994 management plan were reviewed and updated: Stormwater and Combined Sewer Overflows; Wetlands Protection; and Fish and Wildlife Habitat Protection

Changes to the stormwater program recognize our improved understanding about the critical effect that stormwater has on water quality, as well as habitat. The Wetlands Protection and the Fish and Wildlife Habitat Protection programs from the 1994 management plan are updated and combined into one comprehensive Marine and Freshwater Habitat Protection Program. This combination acknowledges that wetlands need to be managed in the overall context of habitat protection. New measures are added to provide for establishment of marine protected areas and to improve knowledge about habitat gains and losses in the basin.

The remaining programs from the 1994 management plan have been edited to streamline language, update some target dates, and correct outdated references to programs and agencies. However, there was no intent to substantively change the policy approaches in these programs. The Action Team decided not to include budget estimates in the management plan, believing this function is better served through development of the biennial work plans to implement the management plan. The Action Team and Council will consider the need for future updates to this management plan as time and resources allow.

The 21 programs in this management plan address major concerns about Puget Sound and its resources. The first program in the management plan—Estuary Management—discusses the overall framework of the management plan. This includes the management structure, funding sources and interaction of the management plan and biennial work plans.

Other programs address pollution sources, resources that need special attention and techniques and tools. Each program provides a brief description of the issues and institutional structure in place to address and presents the goal, strategy and elements (actions) necessary to protect and restore Puget Sound.

The 15-year history of the *Puget Sound Water Quality Management Plan* demonstrates that governments, in cooperation with business, interest groups and citizens can make a difference to the health of Puget Sound. The future will present us with even greater challenges. This management plan provides a flexible road map for dealing with current problems and learning from experience. If we all do our part, we can have a productive, healthy Puget Sound.