



Department of Ecology Budget and Program Overview 1999-2001

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> printed on recycled paper publication # 99-701

> > Revised January 2000



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Department of Ecology Mission

The Mission of the Department of Ecology is to protect, preserve and enhance Washington's environment, and promote the wise management of our air, land and water for the benefit of current and future generations.

Goals

- Prevent pollution
- Clean up pollution

 Support sustainable communities and natural resources



I am pleased to offer this summary of the Department of Ecology's programs. At Ecology we make a constant effort to inform the public and elected officials about the work that we do on behalf of the public. I hope you find this document useful and informative.

As the head of the state's central environmental protection agency, I have come to understand that leaving a sound environmental legacy depends upon the individual citizen's ability to understand how everyday choices, made by individuals, by families, and by businesses, affect the health of our current and future environment. Some of our most persistent environmental challenges are due to nothing more complex than the fact that over 5 million people live and work in Washington. As tradeoffs between environmental, social, and economic values become in sharper conflict and more substantial, each of us will be called upon to change the effects our activities have on the air, water, and land.

It is hard for me to imagine a future in which citizens do not expect the state to have sufficient resources to ensure that the air is healthy to breath. Nonetheless, as this document goes to the printer, such a future is close at hand because of the repeal of the \$2 tax that was used to pay for nearly one-half of the state's efforts.

Since 1990, the quality of the air you breath has benefited from a legal framework that encourages sharing the cost of solutions among the sources of pollution, and also from the creativity and innovations developed by Ecology staff and our local partners. It is unfortunate that as we enter a new century much of the success that we have achieved is in jeopardy. We cannot let this happen. Consequently, Ecology's top priority for the 2000 Session of the Legislature is to secure funding to continue to protect the quality of our air.

Other challenges face us in the months and years ahead. It is essential that we act to resolve the political and administrative gridlock that grips our system of protecting and allocating water resources. We must also begin the process of cleaning up the state's 700+ lakes, rivers, and streams that do not even meet basic environmental standards. Our citizens expect that our water resources will be kept clean and managed for a future that includes wild salmon.

I look forward to working cooperatively with citizens and elected officials on solutions to the range of problems that challenge us. It is my hope that this summary adds to your understanding of our shared environmental challenges and the role of the Department of Ecology in preserving, protecting and enhancing the state's environment.

Sincerely,

Tom Fitzsimmons

Contact: Mary Burg (360) 407-6880

Air Quality Program

Program Mission

To preserve, protect and enhance the air quality of the state for current and future generations; to return areas with poor air quality to levels adequate to protect health and the environment as expeditiously as possible; and to prevent any areas of the state with acceptable air quality from reaching air contaminant levels that are not protective of human health and the environment.

Environmental Threats

Air quality concerns come in three forms: public health, environment and quality of life. Fourteen areas of Washington State were designated as violating national, health-based, ambient air quality standards for six chemicals known as "criteria" pollutants. Over 2.3 million people live within these areas. Additionally, special monitoring studies show the potential for violations in several new areas such as Wenatchee, Ellensburg, Colville and parts of the Columbia plateau. Although air quality has improved significantly in the state's major urban areas, most remain close to violating one or more federal air quality standards. Population growth, more cars and economic expansion will continue to push vehicle use and emissions higher. It will take vigilance and the combined efforts of citizens, business and government to sustain our air quality gains.

In addition to the six criteria pollutants, hundreds of other chemicals, known as toxic or hazardous air pollutants, enter the atmosphere from a wide variety of sources but are not subject to ambient, health-based standards. Because of limited air quality data, the level of public health and environmental damage caused by toxic air pollutants is largely unknown.

Air pollution causes lung disease and worsens existing respiratory and cardiopulmonary disease, sometimes hastening death for persons afflicted with such diseases. Best available data suggest that approximately 1,400 people die each year in Washington due to exposure to fine particles in the air they breathe. Hundreds of studies find that short and long-term exposures to air pollution increase respiratory symptoms, emergency room visits, hospitalizations and medication use; decrease lung function; and create school absences, work loss days, and restricted activity days. Air pollution increases chronic respiratory illness; increases the overall death rate; increases the likelihood of contracting cancer; and decreases lung function in children, pre-disposing them to chronic obstructive pulmonary disease as adults. Based on national studies, it is estimated that Washington citizens save over \$1.5 billion in annual medical costs because the air is cleaner than it was in 1990.

Air pollution affects the environment and quality of life in many ways, including: damage to soils, water, crops, vegetation, manmade materials, property, animals, and wildlife; impairment of visibility, climate and weather; and hazards to transportation. It also adversely affects economic values and personal comfort and well-being.

Program Origin and Laws

Widespread citizen concerns about air pollution and its effects on public health and quality of life caused Congress and state legislatures to pass broad air quality protection laws. In 1990, Washington residents ranked air pollution the number one environmental threat in the state. More recent polls rank air quality near the top of citizen environmental concerns.

Chapter 70.94 RCW, Clean Air Act

Air quality regulatory authority for Ecology (and other state and local agencies) comes primarily from the state Clean Air Act, which establishes philosophy, goals and specific control strategies for selected air pollution sources. This law recognizes that there are many and varied sources of air pollution and directs government agencies to approach problems and solutions comprehensively. It directs its attention to four broad categories of air pollution: motor vehicles, industry, wood stoves and fireplaces and outdoor burning. The law contains detailed, prescriptive programs that specify performance standards, emission limits, fees and constraints on regulatory agencies.

Chapter 70.120 RCW, Motor Vehicle Emission Control

This law establishes authority for motor vehicle emission testing.

Much of the content of Washington's air quality laws is based on the goals, objectives, standards and control requirements of the federal Clean Air Act.

Constituents/Stakeholders

Motor Vehicles

Motorists, transportation agencies, oil industry, major employers in the nine most populous counties, auto repair industry.

Industry

Large businesses such as pulp and paper, aluminum, power plants and oil refineries; small businesses such as dry cleaners, wood products, gasoline marketing and printers; agriculture, including food processing, grain handling, feedlots and fertilizer manufacture; and associated trade organizations.

Wood Stoves

Wood stove users, manufacturers, distributors/retailers, home construction industry.

Outdoor Burning

Timber industry, agriculture, developers, homeowners.

Stakeholders also include federal, state and local government; environmental and public health advocates; and the seven local air agencies, which manage a majority of the air pollution sources within their jurisdictions. Ecology provides financial and technical assistance to the local air agencies.

Major Activities

Characterize Air Quality

To characterize air quality, we must develop an understanding of how much pollution is in the air, where it comes from and how it moves in the environment. Characterizing air quality consists of three basic functions: monitoring ambient air quality, inventorying emissions and modeling the movements of pollution through the atmosphere.

Ambient monitoring measures the status of air quality throughout the state to assess trends, compliance with federal and state air quality standards, effectiveness of control strategies and attainment plans, health effects and environmental damage; respond to citizen complaints; evaluate specific geographic or hot-spot air quality concerns; and create environmental indicators.

An emission inventory is a catalog of sources of air pollution and the emissions from those sources. Inventory data is critical to understanding the causes of air pollution problems and creating appropriate solutions.

Meteorological forecasting and dispersion modeling of air pollutants are essential to understanding the movement and buildup of air pollution; the carrying capacity of airsheds; the interaction of pollutants; and the location of maximum impact of sources of pollution.

Design Solutions

Designing solutions means getting the right, most cost-effective solution in the right place at the right time. Designing the best solutions to air quality problems includes preparing comprehensive plans to achieve and maintain good air quality, identifying and evaluating clean air strategies and writing rules. Specific tasks include: analyzing costs and benefits of air quality strategies; identifying control or prevention options and assessing their viability; meeting regulatory reform commitments; developing and modifying rules; researching emission reduction potential, health and environmental effects of pollution and atmospheric chemistry; assessing risk.

Implement Solutions

Implementing solutions is the work most directly seen by the public. Emission reduction programs are one of the more traditional regulatory methods for controlling air pollution. Control strategies include motor vehicle emission testing, federal operating permits and new source permits for industries, outdoor burning restrictions and industrial source registration. This category of activity also includes federal and state air quality grants to local air pollution control agencies.

Measure Effectiveness

To measure effectiveness, we must track results of decisions and strategies and modify them to better meet priorities, objectives, and changing needs of society. The number of citizens living in areas now measuring unhealthful air as defined by federal standards has been reduced from over 2.3 million in 1990 to less than 100,000 in 1998. Of 14 nonattainment areas in Washington, five now fully comply with national requirements and nine have air quality that meets federal standards. No new nonattainment areas have been identified; however, in several eastern Washington cities, we have recently measured air pollution levels high enough to trigger violations of federal standards. More specific measurements of the success of Ecology's air quality activities include:

♦ An evaluation of mobile sources of air pollution analyzed 17 methods for reducing pollution from motor vehicles. This analysis helped stakeholders and Ecology identify and select cost-effective and least burdensome solutions to carbon monoxide and ozone air quality problems. The analysis provided the basis for removing the oxygenated gasoline requirement in central Puget Sound and Clark County, saving motorists and industry over \$50 million a year. Windblown dust studies on the Columbia plateau provided the data to persuade EPA to remove a nonattainment designation for large parts of Benton, Franklin and Walla Walla counties. Ecology successfully argued that those areas should not suffer federal restrictions because of air pollution from natural causes.

✤ The motor vehicle Emission Check Program has reduced pollution from cars and trucks in the Vancouver, Spokane and Puget Sound areas by 15 percent, or 146,000 tons per year, contributing greatly to improved air quality.

❖ In 1998, Ecology issued 69 permits for industrial air pollution sources, preventing the release of approximately 7,500 tons of air pollution. The air operating permit program bundles all of a facility's requirements into a single document. While the operating permit program does not impose new controls, it has helped identify compliance problems at facilities. In one case, this resulted in 98 percent lower emissions.

✤ High-quality air pollution data allow accurate assessment of pollution levels in much of the state. Presently, the data show that air quality trends are improving throughout the state. Continued monitoring will help us track trend changes as population and motor vehicle use grow.

✤ Accurate emission inventories have provided the basis to exempt over 100 sources from the federal operating permit program. Emission inventory refinements have reduced fees and eliminated regulatory requirements for several hundred smaller agricultural and industrial sources.

☆ A public involvement campaign in Wenatchee helped local citizens recognize the impact of smoke on air quality. Citizens then took action to curtail wood stove and outdoor burning. To date, these efforts have prevented violations of federal standards and the imposition of regulatory programs.

✤ Single industry, non-enforcement information and technical assistance campaigns for auto repair shops, printers, dry cleaners, hospitals and others have increased understanding of regulations, reduced emissions and improved compliance while saving businesses money and reducing the need for enforcement.

 ✤ All 14 nonattainment areas and maintenance areas (former nonattainment areas) met air quality standards for the first time since monitoring began over 30 years ago. ✤ Improved weather forecasting capabilities have enabled Ecology to better protect citizens from toxic smoke and high levels of air pollution. The improved system allows Ecology to provide better information for declaring "no burn" days for silvicultural and agricultural burning; to forecast smoke plume trajectories from chemical fires or other emergencies; to better analyze high pollution events; and to better predict the effects of new sources or regulatory decisions.

Ecology's Air Quality Program staff have implemented efficiency measures designed to save the state money and improve government service. Examples include:

-Staff identified and implemented a more cost-effective system for relaying air monitoring data over telecommunication lines, for a projected savings of \$19,000 per year after a one-time investment of \$10,000. Ecology's air monitoring system consists of 80 remote air pollution monitors and computers located around the state. A main computer in Lacey was linked to the remote monitors via multiple phone lines and phone companies. The main computer "called" the remote monitors once each hour, 24 hours per day for pollution data. Staff determined it would be more efficient to piggyback the air monitoring data onto the agency's wide area network. Aside from the monetary savings, the system reconfiguration permits collection of more field data and has proven to be more stable and reliable.

- Citizens in Vancouver are required to get their vehicles tested for emissions of air pollutants. Recently, a new gas cap test was added to the series of tests, causing citizens to wait up to 45 minutes in line. Ecology staff worked with the vendor to reduce the new gas cap emission test to just one minute, keeping the average inspection time around five to seven minutes and the wait-in-line time around five to eight minutes. The vendor improved staff training and increased testing accuracy through enhanced software.

Major Issues

I-695 Removes 45 Percent of State Clean Air Funding

When the voters passed Initiative 695, one probably unintended consequence was the elimination of a \$2.00 per vehicle annual tax called the clean air excise tax. This tax pays for nearly half of the state's efforts to protect the air we breathe.

Elimination of the clean air excise tax means \$17.1 million from the air pollution control account is no longer available statewide for the 99-01 biennium. As a result, Washington can do less to control air pollution and can expect more of it. The primary cost of dirty air will be to people's health. Having clean air saves billions of dollars in health costs. Ultimately, our economy will suffer, too. As the ability to design and implement tailored solutions to local problems is lost, less flexible and more costly solutions will have to be employed. In addition to the obvious heath issues, failure to meet federal clean air standards will result in expensive regulatory requirements for business and individuals and the potential loss of federal transportation funds for the state's roads unless the funding issue is resolved.

Growth Threatens Air Quality Gains

Population growth and human activity will continue to challenge air quality improvements. Because vehicle use has grown three times faster than population, the toughest challenge will be to find ways to contain vehicle emissions. Without sound clean air strategies, the resulting pollution may overtake and reverse the progress that has been made. The public will need to understand education campaigns highlighting the impacts of increased vehicle usage and continued partnering with other state and local transportation agencies to implement clean air strategies can help alleviate problems associated with growth.

Air pollution levels in Washington are within one percent of violating federal standards for smog (ozone), three percent for carbon monoxide and seven percent for fine particles.

Changes to Federal Standards for Particulate Matter and Ozone

EPA adopted new federal standards for fine particulate matter and ozone in July 1997. Dozens of recent health studies show that historical federal standards for ozone and fine particles are not adequate to protect public health. EPA and health professionals estimate that fine particles cause premature death for over 40,000 Americans each year — 1,400 each year in Washington. This is more than those who die in automobile accidents.

Implementation of the new ozone standard was subsequently halted by a federal court, and EPA recently reinstated the previous standard. All areas of Washington are currently meeting this standard, although population growth and increasing motor vehicle use will continue to make meeting it a challenge.

The federal court also overturned the new standard for fine particulate matter, which was based on even smaller particle size than the present one. While the court decision is under appeal, EPA is still funding the new monitoring needed for the new standard. Ecology will invest substantial resources to establish ambient monitoring and emission factors for the new standard, and control and pollution prevention strategies will have to be reevaluated in light of it.

Visibility and Regional Haze

The public responds strongly to clear air or the lack of it. Citizens complain when their views of Mt. Rainier, the Olympics or the Columbia Gorge are obstructed by air pollution. Regional haze and visibility degradation also affect tourism, restrain economic growth, and diminish the quality of life for Washington residents. Ecology is reviewing its visibility data and the state's federally required visibility protection plan to determine what works well and what changes might be needed to meet the new federal requirements proposed by EPA to improve visibility and prevent regional haze in national parks and wilderness areas.

Urban or regional haze, as opposed to specific health-based pollutants, is just beginning to be addressed as an important air quality problem. Resolution of the problem will require new strategies and multi-state and tribal cooperation. Historical clean air strategies may need to be revised so that standards for both health and clear air are met in the most efficient way possible.

Redesignation of Nonattainment Areas

Nonattainment of federal air quality standards imposes significant economic penalties on communities, including higher pollution control costs for new and existing businesses, economic growth constraints, and compromised public health. Two areas of the state, Yakima and Spokane, have not satisfied federal requirements for adopting clean air plans. These plans are past due and the state could face federal sanctions, including loss of federal transportation funds, for failing to meet its obligations. As long as an area remains listed in nonattainment, regardless of its measured air quality, prescriptive federal control measures stay in effect.

Toxic Air Pollutants

Air quality regulators have traditionally split air pollutants into two categories: criteria pollutants (six compounds for which federal ambient standards have been set) and toxic pollutants. Hundreds of toxic chemicals (totaling millions of pounds) are released into the air each year in Washington. No ambient standards and few emission limits have been established for these compounds. We have limited understanding of the potential effects on human health and the environment, the sources and quantity of emissions, and the ambient concentrations of toxics in Washington's air.

The public reacts emotionally and frequently to possible exposures to toxic air pollutants. Threats of cancer, reproductive disease, brain damage and other debilitating illnesses are associated with various toxic pollutants. Recent public outrage over toxics from industrial facilities has occurred in Northport and Port Angeles. Citizens have opposed the building of incinerators and other industrial plants because of perceived threats from toxics. In Washington, new sources of air emissions are reviewed for their health risks from toxics.

In order to develop a rational strategy for addressing these pollutants, Ecology is now working on a comprehensive evaluation of what is known about air toxics in Washington.

Agricultural Burning

Growers burn their fields to remove stubble after harvest and help control weeds and disease. However, this burning also produces substantial amounts of smoke that affects the health and quality of life of people in nearby population centers. Of the crops for which field burning is done, grass seed and wheat have drawn the most attention in recent years. In 1996, in response to complaints from the public and testimony from the medical community about the seriousness of smoke-related health effects, Ecology took action to reduce burning of grass fields. Ecology restricted the amount of burning by two-thirds, then evaluated and certified an alternative to burning. For wheat and other crops, Ecology administers the agricultural burning permit system to reduce air pollution from field burning. In 1999, Ecology, the state Department of Agriculture, and the Association of Washington Wheat Growers entered into a voluntary agreement. The wheat industry agreed to reduce burning by 50 percent over the next seven years, so that in 2005, the amount of wheat stubble burning done will be half of what it was in 1998.

Ecology's decisions to reduce smoke emissions from agricultural field burning continue to generate heated and polarized reaction. Some clean air groups want a total ban now, and some grass seed growers, primarily through lawsuits, continue to oppose efforts to restrict burning. Ecology continues to defend its rule and to emphasize the certification of practical and reasonably available alternative waste removal methods.

Motor Vehicle Emission Check Program Changes

The motor vehicle Emission Check Program affects nearly 40 percent of the state's car and light truck owners. Because it affects so many people and requires them to take personal responsibility for their cars and pollution, Ecology has a responsibility to ensure that the program scores high on air quality, cost-effectiveness and public service tests.

Ecology staff evaluated the Emission Check Program during 1997 and part of 1998. The goal of the evaluation was to identify how to improve customer service while still achieving the needed emission reductions from motor vehicles. As a result of the evaluation findings, staff developed a package of program changes. Changes were recommended in the area of vehicle testing and methods of paying for testing.

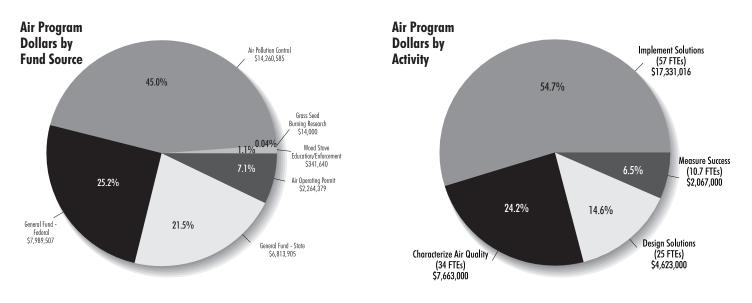
The 1999 Washington State Legislature made one of the recommended changes to the program, eliminating testing of vehicles less than five and more than 25 years old. This change was made because newer cars now have much more efficient air pollution controls and most do not fail the test, while overall, repairs on cars more than 25 years old are not usually cost effective. In 2000, 1976 model year vehicles will be the oldest vehicles required to be tested, and 1996 models the newest.

As a result of this change to the program, Ecology estimates a 15-20 percent reduction in the number of paid tests conducted. This means there will be less revenue for running the program. Because state law requires that the cost of the Emission Check Program be recovered from test fees, Ecology has increased the test fee from \$12 to \$15, effective December 31, 1999 to offset the loss of test revenue.

Air Quality Program Budget – Pre Initiative 695

Budget: \$31,684,016; Staffing: 127 FTEs

Fund	Amount (\$)	Sources	Uses
Air Pollution	14,260,585	Fees collected for vehicle licenses; air	Ambient air monitoring; grants to local air authorities;
Control		registration fees; agriculture burning	new source permits; modeling and meteorology; emis-
		permits	sion inventory
General Fund -	6,813,905	Fees collected for vehicle emission in-	Vehicle emission testing
State		spections	
General Fund-	7,989,507	Federal grants	Grants to local air authorities for ambient air monitor-
Federal			ing; emission inventory; modeling and meteorology
Air Operating	2,264,379	Permit fees collected for air contami-	Issuing permits to major air pollution sources; small
Permit		nant sources	business technical assistance
Woodstove Edu-	341,640	Fees on the retail sale of woodstoves	Enforcement and education on proper woodstove use;
cation and En-		and fireplaces	grants to local air authorities
forcement			
Grass Seed	14,000	Fees on the open burning of grasses	Research on alternatives to grass seed burning
Burning Research		grown for seed	



Air Quality Program Budget – Post Initiative 695

Budget: \$20,922,431; Staffing: 63 FTEs

Fund	Amount (\$)	Sources	Uses
Air Pollution Control	3,499,000	Fees collected from air registration fees; agriculture burning permits	New source permits; agricultural burning research; implementing registration program
General Fund - State	6,813,905	Fees collected for vehicle emission inspections	Vehicle emission testing
General Fund- Fed- eral	7,989,507	Federal grants	Grants to local air authorities for ambient air moni- toring; emission inventory; modeling and meteorol- ogy
Air Operating Permit	2,264,379	Permit fees collected for air contami- nant sources	Issuing permits to major air pollution sources; small business technical assistance
Woodstove Educa- tion and Enforcement	341,640	Fees on the retail sale of woodstoves and fireplaces	Enforcement and education on proper woodstove use; grants to local air authorities
Grass Seed Burning Research	14,000	Fees on the open burning of grasses grown for seed	Research on alternatives to grass seed burning

Contact: Bill Backous (360) 407- 6699

Program Mission

To provide objective, reliable information about environmental conditions that can be used to measure program effectiveness, inform the public, and help focus the use of limited resources. The Environmental Assessment Program (formerly the Environmental Investigations and Laboratory Services Program) is responsible for monitoring and reporting environmental status, trends, and results, ensuring that Ecology staff, citizens, governments, tribes, and businesses have access to environmental information.

Environmental Threats

Environmental threats include both point and nonpoint sources and range from conventional pollutants such as fecal coliform bacteria, nutrients, and temperature to toxic contaminants and invasive aquatic weeds. Most of our monitoring and investigation efforts focus on threats to water or sediment quality, while many of our directed studies are conducted in support of clients in other Ecology programs. The Environmental Assessment Program focus is on the objective assessment of existing environmental conditions. We frequently identify threats or evaluate cumulative or combined impacts stemming from the entire spectrum of environmental threats. Consequently, we provide relevant and useful information to Ecology and other resource management agencies.

Program Origin and Laws

The Environmental Assessment Program was established as a separate program in 1989. Our monitoring and analytical activities derive generally and specifically from the many Ecology mandates that include environmental monitoring (especially water quality monitoring) as an obligation or requirement of the agency. Below are a few of the more significant mandates.

Federal Clean Water Act

This act and the associated delegation of authority obligate Ecology to monitor and assess the status of state waters, identify impaired and threatened waterbodies, and complete pollutant loading assessments on impaired waterbodies.

Chapter 90.48 RCW, Water Pollution Control

This law is the statutory authority for establishing water quality standards.

Chapter 90.70 RCW, Puget Sound Ambient Monitoring Program

Ecology is responsible for implementing significant portions of the Puget Sound Ambient Monitoring Program, including freshwater, marine water, and marine sediment monitoring in the Puget Sound basin.

Chapter 70.105D RCW, Model Toxics Control Act

The Model Toxics Control Act charges Ecology with cleaning up lands contaminated by toxic chemicals.

Chapter 43.21A RCW, Department of Ecology

This law provides for Accreditation of Laboratories submitting data to the Department. It also establishes an aquatic weeds account and requires Ecology to develop a freshwater aquatic weeds management program that incorporates technical assistance to local governments and citizen groups.

Constituents and Stakeholders

Local government

We support counties, cities, other municipal governments, public utility districts, and conservation districts through direct data sharing; consultation and interpretation of study or monitoring results (e.g., noxious aquatic weed monitoring); participation and technical assistance in watershed scoping and analysis; and through review of grant proposals, sampling designs, draft reports, and management recommendations.

State government

Significant clients or points of coordination include the Departments of Health, Fish and Wildlife, Natural Resources, and Agriculture, the Puget Sound Action Team, Conservation Commission, and Parks and Recreation Commission. Our most important internal clients are the Water Quality Program, the Toxics Cleanup Program, and the Air Quality Program.

Federal government

We coordinate and exchange information with numerous federal agencies, including the Environmental Protection Agency, Fish and Wildlife Service, National Oceanographic and Atmospheric Administration, Forest Service, Natural Resources Conservation Service, Park Service, Environment Canada, BC Ministry of Environment, and Native American tribes. EAP

Business

We provide monitoring data to numerous private consultants and industry/business representatives. We accredit both private and public laboratories for the tests they perform. Dischargers must use accredited laboratories when reporting results to the Department of Ecology.

Environmental Organizations

We provide monitoring data to various environmental organizations and coordinate with public interest and environmental groups such as the Willapa Alliance, Chehalis River Council, and Yakima River Watershed Council.

Public

We support citizen volunteers who participate in our statewide lake assessment monitoring. We maintain long-term databases and provide data to the public upon request. Our environmental monitoring data and bibliography of current and historical reports are accessible through Ecology's home page on the Internet.

Major Activities

Environmental Monitoring

The environmental monitoring network assesses the current status of state waters, identifies threatened or impaired waters, and evaluates changes (trends) in water quality over time. This is accomplished through a statewide network of sampling stations in rivers, streams, marine waters (Puget Sound and coastal estuaries), lakes, and Puget Sound sediments. To maximize coverage and reduce costs, sampling stations are located in coordination with other state, local, and federal agencies. By detecting early changes in water quality, environmental monitoring allows simpler, less expensive solutions to be applied to emerging problems.

Results

In FY 1999, over 2,500 water and sediment samples were collected from 82 river and stream stations, 40 marine water stations, 100 sediment monitoring stations, and 60 lakes. Our citizen volunteer monitoring program has engaged over 400 volunteers in cooperative sampling efforts on approximately 170 lakes since that program began in 1989. We have expanded our monitoring programs where possible by building cooperative partnerships with federal, state, and local agencies and universities. In addition, we have significantly improved public access to our monitoring data via Ecology's web site, including making numerous publications and reports directly readable or downloadable via the web.

Directed Environmental Studies

These wide-ranging projects are individually designed to address known or suspected problems at individual sites or across regional areas. Directed studies span the range from conventional water quality analyses to sampling for toxic chemicals, such as dioxins in fish tissues, pesticides in groundwater, or toxic chemicals in marine sediments. Study goals are typically focused on identifying the source, effect, and fate of pollutants released into the environment. Study results are published in scientific reports used for regulatory decision making, defining policy, and providing a basis for protecting and enhancing environmental health.

One type of directed environmental study is a pollutant loading assessment, which the program conducts on rivers, lakes, and marine waters. These are generally conducted on degraded waters which do not meet state water quality standards. Assessments are conducted for all or part of a watershed and typically have both a field sampling and an analytical (modeling) component. Assessments quantify loading from both point and non-point sources and frequently include studies describing the relationship between surface water and ground water quality.

A primary product of these assessments is a calculation of the total maximum daily load (TMDL) of a pollutant that the water body can absorb without causing violations of water quality standards. These assessments estimate the reduction in loading that would be necessary to return the river, lake, or estuary to a condition of acceptable water quality. Additionally, they explore alternative scenarios for pollutant load reduction which may be implemented by Ecology and local partners.

Results

From 1990-1999, the program has published 628 reports describing results from intensive, directed studies. These studies have provided specific information to clients, local and state agencies, and the public regarding a wide variety of environmental issues.

Quality Assurance and Scientific Assistance

The Environmental Assessment Program provides the designated Quality Assurance (QA) Officer for all agency technical activities. The QA Section provides guidance on developing Quality Assurance Project Plans, reviews project proposals, and consults on sampling design requirements and interpretation of results.

The program's staff of scientists, modelers, statisticians, chemists, and other environmental specialists are frequently called upon by other agency personnel to assist with technical interpretations of data and to supply information for critical policy questions. A significant aspect of our work involves both formal and informal scientific review of agency and consultant reports, project proposals, and grant applications. We also provide technical and engineering analyses on request to help assure that water quality permits are based on technically sound evaluations. Analyses include evaluations of dilution zone characteristics, determination of limiting receiving water conditions, and development of water quality-based effluent discharge limitations.

Results

During FY 1999, the program provided quality assurance review and scientific assistance on more than 200 projects, most of which were environmental monitoring efforts undertaken by external parties, particularly local governments. Examples of projects include: the Tulalip Tribe shellfish water quality monitoring plan, the Lincoln County Conservation District monitoring plan for Lake Creek, and the City of Kent ambient monitoring plan.

Laboratory Services

Manchester Environmental Laboratory (MEL) is a full-service environmental chemistry laboratory operated jointly by EPA Region 10 and the Department of Ecology. The laboratory provides technical, analytical, and sampling support for analytical chemistry and microbiology for Ecology. MEL is committed to providing the highest quality environmental information to agency resource managers.

Results

In 1999, MEL completed over 42,000 analyses in support of agency sampling. To speed and improve access to data, MEL has developed a Laboratory Information Management System that enables the direct electronic transfer of laboratory results to interested parties. MEL recently developed several state-of-the-art techniques for the analysis of environmental toxicants. Solid and Hazardous Waste method 8085, written by MEL staff, was approved for use by the EPA. Standard Methods 3125, written by MEL staff, has been incorporated into the 20th edition of Standard Methods for the Examination of Water and Wastewater.

Laboratory Accreditation

Responding to evidence that falsified analytical data were being submitted to Ecology, 1987 legislation authorized the department to establish an Environmental Laboratory Accreditation Program. Accreditation helps assure that accurate and reliable data are available for monitoring water quality and sampling soil and tissue. The program will be expanded to include participation in the emerging National Environmental Laboratory Accreditation Program.

Results

As of November 1999, 452 labs are accredited for various parameters (this number changes as labs enter and leave the program). Program successes include discovery, documentation and correction of thousands of potentially significant analytical deficiencies, and improved lab performance. To date, the Departments of Natural Resources, Fish and Wildlife, and Transportation, as well as the U.S. Army Corps of Engineers have adopted policies requiring use of Ecology accredited labs. The U.S. Navy requires its Washington State labs to be accredited, even though federal labs are exempted from requirements of the program.

Major Issues

Monitoring environmental results, status, and trends

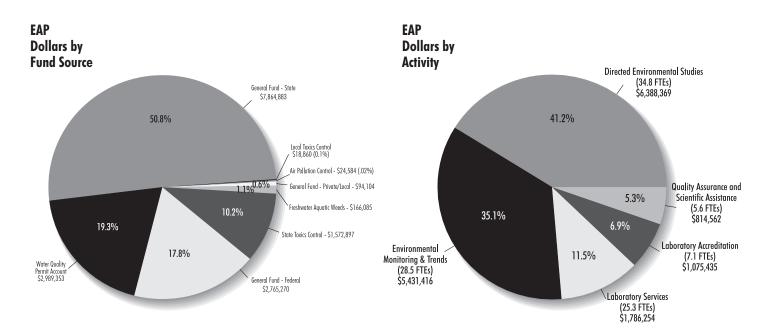
Demand for reliable water quality and flow data have significantly increased as a result of new requirements for watershed planning and salmon recovery. However, our current monitoring programs continue to be severely constrained due to limited resources. We presently assess only about 5% of the state's surface waters and even smaller percentage of ground water. As other statewide and watershed-directed monitoring programs grow, the program's ability to provide the breadth of technical support that is needed and requested will be seriously challenged. Consequently, we will often be unable to successfully monitor the state's waters, reliably assess status and trends, or properly measure performance or environmental results which have been achieved through state or local water quality management activities. Nonetheless, the program has been improving access to the data that is collected, by continuing to make it available through the web and archiving historical data so they too can be accessible in the future.

Persistent, bioaccumulative toxics strategy

The program is coordinating an agency-wide effort to engage other key agencies and interest groups, in the development of a strategy to reduce and eliminate persistent, bioaccumulative, and toxic (PBT) chemicals in the environment. PBTs are suspected to impact the health of humans, fish, and wildlife. A key component of the strategy is expected to be the identification of prevention actions that will both benefit the environment as well as pay off economically. A draft strategy is expected to be developed by March 2000.

Environmental Assessment Program Budget Budget: \$15,496,036; Staffing: 101 FTEs

Fund	Amount (\$)	Sources	Uses
General Fund - State	7,864,883	Multiple	Water quality monitoring; marine sediment monitor- ing; nonpoint source control; pollutant loading assess- ments; laboratory accreditation
General Fund - Federal	2,765,270	Federal grants	Nonpoint source control; water quality monitoring; marine sediment monitoring, watershed studies
General Fund – Private/Local	94,104	Agreements with counties, cities	Water quality studies, laboratory analytical work
State Toxics Control	1,572,897	Hazardous substance tax; remedial actions and penalties recovered	Groundwater investigations; surface water investiga- tions; pollutant loading assessments
Local Toxics Con- trol	18,860	Hazardous substance tax	Laboratory staffing and analytical work
Water Quality Permit	2,989,353	Fees on wastewater discharge per- mits	Groundwater investigations; pollutant loading assess- ments; watershed studies; compliance monitoring
Air Pollution Control	24,584	Fees collected for vehicle license; air registration fees	Laboratory staffing and analytical work
Freshwater Aquatic Weeds	166,085	Fees on boat trailers	Technical assistance; monitoring



Program Mission

To work in partnership with local governments and other stakeholders to promote statewide environmental interests and healthy watersheds. The SEA Program helps communities manage shorelines, wetlands, waterways, and watersheds; make efficient and environmentally sound land use decisions; and reduce hazards to people, property, and the environment.

The major goals of this program include:

Ensuring environmental consideration in local planning and permitting decisions

Helping people comply with environmental regulations

Ensuring consistent and effective implementation of environmental laws

 Analyzing and managing the environmental impact of growth and development

Conducting research, advancing sound science, and providing technical assistance

Educating and informing the public and local governments

Reducing flood hazards and erosion hazards

Training and involving young adults to protect and enhance the environment

Environmental Threat

Shorelands

Uncoordinated and piecemeal development along rivers, lakes and marine waters can result in:

Loss of industry and commerce that depend on and are related to water

Loss of public access to waters of the state

✤ Interference with the public's right to navigate upon and use the water areas of the state for commerce, recreation, and transportation

Property damage due to flooding and erosion

✤ Diminishing property values due to loss or impairment of views, incompatible uses and environmental degradation

✤ Diminishing or loss of environmental productivity through incremental degradation of fish and wildlife habitat and water quality

✤ Increased local government liability under the Endangered Species Act.

Programs Origin and Laws

Shoreline Management

Chapter 90.58 RCW, Shoreline Management Act This act passed the Washington State Legislature in 1971 and was approved by voters in a referendum in the fall of 1972. The Act establishes a cooperative program between local and state governments, in which local government develops and administers local Shoreline Master Programs, and state government provides policy guidance, technical assistance and oversight.

Coastal Zone Management

Coastal Zone Management Act

This act was passed by Congress in 1972 in response to many of the same issues that led to passage of Washington's Shoreline Management Act. Congress responded with a voluntary program that provides resources to the coastal states and territories for planning and managing coastal economic and environmental resources. States may receive funds once they establish a federally approved program to manage their coastal resources.

Washington's coastal zone management program, approved in 1976, is primarily based on the state's Shoreline Management Act, but applies only within the 15 counties with saltwater shoreline. In addition to the financial resources that come from having an approved plan, the federal law provides authority for states to review federal activities for consistency with the state's approved coastal zone management plan.

The Coastal Zone Management Act also established a system of estuarine research reserves for estuarine protection, long-term research, education and interpretation. In Washington State, Ecology manages the Padilla Bay National Estuarine Research Reserve in Skagit County. This includes ownership of tidelands and uplands, plus research, educational and interpretive facilities at the Breazeale/Padilla Bay Interpretive Center.

The Act was reauthorized by Congress in May of 1996 with unanimous votes in both the House and the Senate.

SEA

Floodplain Management

Chapter 86.16 RCW, Floodplain Management Act Originally the Flood Control Zones Act, it was passed in 1935 in response to a series of catastrophic flood events. This law set up a system of state permits for development in floodplains. In 1987 and 1989, the law was extensively amended to provide a system of state coordination and oversight of flood management activities of local government in response to federal mandates pursuant to the Federal Flood Insurance Program.

Chapter 86.26 RCW, State Participation in Flood Control Maintenance

The Flood Control Assistance Account Program is derived from a 1951 law which has been extensively amended over the years. It provides grants to local governments for flood hazard planning and construction of flood damage reduction projects.

Wetlands Management

Chapter 90.58 RCW, Shoreline Management Act

This act, and the state's responsibilities under Section 401 of the Federal Clean Water Act, are the primary drivers for Ecology's wetland management activities. The Shoreline Act applies to wetland areas associated with streams, lakes and marine waters that are designated as shorelines. Section 404 of the Federal Clean Water Act requires that projects that propose to discharge dredge or fill material in water areas and wetlands obtain a permit from the Corps of Engineers. As a part of our responsibilities as the state agency designated as responsible for implementation of the Clean Water Act, we issue Section 401 water quality certifications for those projects seeking 404 permits. The area covered by 404 authority includes shoreline and non-shoreline wetlands.

Chapter 90.71 RCW, Puget Sound Water Quality Protection

This act prescribes actions needed for the maintenance and enhancement of Puget Sound water quality. Ecology has responsibility for implementing the wetlands activities outlined in the plan, including assisting local communities in using non-regulatory methods to protect wetlands, and developing and implementing the Puget Sound Wetlands Restoration Program.

Washington Conservation Corps (WCC)

Chapter 43.220 RCW, Washington Conservation Corps In 1983, this law created the WCC at Ecology as well as six other state agencies. The goals of WCC are conservation, rehabilitation, and enhancement of the states natural and environmental resources while providing educational opportunities and meaningful work experiences for the state's youth.

Permit Coordination

Chapter 90.48 RCW, Water Pollution Control Act This act authorizes Ecology to implement Section 401 of the Federal Clean Water Act which requires states to evaluate and certify that water related construction projects comply with water quality laws and regulations prior to the issuance of applicable federal permits.

SEPA/GMA

Chapter 43.21C RCW, State Environmental Policy Act (SEPA)

Adopted in 1971, this act directs state and local agency decision makers to consider the environmental consequences of their actions. The law was amended in 1995 to better integrate the provisions of SEPA and the Growth Management Act. Other enabling legislation includes the National Environmental Policy Act (42 USC 4321 et.seq.).

Permit Assistance

Chapter 90.60 RCW, Environmental Permit Assistance Act

Passed in 1995, this law established the Permit Assistance Center to help citizens comply with environmental permitting requirements. The concepts underlying the law are similar to those in the Environmental Coordination Procedures Act (ECPA) of 1973, which was repealed by the Legislature in 1995.

State Government Departments of Fish and Wildlife; Natural Resources; Community, Trade, and Economic Development and Health; and the Puget Sound Water Quality Action

Federal

Team

Corps of Engineers, EPA, Fish & Wildlife, National Marine Fisheries Service, National Oceanic Atmospheric Administration, Federal Energy Regulatory Commission, Coast Guard

Cities and counties, water and sewer districts, ports

Constituents/Stakeholders

Local Government

Tribes

Business

Developers, ports, industrial and commercial interests, agriculture, business associations, and industrial associations

Environmental

Washington Environmental Council, Sierra Club, People for Puget Sound, Friends of the Earth, Nature Conservancy, Washington Toxics Coalition

Public

Homeowners, business owners and operators, boat owners, waterfront property owners, recreational organizations, the agricultural community, and citizens seeking permit information

In administering the Shoreline Management Act, we serve both as support and oversight to local government. Over the years, our emphasis has been on providing technical assistance and training and on working cooperatively with communities.

Ecology has established and/or participated in a variety of intergovernmental bodies for the purposes of coordination, technical review, or collaborative decision-making. A few examples include the Shoreline Guidelines Commission, the Puget Sound/Georgia Basin International Task Force, the Wetlands Restoration Interagency Technical Work Team, and the Interagency Levee Task Force.

Major Activities

Coastal Zone Management

Ecology staff encourage sound coastal management using a variety of non-regulatory approaches, including:

Providing technical assistance for state and local governments, property owners and others concerned about property erosion, coastal hazards and bluff stabilization

Developing information resources for improved coastal decision making

✤ Coordinating the Southwest Washington Coastal Erosion Study to assess coastal erosion and navigation hazards along the coast and at Willapa Bay, Grays Harbor and the Columbia River

Providing coastal zone management grants to local governments (see Grants to Locals)

Results

Southwest Coastal Erosion Study staff have assisted local and state agencies on a variety of coastal projects, including the Ocean Shores EIS, erosion problems at Fort Canby State Park and Damon Point, and wetlands mapping at Westport. A new web site provides Puget Sound shoreline property owners and others with information about living on the shore. Overall, landowners are now better informed about options for protecting their land, and agencies have better information upon which to base management decisions.

Federal Permitting

Ecology issues 401 Water Quality Certifications and Coastal Zone Management Act (CZMA) Concurrence Determinations for water-related construction projects. Our goals are to minimize environmental impacts by ensuring these projects comply with state environmental requirements, and to provide a coordinated state response on federal permitting actions by working closely with several federal, state, and local agencies.

Results

Ecology staff review approximately 600 federal permits/year to ensure that water quality standards will be met. The projects, including dredging, sand and gravel operations, shoreline stabilization, and small piers and docks, can have significant impacts on salmon and other important habitat.

Flood Plain Management

Ecology administers the Flood Control Assistance Account Program through providing grants to communities for flood damage reduction and comprehensive flood hazard management planning (See Grants to Locals). We also

 Review and approve local Comprehensive Flood Hazard Management Plans

Inspect construction of flood damage reduction projects

Develop and implement statewide policies on floodplain management

Provide technical assistance to local governments and agency staff

 Coordinate with local governments on the National Flood Insurance Program

Results

These activities result in good Flood Hazard Management Plans and flood damage reduction projects. Both help mitigate losses from flooding. A post-flood evaluation of some of the areas flooded clearly demonstrated the value of flood hazard reduction measures such as critter pads (elevated land for cattle), elevation of structures (e.g. homes and businesses), and land use restrictions in areas that receive severe inundation.

Grants to Local Jurisdictions

The SEA Program administers three local grant programs:

✤ Coastal Zone Management (CZM) Grants — \$850,000 per biennium for updates to local Shoreline Master Programs, shoreline public access projects, and other coastal management efforts.

 ◆ Flood Control Assistance Account (FCAAP) Grants —
 \$3.1 Million per biennium for Comprehensive Flood Hazard Management Plans and flood hazard reduction projects.

✤ Watershed Grants — \$9 million per biennium for conducting watershed assessments and establishing local watershed planning groups.

Padilla Bay National Estuarine Research Reserve

Management of this Reserve includes:

Managing the 11,500-acre Reserve and extensive support facilities, in cooperation with the National Oceanic and Atmospheric Administration

Conducting long-term estuarine/coastal research and monitoring critical habitats and species

Establishing research projects to address policy, regulatory, and resource issues

Providing educational programs to teachers, students and the public on estuarine, coastal zone management, watersheds, water quality and ground water

Results

Careful management and stewardship of tidelands, important to fish, shellfish, migratory waterfowl, and shorebirds

More than 250 educational programs per year, reaching more than 10,000 participants with information that increases their understanding of estuaries

Increased understanding of controlling Spartina alterniflora

Permit Assistance Center

The Permit Assistance Center (PAC) provides assistance and information on environmental permitting to businesses, the public, and other government agencies. Our goal is to provide high quality service by improving the timeliness and effectiveness of the environmental permitting process. The PAC works with federal, state, and local permitting agencies to facilitate timely and coordinated project permitting, and works closely with other state agencies to ensure that PAC services address all state environmental permitting requirements.

Results

The PAC serves an average of 1200 customers per year. Ninety-eight percent (98%) of customers surveyed gave the PAC high ratings for customer service. The PAC facilitated the permitting of several development projects this biennium and completed two coordinated permit agreements (Stafford Creek Correctional Facility in Grays Harbor County and Heritage Park in Thurston County).

SEPA

Activities include managing the preparation of environmental impact statements for major projects; providing training and guidance for local agencies and the public; preparing rule amendments and interpretation guidance; and managing a statewide information clearinghouse. We work closely with federal, state, and local agencies to implement SEPA, and with federal agencies in preparing documents under the National Environmental Policy Act (NEPA).

Results

In the first 10 months of 1999, Ecology received 6,409 SEPA Documents, sponsored five SEPA Workshops (130 attendees), and made over 1,400 technical assistance contacts.

Shoreline Management

The Shoreline Management Act establishes a cooperative program between local and state governments, in which local governments develop and administer local Shoreline Master Programs, and Ecology provides support and oversight. This includes:

Updating shoreline master program guidelines as needed

✤ Providing technical and financial assistance to local governments in preparing, amending, and administering shoreline master programs and Critical Area Ordinances

✤ Providing technical assistance (e.g. geology, hydrology, and wetlands) to help local governments make scientifically based decisions without the financial burden of retaining their own technical staff

Reviewing shoreline permits to ensure an appropriate level of resource protection and implementation of Shoreline Management policies

✤ Providing training and assistance to local governments, negotiating voluntary compliance, and taking enforcement action if necessary.

Results

Updated rules, policies, and procedures are needed to implement recent changes to the Shoreline Management Act. Well conceived rules reduce litigation of shoreline decisions and enhance protection of the shorelands. Our technical assistance helps produce local plans that meet the intent of state laws, and also helps local governments make sound, scientifically based permit decisions. By reviewing conditional use permits and shoreline variances, Ecology ensures a minimum level of resource protection and implementation of Shoreline Management policies. Our compliance and enforcement work reduces unpermitted and unlawful shoreline development, reducing adverse effects to the shoreline resource. Ecology strives to achieve compliance without resorting to formal action and has been able to avert many potential enforcement actions.

Washington Conservation Corps (WCC)

The WCC primarily performs watershed restoration projects in economically distressed communities throughout the state. The new Salmon Recovery Initiative will put additional crews to work on projects aimed at salmon recovery. The WCC creates partnerships and sponsorships with federal, state and local agencies, private entities and non-profit groups to restore watersheds. WCC provides jobs and training for disadvantaged youth and displaced timber workers. Each corps member is eligible for 20 college credits of training and on-the-job experience as well as a \$4,725 post-graduate Americorps Scholarship. Displaced timber workers are hired as crew supervisors and paid a family wage.

Results

From July 1997 to June 1999 the WCC performed 3,131,059 square feet of bio-engineering work on upper watersheds, including installation of bio-degradable erosion matting, seeding, fertilizing, and mulching. Other restoration methods included log terracing, brush layering, and brush matting of more than 90,000 linear feet. WCC crews cleaned up over 21,000 cubic yards of non-native vegetation and other debris. Other activities included construction of over 115,000 feet of fencing to keep cattle out of streams, planting 550,000 trees, constructing over 141 campsites, and building over 6,200 erosion control, wildlife habitat, and in-stream structures. The WCC provided more than 800 hours of emergency response.

Watersheds

In 1998 the Washington State legislature passed the Watershed Planning Act which established a framework for state, local and tribal governments to collaboratively create plans that address water needs, reduce water pollution and protect fish habitat in local watersheds. The SEA Program helps carry out the Act by providing watershed leads for local planning efforts, providing technical and financial assistance to local planning units, and by characterizing watershed condition.

Results

Twenty-three (23) watersheds have their watershed planning units organized and operating. Fourteen other watersheds have received funding to begin planning. (See also Grants to Locals)

Wetlands Management

Activities include:

Assisting and coordinating with local, state, and federal agencies in reviewing projects involving wetlands

✤ Assisting local governments in developing and supporting Critical Area Ordinances

Providing technical assistance to sustain multiple environmental benefits, including aquifer recharge, water quality, flood reduction, and fish and wildlife habitat protection

✤ Developing new approaches and methods for managing and restoring wetlands and other aquatic resources (i.e. wetland restoration program, watershed-based management plans, voluntary landowner restoration)

Developing a wetlands stewardship program to provide multi-agency expertise and non-regulatory alternatives for wetlands protection to communities

Enhancing public awareness and understanding of the benefits of preserving and restoring wetlands

Results

Educating landowners about wetland values and stewardship practices reduces wetlands loss without the need for regulation. The Puget Sound Wetlands Restoration Program has been a successful model of a landowner/government partnership and has been well received by a wide array of participants. SEA

Major Issues

Endangered Species Act

The March 1999 listings of seven salmon species under the federal Endangered Species Act (ESA) brings the total number of fish species listed as threatened or endangered in Washington to 16. The listing of Puget Sound's wild chinook is the first ESA listing in the nation to affect a highly populated, major urban area. Two more salmon runs are scheduled for listing in the summer of 1999 and several more listings are anticipated in the future. The SEA Program will review program activities in the coming year in light of the listings and will determine what short term strategies are needed to ensure ESA compliance. Additionally, the program will work with the National Marine Fisheries Service, the US Fish and Wildlife Service, and the State's Salmon Recovery Office to determine the most appropriate mechanisms for ensuring long term compliance with the ESA and restoring salmon runs in Washington. Finally, the program will work collaboratively with Washington Department of Fish and Wildlife and Washington State Department of Transportation to develop salmon habitat protection guidelines for project-related activities. The primary areas of the SEA Program that are affected include Shoreline Management, Floodplain Management, Federal Permitting (401 and CZM), Wetlands, Coastal Zone Management, and SEPA.

Shoreline Management Guidelines

Ecology is proposing to overhaul the state guidelines that local governments follow in managing streams, lakes and marine shorelines. The SEA Program has been working with a variety of constituents since 1995 to update the 26 year old shoreline master program guidelines. Ecology plans to adopt an updated rule, begin the process of developing technical guidance materials (a new Shoreline Management Guidebook), and to provide training and technical assistance to local governments.

Watershed Management

The 1998 legislature passed the Watershed Planning Act which established a framework for addressing the State's water resource and water quality issues as well as establishing instream flows and addressing salmon habitat needs. The SEA Program is making a significant investment in watershed-related work. Fifteen regional watershed leads will continue to coordinate watershed planning efforts in 32 of the state's 61 WRIAs, providing technical assistance and representing the state's interests at the local planning tables. Headquarters staff will coordinate the program's watershed planning efforts by providing policy, budget, and other technical support. Headquarters grant staff will also administer the distribution of \$4.5 million in pass-through grants for local planning efforts. Technical staff at Headquarters will continue watershed characterization efforts in priority areas. The Washington Conservation Corps (WCC) will help local salmon recovery efforts by placing a total of 150 crew members with public and non-profit entities to support on-the-ground salmon recovery efforts. These members began working directly for local organizations for a full year beginning in October 1999. Finally, several SEA Program staff will provide additional technical assistance (e.g. wetlands and floodplain management) for projects being identified in the agency's three focused watersheds: the Dungeness, the Methow, and the Skagit.

Permit Assistance Center (PAC)

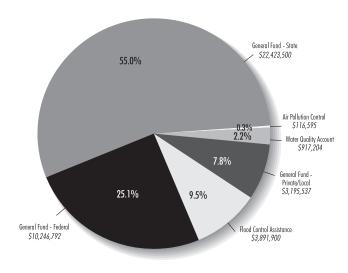
The SEA Program is anticipating legislation that will expand the scope of cost recovery under the optional coordinated permit process. With this legislation and the current biennium budget which provides funding for regional PAC personnel, the PAC will be well positioned to provide the state's rural communities and local governments with up-front, front-end environmental assistance, information, and project management/facilitation/coordination.

Shorelands and Environmental Assistance Budget

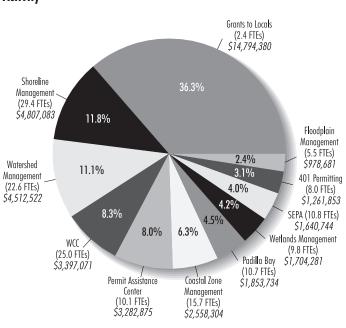
Budget: \$40,791,528; Staffing: 150 FTEs

Fund	Amount (\$)	Sources	Uses
General Fund - State	22,423,500	Multiple	Shoreline management planning; implementation enforce- ment and technical assistance to local governments; Water- shed management grants and watershed leads. Implementa- tion of the Governor's Executive Order on Wetlands and Puget Sound Action Team Plan implementation require- ments. Match for federal grants. SEPA; Permit Assistance Center; enforcement safety; the SW Washington Coastal Erosion study
General Fund - Fed- eral	10,246,792	Federal grants	Primary grant - National Oceanic Atmospheric Administra- tion (NOAA) Coastal Zone Management. Coastal zone man- agement planning; implementation; enforcement and tech- nical/financial assistance to local governments. EPA grants for Wetlands. Various Padilla Bay operating and data collec- tion and analysis grants. Sediment cleanup. Washington Conservation Commission
General Fund - Private/Local	3,195,537	Donations and other miscel- laneous income	Padilla Bay operations and Washington Conservation Corps
Flood Control Assistance	3,891,900	Treasurer transfer from the State General Fund	Administer Flood Control Assistance program. Grants to lo- cal governments for comprehensive flood mitigation pro- jects; repair of damaged dikes and levees
Water	917,204	Tobacco Tax	Washington Conservation Corps
Quality Account			
Air Pollution Control	116,595	Fees collected for vehicle li- cense; air registration fees	Permit Assistance Center









Contact: Megan White (360) 407-6405

To protect, preserve, and enhance Washington's surface and ground water quality, and to promote the wise management of water to benefit current and future generations.

Environmental Threat

Threats to water are varied and cumulative. Once polluted, water is extremely costly or impossible to clean up. Continued and rapid population growth in our state threatens our water and affects our ability to maintain clean water for drinking; for industries such as high-tech computer manufacturers, agriculture, and shellfish; and for recreation, fish habitat, and other uses. The Water Quality Program is taking a number of actions to help communities maintain their quality of life by protecting water quality and addressing a variety of threats that could harm our environment, human health, and economy.

In lakes that have been assessed by Ecology, the primary water quality problem is excessive nutrients which cause accelerated algae and aquatic plant growth. In estuaries and streams Ecology has assessed, the primary human-caused water quality problem is fecal coliform bacteria which comes from agricultural activities, inadequate wastewater treatment plants, and failing on-site sewage systems. The bacteria are an indicator of pollution and are pathogens that can cause serious illnesses and threaten our state's commercial and recreational shellfish industries. Elevated water temperature is the leading natural condition water quality problem in estuaries. All of these problems contribute to pollution that threatens salmon and steelhead.

Program Origin and Laws

Chapter 90.48 RCW, Water Pollution Control Act

This act, passed in 1945, created a water pollution control agency, which became a part of the Department of Ecology in 1970. In 1948, Congress passed the federal Water Pollution Control Act. Both the federal and state acts have been amended several times. The Water Quality Program has been in existence since the legislature created the Department of Ecology.

Federal Clean Water Act

Adopted by Congress in 1972, the objective of this act is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Requirements include: adoption of water quality standards; water quality monitoring and assessments; development of Total Maximum Daily Loads (pollution loading limits) for waters not meeting water quality standards; certification for federally licensed or permitted projects to meet water quality standards; implementation of the National Pollutant Discharge Elimination System (NPDES) permit program; control of nonpoint sources of pollution; and financial assistance programs.

Federal Safe Drinking Water Act

Passed by Congress in 1974, this act established programs to protect underground sources of drinking water. In 1984, EPA delegated Ecology as the lead for the Underground Injection Control Program to prevent discharges to ground water.

Chapter 76.09 RCW, Forest Practices Act

Passed in 1974, this act required Ecology to adopt rules for water quality protection in cooperation with the Forest Practices Board. Amendments in 1999 removed Ecology's rule making requirement. Ecology is a member of the Forest Practices Board and must approve of any changes to the Forest Practices Rules that affect water quality.

Chapter 90.70 RCW, Puget Sound Water Quality Authority

In 1985, this act created the Puget Sound Water Quality Authority to develop a comprehensive plan for the protection of Puget Sound. The Authority was replaced by the Puget Sound Water Quality Action Team in 1996. Key features of the Puget Sound Plan implemented by the Water Quality Program are point and nonpoint source pollution controls, stormwater control, and watershed planning.

Chapter 70.146 RCW, Water Pollution Control Facilities Financing Act

In response to the phase out of the Federal Environmental Protection Agency Construction Grants Program and declining Referendum 39 funds and the need to support water quality efforts in Puget Sound and statewide, this act was passed in 1986. It created the Water Quality Account, which includes the Centennial Clean Water Fund, to provide water quality grants and loans to local government, Native American tribes, and other public bodies.

Chapter 70.105D RCW, Model Toxics Control Act

Passed by voters in 1988, a portion of the initiative that adopted this act (I-97) requires all wastewater discharge permit holders pay permit fees to cover the full cost of processing permits and administrating the program.

RCW 43.21A.650, Freshwater Aquatic Weeds Account

In 1991, the legislature created this account to combat noxious aquatic weeds in state waters. The program provides grants and technical assistance and education to local communities for the prevention and eradication of noxious freshwater aquatic weeds.

Chapter 90.64 RCW, Dairy Waste Management Act

Originally passed in 1993, this Act was significantly changed in 1998 by SB 6161. The law now calls for all dairy farms to register with Ecology every other year. By October 1, 2000, Ecology must also inspect all 754 dairy farms surveying for actual or potential violations of state and federal water pollution control laws and to identify farms needing technical assistance. All dairy farms must develop and gain conservation district approval by July 1, 2002, of a nutrient management plan to prevent surface and groundwater pollution. The plan must be certified by both the conservation district and dairy as being fully implemented by December 31, 2003.

Chapter 90.46 RCW, Reclaimed Water Use

This act, passed in 1995, requires Ecology to develop standards, procedures, and guidelines for direct aquifer recharge using reclaimed water. Ecology is working closely with the Department of Health to implement the act.

Stakeholders and Constituents

The Water Quality Program works with numerous local, state, and federal agencies, business groups, environmental organizations, and citizens. The watershed approach to water quality management encourages the wide participation of all interests within designated river basins to solve water quality problems and prevent pollution.

The Water Quality Program has two main advisory committees: The Water Quality Partnership, originally convened in 1994, serves as a standing policy advisory committee to Ecology. It provides stakeholder input on a variety of program elements including permitting and enforcement, stormwater, dairy nutrient management, water quality standards, groundwater protection, and nonpoint source pollution control. Groups represented on the Partnership include environmental organizations, industries and small businesses, local, state, and federal governments, and Native American tribes. The other major advisory committee is the Financial Assistance Council. The Council is comprised of conservation districts, cities, counties, tribes, and state and federal agencies. The Council addresses the department on the administration of the department's water quality grants and loans programs.

Under written agreements, Ecology works with several state agencies, including the departments of Agriculture, Health, and Transportation, the Washington Conservation Commission, and local conservation districts on such diverse issues as aquatic weed control, shellfish and salmon protection, stormwater runoff, and dairy waste management.

Local governments

Ecology is producing tangible results for the state's regulatory reform efforts by streamlining its grant and loan programs. Among the improvements are integrating state and federal grant and water programs to the maximum extent possible to gain flexibility to fund more projects and address local priorities, address financial needs of small communities, and delegate engineering reviews.

Performance Partnership

Ecology and EPA have embarked on a fundamentally new and improved partnership, the Performance Partnership Agreement. Within the confines of federal laws and standards, the agreement identifies mutual priorities, strategic goals, objectives, and activities that the agencies will jointly undertake each biennium.

Activities

Point Source Pollution Prevention and Management

This is the state's principal regulatory program for reducing pollutant discharges to Washington's surface and ground water. Its mission is to regulate discharges of pollutants to surface and ground water from industrial and municipal point sources of wastewater and stormwater. Education, technical assistance, enforcement, and public access to wastewater and receiving water information help ensure risks to health are minimized. Ecology conducts about 1,000 inspections and site visits per biennium to wastewater discharge permit holders.

Ecology maintains a steady pace of issuance of individual permits and a manageable backlog of approximately six percent of all permittees, As a result of issuing permits Ecology increased the number of permitted facilities from approximately 1,000 to more than 4,000 as stormwater discharges were required to be permitted in accordance with new federal regulations.

Ecology provides on-site technical assistance to wastewater discharge permit holders. We also prepare pollution prevention and best management practices publications, conduct workshops, and hold client-group sessions. ✤ Technical Assistance for Small Municipalities: Each year, staff visit over 50 small communities, giving them assistance to ensure clean water. The human health and environmental results of those visits are substantial.

✤ Technical assistance to un-permitted discharges: Ecology provides assistance to entities that have the potential to harm water quality. Activities include participating in single industry campaigns, such as a recent effort focusing on boat yards and marinas.

✤ Enforcement: During follow-up on permit violations, the Water Quality Program works with permit holders to achieve compliance. We continue to use enforcement avenues at problem sites.

Results

✤ Preventing Pollution from Wastewater Discharges: Since 1991, the total number of facilities controlling pollutant discharges under wastewater discharge permits has increased by 73 percent, resulting in less pollution in our lakes, rivers, and marine waters

✤ Streamlining the Way We Do Business: Ecology is working with industries to make the wastewater discharge permitting process more efficient and effective by developing and issuing eight general permits rather than numerous individual permits.

Nonpoint Source Pollution Prevention and Management

Nonpoint pollution threatens basic ecosystem balance and poses one of the most significant health and economic threats to the people of Washington. Through partnerships, Ecology focuses its efforts on solving common nonpoint source problems which threaten salmon, shellfish, drinking water, and aesthetic values, and contribute to flooding and loss of usable land.

Our efforts to address nonpoint source threats include raising awareness, encouraging action, providing tools, and supporting local activities. Working with local decision makers using the watershed approach, Ecology assesses needs and determines level of support.

✤ Forest practices technical assistance: Ecology provides assistance to the Department of Natural Resources on water quality issues related to forest management, focusing on watershed analysis, shorelines, water supplies, road management planning, and participation in interdisciplinary team reviews.

★ Agricultural technical assistance: Ecology implements agricultural water quality programs under the Agricultural Memorandum of Agreement among Ecology, Conservation Commission, and 47 of 48 conservation districts around the state. This process allows for referral of farmers to conservation districts for technical assistance and farm planning as an approach to improving water quality. Ecology provides enforcement to assist local conservation districts with non-cooperative farmers. ★ Dairy waste permitting: Ecology conducts inspections in certain geographic areas, responds to complaints, and brings dairies that are having water quality problems under permit. A permit requires a dairy to develop and implement a farm plan to manage dairy waste using best management practices.

✤ Enforcement: Ecology provides followup to complaint response and permitting, working with local governments and other agencies to focus on problem sites.

★ Local government assistance: Ecology provides technical and regulatory input to local planning decisions by reviewing Growth Management Act and State Environmental Policy Act documents.

✤ Water quality assessment, monitoring, and standards: From selected waters around the state, Ecology collects data and evaluates conditions related to nonpoint source pollution. Ecology provides data to local governments and other decision makers.

✤ Puget Sound Water Quality Management Plan: Ecology continues to assist local planning efforts (under Chapter 400-12 WAC) and implement stormwater, shellfish monitoring, and other plan elements.

★ Federal Nonpoint Source Program (Section 319 of the Clean Water Act): Ecology administers the federal nonpoint source pollution prevention and control program, which provides education, technical assistance, financial assistance, and enforcement.

Working Toward Sustainable Natural Resources

★ Watershed Approach: The watershed approach is nationally recognized as an effective tool to improve water quality. Using this approach to address point and nonpoint pollution allows Ecology to emphasize local service delivery. This approach provides an organizational guide to improve coordination of water quality activities, service delivery, protection and prevention activities, and overall improved management of the state's waters.

★ Water Quality and Watershed Assessments: Results of assessments are published in two reports: a water quality assessment report (305b report) and a report listing waters that do not meet water quality standards (303d list). The water quality assessment (305b) report is the most comprehensive assessment of Washington's waters. The report that lists waters not meeting water quality standards (303d list) is a strong regulatory tool which results in developing management plans to improve water quality.

★ Lower Columbia River National Estuary Program: Ecology participates in and provides assistance to the Lower Columbia River National Estuary Program, a joint Oregon/Washington program established to protect lower Columbia River water quality.

Sustainable Communities and Natural Resources

The financial assistance function of the Water Quality Program is aimed at reducing and preventing pollution by providing state and federal grants and low-interest loans in conjunction with technical assistance to local governments, state agencies, and Native American tribes. Funds help pay for water pollution control facilities to improve and protect surface and ground water quality. Ecology also provides grants and low interest loans for nonpoint source control projects, including watershed planning, stormwater management, and agricultural best management practices.

Results

Each year, Centennial Clean Water Fund grants and loans help build wastewater treatment plants that remove thousands of tons of pollution. Since 1988, Centennial funding and technical assistance have helped communities protect water resources. Annually Ecology provides Centennial grants and loans to local governments and Native American tribes, and State Revolving Fund low interest loans.

Major Issues

Endangered Species Act

Endangered Species Act (ESA) listings of aquatic species such as salmon have numerous water quality implications. In August 1997, the National Marine Fisheries Service listed upper Columbia River steelhead as endangered (meaning the species is in imminent risk of extinction) and Snake River steelhead as threatened with extinction.

If Washington state develops an adequate conservation plan for listed species, it can limit federal involvement in water quality standards, total maximum daily loads (TMDLs), and nonpoint source plans. Ecology is working on developing plans to protect aquatic species and their habitat. The goal is to restore healthy fish populations and habitat. The objective is to develop state strategies for healthy fish runs so that we can manage state resources without federal intervention while maintaining a healthy economy.

We are also working with federal agencies on a Habitat Conservation Plan which will meet the requirements of TMDLs and vice versa. Without action by the state, nearly all waters in Washington could have fish species listed as endangered or threatened. Endangered species listings not only pose a significant threat to our ecosystem, but also to our quality of life and economic stability. Agriculture, hydropower, and fisheries are just a few of the industries that could be affected by ESA listings.

Nonpoint Source Water Pollution

Nonpoint source pollution, the pollution that comes from many diffuse sources, is the most prominent source of pollution in our state. Sources include: fecal coliform bacteria from poorly managed dairy farms, failing septic systems, and pet waste; elevated water temperature from clearing trees and shrubs for land development, agriculture, and forestry practices; and pesticides from agriculture and gardening activities.

Along with water supply and watershed management, nonpoint agricultural activities top Ecology's environmental agenda. Ecology, with the assistance of a broad range of agencies, tribes, local governments, and interest groups, recently drafted a Nonpoint Source Management Plan for the state. The plan includes a critical analysis of Washington's efforts to address nonpoint pollution and identifies actions needed to improve the effectiveness of existing programs. In streams not meeting water quality standards, agriculture accounts for 57% of the problem. We will work collaboratively with the agricultural industry to encourage farmers and ranchers to help get and keep our waters clean.

The new dairy nutrient management program is showing positive results. Ecology is working with the agriculture industry to embrace its tradition of conserving the land's ability to support individual farms, and encourage farmers and ranchers to take steps toward stewardship of entire watersheds. Ecology is working with state legislators, the dairy task force, the Dairy Federation, individual producers, and others.

Waters Not Meeting Water Quality Standards

<%-2>The federal Clean Water Act requires Ecology to identify waters that do not meet water quality standards or are not expected to meet standards within two years of installing technology-based controls. The 1996 list contained 666 waterbody segments (portions of lakes, rivers, and estuaries), while Ecology proposed 636 waters for listing in 1998. EPA has reviewed and approved Ecology's list, but is also proposing to add seven additional waters to the 1998 list. EPA has completed the public comment period on their proposed additions and are expected to release the final 1998 303(d) list soon.

After compiling this list, Ecology must prepare water cleanup plans or TMDLs to improve the health of the waters. The TMDL includes an analysis of how much pollution a waterbody can receive and still remain healthy for its intended uses and meet water quality standards. Through a public process, Ecology develops control actions to limit water pollution activities. We then set conditions in discharge permits and nonpoint source management plans, and develop and implement a monitoring plan to test the effectiveness of the controls. In 1991, the Northwest Environmental Advocates and Northwest Environmental Defense Center filed a lawsuit in the Ninth Federal District Court, faulting EPA and Ecology for an inadequate 303(d) listing and TMDL program. The court dismissed Ecology from the suit because EPA has final responsibility to conduct TMDLs. In 1994, dissatisfied with progress on TMDLs, the plaintiffs amended the lawsuit. The parties reached agreement in principle on a revised plan. The settlement is significant for three reasons: the TMDL process is vital to improving water quality; the settlement could require significant staffing resources for Ecology; and, if a settlement is not reached, EPA would become directly involved in mandating TMDLs and water quality improvements and protections for Washington state.

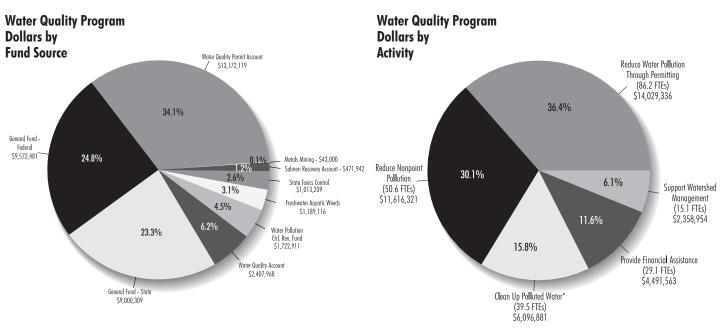
Water Quality Standards

Water quality standards are intended to protect surface waters for public health and enjoyment; the propagation and protection of fish, shellfish, and wildlife; and recreation in and on the water. Ecology is currently updating its surface water quality standards to improve protection of aquatic resources. Assisted by advisory panels and technical workgroups, Ecology is developing two significant proposed changes to the water quality standards.

One of the proposed changes involves the antidegradation process, which is designed to ensure that the water quality of a lake, river, or marine water will not be degraded except when certain conditions are met. The second water quality standard Ecology is proposing to change is the way the beneficial uses of waterbodies are assigned and protected. The proposed change develops a system by which Ecology assigns protected uses to individual waterbodies in a more site specific and scientifically defensible manner. The result may be that some waterbodies receive more protective criteria, while others have the existing level of regulatory protection reduced.

Infrastructure Financing

Water quality needs far exceed the funding available to protect and improve our state's waters. Population growth, accompanied by urbanization and ongoing industrial processes, have increased pressure on the infrastructure which is necessary to adequately protect human health and the environment. Demand for wastewater treatment, potable drinking water, stormwater management, and waste disposal is fast outstripping the capacity of existing facilities. Nonpoint pollution presents additional challenges and costs. Communities requesting grants routinely outstrip the amount of money available. These funds are used for water pollution management projects, such as collection sewers, sewage treatment plants, combined sewer overflows, and stormwater treatment facilities. Ecology is working with its Financial Assistance Advisory Committee and other state agencies to address these problems.



* Of the "Clean Up Polluted Water" FTEs and Funds, 4.65 FTEs and \$698,000 of funds are State General Fund Proviso TMDL funding which will not be spent until April, 2000.

Water Quality Program Budget Operating Budget: \$39,593,055; Staffing: 220 FTEs

Fund	Amount (\$)	Sources	Uses		
General	9,000,309	Multiple	Point source enforcement of permit requirements. Also,		
Fund - State		1	Puget Sound Plan activities for shellfish protection; nonpoint		
			watershed management; and stormwater control, and opera-		
			tor certification program. Fauntleroy cove, forest practices		
			compliance, urban stormwater advisory committee, TMDLs,		
			gravel removal studies, wastewater reuse, and aquatic plant		
			management EIS.		
General	9,572,481	Federal grants	Numerous EPA grants for point and nonpoint source control;		
Fund - Fed-			planning and implementation grants to local governments;		
eral			groundwater protection; and administrative moneys for pass		
			through funds		
Salmon Re-	471,942	Excise taxes on cigarettes and	Bring about compliance with water quality laws related to		
covery Ac-		other tobacco products	nonpoint source pollution.		
count	2.407.070				
Water Qual-	2,407,968	Excise taxes on cigarettes and	Grant and loan management; technical assistance to local		
ity Account		other tobacco products; sales	governments for wastewater treatment facilities and		
		tax transfer; loan repayments,	nonpoint projects.		
		interest payments; and state			
State Toxics	1,013,209	general fund transfer Hazardous substance tax, re-	Cooperative effort with Oregon and EPA to enhance the		
Control	1,013,209	covered remedial actions and			
Control		penalties collected	health of the lower Columbia River through the National Es- tuary Program. The Aquatic Plant Management Program as-		
		penanties conected	sesses human health and environmental risk associated with		
			various aquatic pesticides. Also, work with agricultural com-		
			munity to reduce pesticide and other contamination		
Water Qual-	13,172,119	Fees assessed on the holders	Issuance and management of federal and state wastewater		
ity Permit	10,172,117	of wastewater discharge per-	discharge permits		
Account		mits	albenaige permits		
Freshwater	1,189,116	Fees on boat trailers	Grants to local governments to prevent, remove, or manage		
Aquatic			invasive freshwater aquatic weeds.		
Weeds			1		
Metals	43,000	Fees collected from active	Inspections required by metals mining act		
Mining		metals mining and milling op-			
		erations			
	1,722,911	EPA grant and state match	Administration of a loan program for the construction or re-		
tion Control			placement of water pollution control facilities. Activities in-		
Revolving			clude portfolio management and technical assistance to local		
Fund			governments for point, nonpoint, and estuary projects		
C 11 D 1		. 1 4 1			
	Capital Budget Funding: \$266,696,141				
Referendum	1,041,391	Sale of Bonds; loan repay-	Grants/loans for the construction or improvement of public		
26 Deferrer dure	(reappropriation)	ments and interest payments	waste disposal facilities		
Referendum 39	5,084,437	Sale of Bonds; loan repayment	Grants/loans for the construction or improvement of public		
	(reappropriation)	and interest payments	waste disposal facilities.		
Water Qual-	81,334,337	Excise tax on cigarettes and	Grants/loan for water pollution control facilities; nonpoint		
ity Account	(\$29,334,337	tobacco products; sales tax	source control and water quality improvement planning and		
	<i>reappropriation and</i>	transfer; loan repayments and	implementation activities		
	\$52,000,000 new ap-	interest payments			
Public	propriation)	Roal actate avaiga taxas loon	Crants for water pollution control facilities poppoint source		
Works	10,000,000	Real estate excise taxes, loan repayments and interest pay-	Grants for water pollution control facilities; nonpoint source control and water quality improvement planning and imple-		
Assistance		ments	mentation activities for communities with populations less		
Account			than 5,000		
State	169,235,976	Federal; capitalization grants;	Loans for the construction or replacement of water pollution		
Revolving	(\$90,029,777	loan repayments; interest re-	control facilities; nonpoint source control activities and estu-		
Loan Fund	reappropriation and	payments and state match	ary management		
20un i unu	\$79,206,199 new ap-	r -, mento ana state materi			
	propriation)				
	p. op : millolil)	1	1		

Program Mission

Manage water resources to meet the current and future needs of the natural environment and Washington's communities.

Environmental Threats

Washington increasingly lacks water where and when it is needed for communities and the natural environment. The state is experiencing a combination of unprecedented population growth, a vibrant economy, shifting public values, and a growing demand for water. Our ability to manage water resources and protect the environment in the face of these new realities is hobbled by outdated laws and regulations, inadequate water supply/demand information, an era of policy gridlock, and reduced funding.

Virtually all Washington residents have clean, cheap and sufficient water, in what is viewed as a water-rich state. Thus, the growing issue of water resources has, until recently, remained widely unrecognized except by a circle of interests who traditionally follow water issues closely. Broader awareness of water availability as an issue is increasing for several reasons:

✤ Growing communities and increased competition for water

Endangered Species Act salmon listings

Costly delays and uncertainty for water rights applicants

Increased exempt well drilling

 \clubsuit A shift to the courts as the venue of choice for resolution of water issues.

The availability of water helps determine the pattern and density of human settlement and, in turn the rate and extent of alteration of the natural environment. Inappropriate development of surface or ground water can significantly alter natural water features by drying up or diminishing streams, lakes, wetlands, and aquifers. Inappropriate development may also interfere with existing senior water rights and risk the continued survival of fish.

Wells drilled in violation of standards and good practice leave groundwater vulnerable to pollution, can affect public health, and threaten the availability of nearby water sources. Dams that are inadequately built or maintained also pose safety risks both to people and the environment.

Program Origin and Laws

Water use and water resources management are regulated by an increasingly complex web of common law (made by courts) and statutory law (passed as legislation). These laws include:

English Common Law

While still a territory, Washington adopted the English common law in all matters not otherwise specified by the legislature. This included use of the English riparian doctrine of water law. Under the riparian doctrine, those lands abutting a watercourse have the right to the reasonable use of the waters of that watercourse. All riparian users own correlative (equal) rights to the water, and, in times of shortage, all riparian users must reduce their use.

1917 Water Code (Codified as Chapter 90.03 RCW, Water Code)

On former federal lands patented into private ownership, courts ruled that the appropriation doctrine of water law was applicable. Beginning in the 1870's, the territory and then the state increasingly recognized appropriation as the dominant water law doctrine. Water resources management at the state level was born with passage of the 1917 Water Code. Washington was one of the later states in the west to adopt a water code establishing a state permit system for water development. Prior to that, one merely had to establish an intent to develop water, post a notice at the site, and begin construction. As population density increased in the early 1900's, this system was no longer effective because people were increasingly coming into conflict over water use and development. For example, the natural flows of the Yakima River were fully appropriated by 1900. The Courts were increasingly flooded with complaints among neighbors and rival water suppliers and users. Water management at the state level was initiated to reduce or at least manage these conflicts. The permit system and the adjudication process called for in the code required professional management and administration of water.

This culminated in the 1917 Water Code which acknowledged existing riparian rights but required that any new rights be acquired by appropriation through a state administered permit system. Being adjacent to a watercourse is not necessary to establish an appropriative right. Under prior appropriation, the first in time is the first in right, and a person must make continuous use of water to retain the right to it. This code also established the process of general adjudication of water rights to resolve water right disputes on a watershed basis.

In addition, the 1917 Water Code established state authority to regulate dams for protection of life and property in the downstream valley.

The water code established the position of supervisor of water resources (in other states, this position was called the state engineer) to oversee the operation of the permitting, enforcement, dam safety and adjudications functions. Over the years, this function was transferred to the State Department of Conservation (until 1967), then to the State Department of Water Resources (1967-70), and finally to the Department of Ecology (1970 to present). The supervisor's functions are now assigned to the Director of the Department of Ecology, who delegates much of the actual responsibility to the Water Resources Program Manager.

Chapter 90.44 RCW, Regulation of Public Ground Waters

This 1945 groundwater code brought groundwater into the appropriation system. Previously, groundwater was viewed in a similar manner to riparian rights (i.e., correlative and in existence as a coincident of land ownership wherever groundwater occurred).

Chapter 90.14 RCW, Water Rights Registration

This 1967 statute required the filing of claims of rights vesting prior to the water codes and also codified the states "use it or lose it" policy.

Chapter 90.22 RCW, Minimum Water Flows and Levels

This 1969 law required Ecology to establish minimum flows by rule.

Chapter 90.54 RCW, Water Resources Act

This 1971 act established fundamental water resources policies, required better data management, and mandated establishment by rule of a state water resources management program.

Chapter 18.104 RCW, Water Well Construction Act

This act, also passed in 1971, established standards for the construction and proper abandonment of water wells and required the licensing of well contractors.

Chapters 90.38 RCW, Yakima River Basin Trust Water Rights Program, and Chapter 90.42 RCW, Water Resources Management Trust Water Rights Program

These laws, passed in 1989 and 1991, respectively, permit the state to establish trust water rights for instream and out-of-stream purposes.

Chapter 90.80 RCW, Water Conservancy Boards This law, passed in 1997 provides a mechanism for counties to establish Conservancy Boards. Conservancy Boards work in partnership with Ecology to process changes to water rights.

Chapter 90.82 RCW, Watershed Planning

This law, first passed in 1997 and amended in 1998, establishes a process of locally based, collaborative, watershed planning and management. Plans completed under the act must address water quantity and may address water quality and habitat.

Many other minor water laws and amendments have been passed over the years that are too numerous to list. Noteworthy among them are repeated, unsuccessful efforts, starting in the late 1980's and ongoing, to update state water laws and funding to accommodate the new realities of rapid population growth, a dynamic economy, increased water demand, and increased stress on the environment. In 1994, the stalemate on water resource issues resulted in major cuts to Ecology water rights permit staff funding, during a time that service demand increased.

The Courts continue to impact water law through decisions made on individual cases. Hundreds of water law cases have been tried at various levels over the years. Litigation is becoming a more frequent feature of water decision making driven by increased competition over water coupled with lagging policy and service capacity. While litigation increases costs and slows service, it also serves to provide direction and clarity during an era of policy gridlock.

Several important court decisions that have been made in the 1990's affect instream flows (the Elkhorn case); state regulatory authority (the Sinking Creek case); beneficial use and waste (the Grimes case); the relation between groundwater and surface water, known as hydraulic continuity (the Hubbard case); and water right permit decisions on a watershed basis (the Hillis case). Most recently, court decisions addressed transfers and changes affecting ground water rights (the R.D. Merrill case); the validity of unused ("inchoate") water rights (the Theodoratus and Aquavella III cases); the relinguishment of water rights for nonuse (the Aquavella III case), and abandonment and changes to surface water rights (the Twisp case). If there is a pattern to these decisions, it appears that the courts are interpreting water law more strictly than in the past.

Constituents/Stakeholders

Government

★ Local governments: cities, counties, utilities, irrigation districts. Cities, utilities, and irrigation districts are major holders of existing water rights. A number of issues exist regarding the status of water rights for municipal and community domestic purposes. Counties, cities and special purpose districts with interests in water are concerned that water may not be available to support the levels of growth anticipated by state population forecasts and for which they have responsibility under the Growth Management Act.

The Water Resources Program is actively working towards greater partnership with local governments to manage water resources. These efforts include support of local water resources planning under the State Watershed Management Act; working with counties to establish Conservancy Boards to jointly process water rights changes; and working with counties under a delegated well construction regulation program.

✤ Local Watershed Planning Groups: The Water Resources Program supports the work of Local Watershed Planning Groups created under the Watershed Management Act. These local groups include representatives from a variety of local water interests, local governments, tribes, and state governments.

Indian Tribes: have multiple interests in water. Water development is important for tribal economic development on reservations. Conversely, tribes also support the establishment and protection of instream flows to protect fish and wildlife resources. Tribes possess what are arguably the earliest priority rights to water in the state for both on-reservation use and for flows related to treaty fishing rights. However, for the most part, the specific rights of tribes have not been verified and quantified by a court. Indian rights could have a significant effect on water rights established under state law. Disputes occasionally arise regarding whether the state or a tribe (or both) have jurisdiction over non-Indian use of water on Indian reservations. Case law is mixed on this issue, so more case law may be necessary over time to provide clarity. State/tribal/federal negotiations on this issue are currently underway regarding the Lummi reservation in Whatcom County.

♦ State Agencies: The Water Resources Program coordinates efforts with the state Joint Natural Resources Cabinet which represents state agencies dealing with endangered species and related water resource issues. The Program also works with the following state agencies on water resource issues: Office of Financial Management; Department of Fish and Wildlife; Department of Health; Department of Community, Trade and Economic Development; Department of Agriculture; the Washington Conservation Commission, and; the Office of the Attorney General.

★ Federal Agencies: The principal federal agencies with which Ecology water resources personnel interact include the Bureau of Reclamation, Federal Energy Regulatory Commission, Fish and Wildlife Service, National Marine Fisheries Service, Bonneville Power Administration (Department of Energy), and the Army Corps of Engineers.

Non-Government

- Water right holders
- Water and power utilities
- Agricultural groups

- Business and industry
- Real estate development community
- Well drillers
- Sport and commercial fisheries
- Environmental organizations
- Recreational water users
- People near dams and owners of dams

Major Activities

Local Watershed Management

Local watershed management under the Watershed Management Act is the major tool and basis for our partnership with local groups to comprehensively address water issues within a watershed. The Water Resources Program works with local watershed planning groups, other programs within Ecology, state agencies, and tribes to address water issues under the Watershed Management Act by:

Providing basic watershed planning support services including hydrology, water law, water rights processing and data

Providing more comprehensive water resources services to a select number of watersheds, as resources allow.

Results

Well over a third of the state's 62 watersheds are involved in Planning under Watershed Management Act. When completed, these plans enable residents of local watersheds to know how much water they have and make informed choices on how it should be managed to meet current and future water needs.

Water Right Decision-making and Conservancy Boards

Ecology is responsible for making decisions on applications for new water rights and changes and transfers to existing water rights by:

Making decisions on water rights in a watershed or sub-basins where there is sufficient information to make decisions

✤ Focusing on processing applications for changes to existing water rights over applications for new water rights

Supporting the creation of Conservancy Boards by counties to assist in making decisions on water right changes

✤ Holding new water rights applications pending satisfaction of Endangered Species Act issues and, where appropriate, completion of local watershed plans, with some exceptions including public health and safety.

Results

In fiscal year 1999, 180 water right application and change in use decisions were made. Currently, there are

over 7,000 water right and change in use applications pending statewide. To date, over 48,000 water rights certificates have been issued and over 164,000 claims made for water. Almost all of the rights and claims have not been adjudicated to determine the validity and scope. A total of six counties have formed Conservancy Boards to work with Ecology in processing water right changes and two more are being established.

Adjudications

Ecology is responsible for initiating and supporting water rights adjudication services. An adjudication is a judicial determination of existing water rights and water right claims, including federal, tribal and non-tribal claims. The largest adjudication in the state's history is currently in progress in the Yakima River Basin. When this adjudication is completed, over 20 percent of the state's surface water will be adjudicated. The agency filed this adjudication in 1977, and, at the current level of effort, it is anticipated that the adjudication will be substantially complete in the year 2003.

Results

To date, 80 adjudications, which determine who is entitled to how much water and their priority date, have been completed. This provides certainty for the water users. Completion of the Yakima River Basin Adjudication will provide the foundation for long-term solutions to managing surface water uses and needs in the basin, which encompasses approximately ten percent of the land in the state.

Water Rights Compliance

Using new resources authorized by the legislature, Ecology is undertaking actions to ensure compliance with water rights laws and regulations by:

✤ Conducting strategic compliance actions in consultation with watershed planning groups by assessing illegal water use, communicating the results to local users, and offering compliance assistance and enforcement as needed

Strategically enforcing in a few egregious cases and in response to Endangered Species Act needs

Monitoring and regulating streamflows.

Results

Ecology expects newly restored compliance funding will result in a reduction of illegal water use, protection of senior water rights, and protection of instream flows and aquifers.

Maintain Streamflows

Ecology is responsible for maintaining stream flows and does this by:

Supporting development of water restoration plans

Conducting technical studies and adopting instream flow rules

Buying water rights to restore flows

 $\boldsymbol{\diamondsuit}$ Using the hydropower relicensing program to restore flows

✤ Obtaining trust water through water right transactions in ESA areas

Developing a state position to federal management of the Columbia and Snake Rivers.

Results

Ecology expects that these efforts will help protect instream flows and help restore flows in water-short streams.

Conservation and Reuse of Agricultural and Municipal Water Supplies

Ecology supports conservation and reuse of agricultural and municipal water supplies by:

Providing technical assistance and information

Reviewing municipal water supply and waste water plans for reuse and conservation opportunities in a partnership including Department of Health Drinking Water, and Ecology's Water Resources and Water Quality Programs

Providing agricultural and water conservation services through referendum 38 funding and implementing conservation provisions of the water spreading law

Supporting development of an Irrigated Agriculture
 Water Strategy

✤ Providing drought prevention and emergency assistance, as needed.

Results

Given new funding provided for this purpose, Ecology expects to help a number of communities, farms, and businesses meet their water needs through conservation and reuse, thus protecting streams and groundwater levels. These activities will become increasingly important as competition for water grows and technologies advance to provide new solutions.

Well Construction Regulation

Ecology carries out its well drilling responsibilities by:

 Administering the well driller's licensing program, including fee collection, resulting in approximately 1,200 active drillers who are currently licensed

Ensuring consistent interpretation of drilling regulations, investigating complaints, approving variances and providing continuing education to well drillers

✤ Administering the delegation program which provides counties with the ability to enforce well sealing, decommissioning, and tagging compliance

Providing technical assistance to homeowners, well drillers, tribes, and local governments with delegation

Results

The well drilling and licensing program protects the health and safety of the public from ground water aquifer contamination by ensuring wells are properly located, constructed, and sealed. Over 8,500 water supply wells are drilled annually by licensed well drillers. We have entered into partnerships with 15 counties to share in administration of the well drilling program. Legislative authority to continue this successful partnership is scheduled to expire 2000 unless legislation is enacted to extend the date.

Dam Safety

Ecology staff oversees the safety of the state's dams by:

Inspecting over 300 existing dams situated above populated areas, focusing primarily on structural integrity and flood and earthquake safety

Engineering review, approval, and inspection of new construction and repair of existing dams

Taking regulatory, enforcement, or emergency actions to require repair of unsafe structures as needed

Results

Public safety and property are protected. Dams are inspected on a regular basis, and improvements are made to any high-risk problems. The program's goal for each year is to guarantee correction of all problems of that year's ten most unsafe dams, which are identified during the periodic inspection program.

Public Information, Outreach,

and Information Management Services

Ecology provides water resources information, outreach, and information management services by:

✤ Providing the public and stakeholders water resources information through direct contact, the media, electronic website, and printed information

Engaging groups in a dialogue on how water might be managed in the future – a water vision

Preserving water rights data and enhancing electronic access

✤ Providing water resources information support to local watershed planning groups.

Results

Providing information and data on water resources helps build understanding of water resources. It also contributes to informed decision making by individuals, stakeholder groups, and officials. Public information, outreach, and data are essential to the success of local watershed management efforts and local Conservancy Board water right permit actions.

Water Resources Policy Support

Ecology staff has the responsibility to:

Develop and provide information regarding new legislation and support legislative and executive development of a clear framework of water law that can be implemented efficiently

Develop and update statewide rules, policies and procedures to improve water right decision making and watershed planning

Develop and update watershed specific rules to set instream flows and to implement the recommendations of watershed management plans

Results

These activities are vital to the development of creative and efficient alternatives that meet competing and growing water needs, while protecting the environment, instream uses, and senior water rights. These activities contribute to sound statutes, rules, policies, and watershed planning for effective state and local water resource management and certainty in decision making.

Major Issues

Water Policy Gridlock and A Vision for the Future

Washington State has been experiencing an era of gridlock on water policy and funding. The outdated framework for water management and inadequate funding are colliding with the new realities of heightened competition for water, unprecedented population growth, a changing economy, and endangered fish issues. Despite repeated efforts over years, little progress has been made on water resources policy and funding. Instead courts and litigation are the dominant path to defining Washington's water future. In recognition of the lack of progress, Ecology has invited a dialogue to imagine what a Washington water future might look like. There is hope that a broad dialogue around the future for water can be the basis for near term steps to break the gridlock.

Water Rights Backlog and Water Rights Changes

Since the early 1990s a sizable water rights application backlog has accumulated. The backlog grew due to population growth, litigation, and a lack of necessary supporting data. In addition, a 1994 budget cut reduced Ecology's water rights permit staffing from 55 to 20 FTEs. The current application backlog for all water rights, including requests for new rights and changes to existing water rights, has grown to nearly 7,000 applications. Of these, almost one-fourth, 1600, are applications to change existing water rights. This backlog is the most visible representation of a continuing problem that is critically important to many Washington families, businesses, and communities. Current law dating to 1917 allows a person WR

to change an existing water right as to the place of use, the purpose of use and/or the point of diversion or withdrawal with the permission of the Department of Ecology. The solution to Washington's water availability problem is not solely processing new water right applications. The answers increasingly lie in changing existing rights to new uses, buying existing rights, reusing treated wastewater, employing new water efficiency technologies, measuring and pricing water, and storing water.

Declining Fish Populations

The recent Endangered Species Act listing of salmon has underscored the urgency of addressing water resource issues. Many anadromous fish runs all over the state have suffered steep declines in the number of adults returning to streams where they hatched. This is thought to be the result of numerous factors, including loss of habitat (such as lower instream flows). Fisheries interests want instream flows established on more streams and existing instream flow levels increased. They also want the state to re-acquire water rights to improve flows. We are working with the Joint Cabinet to coordinate our water resource and salmon restoration efforts across agencies.

Municipal Water Supply and Use

There is often a disconnect between proposed new development and water availability. The Growth Management Act (GMA) requires local jurisdictions to develop growth plans to meet the projected population as determined by the Office of Financial Management. Due to rapid growth in the state and policies within the GMA and other statutes, municipal water utilities are under pressure to expand service. Because new water sources are difficult and expensive to develop, utilities would like to expand the use of existing water rights to new growth areas. However, in order to curb speculation, existing common law generally prohibits the transfer of unused water to another location. Any movement of the water from the original intended place of use first requires Ecology's approval.

Hydraulic Continuity

The connection between ground water and surface water is known as hydraulic continuity. Limitations in the supplies of surface water, coupled with increased demand for groundwater and concern over impacts on senior water rights holders, have served to elevate hydraulic continuity as a key water issue. Specific issues include technical methods for assessing hydraulic continuity, determining when streams are harmed (impairment), and methods of mitigation.

Over-reliance on Exempt Wells

About 90 percent of wells drilled each year are exempt from the requirement to get a water right permit. Some of these wells are the best or only possible source of water for a residence. However, in some cases, wells are drilled to bypass the permit process, avoid drinking water regulations, or as a cheaper alternative to water supplied by an existing utility. Such wells can undermine the intent of the Growth Management Act, which is to concentrate growth in or near existing urbanized areas, and can severely deplete the groundwater resource.

Regulatory Authority

In the Sinking Creek decision, the State Supreme Court ruled that Ecology does not have authority to regulate and determine the validity and relative priority of water rights and claims that are in dispute. Only the Superior Court can make such a determination through the process of general adjudication of water rights. To date, approximately ten percent of the state has been adjudicated. Because adjudications are time consuming and expensive, this effectively prevents Ecology from attempting to resolve disputes among water users. The Legislature has considered, but not passed, several possible solutions.

Unauthorized Water Use

Unauthorized water use has been found in many areas of the state, due, in part, to a lack of knowledge of the law and the long waiting period for water rights decisions. In addition, insufficient funding and competing priorities have limited Ecology's ability to ensure compliance with state water laws, which may also contribute to illegal use. Enforcement of permit conditions is likely to become more important. New permits increasingly include conditions which allow permit applicants to meet their needs and protect senior water rights holders and the environment.

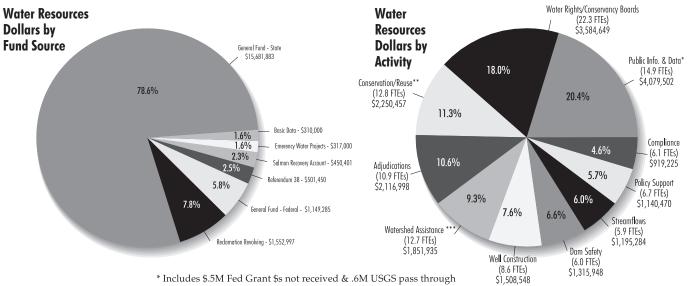
Unquantified Federal and Indian Water Rights

Over the last century, federal case law has established that when the federal government set aside certain lands for specific purposes (e.g. national parks, military posts, or Indian reservations) it, by implication, also reserved a sufficient amount of water necessary to accomplish the primary purposes of that set aside. Much of Washington remains in federal ownership. Twenty-seven Indian tribes in Washington are federally recognized. These federal and Indian reservations have unquantified water rights, which, when quantified and confirmed, could significantly alter state issued water rights. Indian tribes are also recognized as having some form of instream flow rights within their ceded lands related to their treaty fishing rights. Such rights can be quantified through state or, potentially, federal court adjudications of water rights.

Water Resources Budget

Operating Budget: \$19,963,016; Staffing:107 FTEs

Fund	Amount (\$)	Sources	Uses
General Fund - State		Multiple	Water rights decision-making, County water conservancy board assistance, conservation/re- use assistance, watershed assistance, stream flow, data management, public information, dam safety, and Yakima adjudication.
Salmon Recovery Acct.	450,401	Tobacco Tax	Increase compliance with existing water re- sources laws.
General Fund - Fed- eral	1,149,285	Federal grants	FEMA grant and \$1.1 Federal grant funding not received.
Reclamation Re- volving	1,552,997	Well construction fees; well operators' li- censes, and hydropower fees	Administration of the well driller's licensing pro- gram; including grants to local governments and a 50/50 revenue share for counties that have del- egated well construction management authority. Contract with the USGS for stream gauging.
Emergency Water Projects	317,000	Bond sales; loan re- payment and interest payments	Assist with the development and implementa- tion of drought relief activities.
Referendum 38	501,450	Bond sales; loan re- payments and interest payments	Administrative support for grants and loans for the improvement and/or construction of agricul- tural water supply facilities. Provide technical as- sistance to irrigation districts concerning conser- vation and water use efficiency. Operation and maintenance of Zosel Dam.
Basic Data	310,000	Contributions for hy- drographic data	Pass through to the US Geological Survey for stream gauging data collection.
Capital Budget Fund	ling		
State Emergency Water	577,833 (reappropriated)	Sale of Bonds; loan re- payments and interest payments	Grants and loans for emergency drought relief activities.
State Building Con- struction Account	87,689 (reappropriated) \$1,000,000	Sale of Bonds	Methow Basin Water Conservation. Water Rights Purchase pilot project for improv- ing stream flows in fish critical basins.
State and Local Im- provements Re- volving Account State Drought Pre- paredness Account	10,104,436 (\$6,004,436 reappropriation, and \$4,100,000 new appropriation) 6,800,000 new appropriation	Sale of Bonds; loan re- payment and interest payments State Emergency Wa- ter Account	Grants/loans for agricultural water supply facili- ties. Grants/loans for agricultural water supply facili- ties projects.
Water Resources Dollars by		Water Resources	Water Rights/Conservancy Boards (22.3 FTEs) / \$3.564.649



** Includes 2.5 FTE Fed Grant \$s not received & .6M USGS pass through

*** Includes 1 FTE Fed Grant \$s not received

Contact: Jim Pendowski (360) 407-7177

To get contaminants out of the environment and keep contaminants out of the environment.

Environmental Threats

More than 8,100 contaminated sites have been identified across the state. Nearly 6,000 of the contaminated sites statewide are a result of leaking underground storage tanks. Approximately 1,800 sites impact ground water, threaten drinking water, and aquatic sediments.

Each site is unique and poses a different type and level of risk to public health and the environment. Contamination at sites can be localized or widespread. For example:

Soils that are contaminated by toxic chemicals, like arsenic, have been discovered in school playgrounds and in backyards, as well as at industrial facilities.

✤ Fish and shellfish living on chemically contaminated sediments can accumulate certain toxins in their flesh. People eating these fish and shellfish may, in turn, be exposed to the toxic chemicals. Also, contaminated sediments can contribute to declining fish populations and damage state fishery resources.

Contamination can affect drinking water sources and expose people to chemicals in the water they drink and use at home.

We need to remove contaminants from these sites to protect public health and the environment. Cleaning up contaminated sites also helps the state's economy by restoring sites to productive use and by preventing further decline of state resources such as fish and shellfish habitat.

Program Origin and Laws

Contaminated Site Cleanup

Contaminated site cleanup activities in Ecology were first funded by the legislature in 1983, with the aim of enabling the state to participate in federal Superfund cleanups.

Chapter 70.105D RCW, Model Toxics Control Act In 1988, citizens passed Initiative 97. This initiative created a state-specific cleanup law that gives Ecology the authority to order cleanups at contaminated sites and established a tax on hazardous substances sold in the state. These funds pay for cleanup and pollution prevention activities. More than half of the funds are directed to local governments to help pay for cleanup of publicly owned contaminated sites.

Underground Storage Tanks

Chapter 90.76 RCW, Underground Storage Tanks

This law, passed in 1989, requires Ecology to establish standards for the proper installation, operation, and maintenance of underground tanks used for the storage and dispensing of hazardous substances and fuels, primarily at gas stations. It was passed, in part, to provide the state with the authority to implement a program in lieu of one implemented by the EPA. The law was reauthorized during the 1998 Legislative session.

Sediments

Authority is derived principally from several laws: Chapter 90.48 RCW, Water Pollution Control Act, Chapter 70.105D RCW, Model Toxics Control Act, and Chapter 90.71 RCW, Puget Sound Water Quality Protection.

Sediment contamination was identified as a significant environmental threat in the 1980s. The Sediment Management Program evolved based on early experience with Commencement Bay cleanup activity and Puget Sound Dredged Disposal Analysis program (PSDDA is a national model for a multi-agency cooperative dredged disposal program).

Constituents and Stakeholders

An important element of the Model Toxics Control Act is including the public and other stakeholders throughout the process of cleaning up contaminated sites and developing new initiatives. Ecology's Toxics Cleanup Program continues to build partnerships among government, industry, and citizens. Our constituents and stakeholders include:

- The Legislature
- Federal Government
- State Government
- Conservation and environmental groups
- Businesses and individuals engaged in the cleanup of contaminated sites
- Local governments
- Ports
- Insurance companies
- Tribes

Contaminated Site Cleanup constituents also include

Lenders, developers, realtors

Owners of contaminated sites

Water purveyors

Citizens affected by contaminated sites

Underground Storage Tanks constituents also include

Tank owners/operators

Homes and businesses affected by leaking underground storage tanks

Petroleum companies

Underground storage tank service providers

Major Activities

Contaminated Site Cleanup

We focus our resources on sites posing the greatest risk to public health and the environment. These sites are characterized by:

- Imminent threat to drinking water
- Extreme quantity and toxicity of contaminants
- Nearby population or surface water
- Shallow depth to ground water

They range from complex, highly industrialized properties to corner gas stations where a leak from an underground storage tank has occurred. Many of these sites have contamination in soil, sediments, ground water, and/or surface water. Most of these sites are cleaned up through a formal process with Ecology oversight.

Results

Of the 8,100 sites statewide, 44% have been cleaned up and require no further action, 37% are in some stage of the cleanup process, and 19% are waiting for further investigation or cleanup to occur.

Voluntary Cleanup Program

Since October 1, 1997, the Voluntary Cleanup Program in Ecology's Toxics Cleanup Program provides services to site owners or operators who initiate cleanup of their contaminated sites. Voluntary cleanups can be conducted in a variety of ways: completely independent of Ecology; independent with some Ecology assistance or review; or with Ecology oversight under a signed legal agreement (an agreed order or a consent decree).

Changes were made to the state cleanup law to allow Ecology to provide more assistance to persons conducting voluntary cleanups. Ecology may now provide site-specific advice to persons who are conducting, or are interested in conducting, an independent cleanup. While Ecology is authorized to recover the cost of providing this assistance, some level of service is provided without charge. Ecology's Voluntary Cleanup Program services include:

✤ One-hour free consultation on administrative or technical issues related to compliance with the state cleanup law for independent investigation or cleanup

Consultation for a fee on site-specific technical or administrative issues before, during, or after a cleanup

Prepayment Agreement: Ecology's oversight costs are provided in advance of issuing an order or decree that has been requested by a responsible party

✤ Prospective Purchaser Agreement: Ecology's oversight costs are provided in advance of issuing an order or decree that has been requested by a prospective purchaser who wishes to redevelop or reuse the property

✤ Brownfields Redevelopment: a specially targeted cleanup effort, aimed at getting abandoned or under-used properties (brownfields) back into productive use.

Results

Last fiscal year, there were 140 sites that completed cleanups under the voluntary program. On average, these voluntary cleanups took approximately 80 days to complete.

Underground Storage Tanks

Activities

♦ Currently Ecology regulates approximately 11,600 active tanks on 3,600 different properties, including gas stations, industries, commercial properties and government agencies. These tanks must be installed and operated under a permit which is issued as part of the Master Business License by the Department of Licensing.

✤ Our Underground Storage Tank program is working to ensure that tanks are installed, managed, and monitored in a manner that prevents releases.

✤ Compliance inspections: We conduct inspections on about 500 sites per year, most with multiple tanks.

✤ Technical Assistance: To achieve compliance with the Underground Storage Tank regulations, we are emphasizing technical assistance to tank owners. This provides face-to-face, site-specific service to the tank owners so that the owners do not have to carry the entire burden of understanding the Underground Storage Tank regulations. Ecology has about 10 employees who spend the majority of their time providing technical assistance to owners and operators in the field or over the phone. Tank owners can request penalty-free technical inspections and submit Ecology's documentation of the visit to insurance carriers. Some insurance carriers will reduce premiums up to 10% for sites with low risk of releases.

Results

As a result of our Underground Storage Tank Unit program:

The rate of releases reported annually is less than a quarter of what it was in 1990

✤ About 95% of underground storage tanks have leak detection equipment

✤ About 66% are operating the leak detection equipment correctly

All licensed tank owners have documented their ability to pay the costs of cleaning up releases in order to obtain operating permits

Sediments

Our activities include technical support to source control permit writers and cleanup site managers; updating sediment management standards based on current scientific information; maintaining the sediment information database; participating in a multi-agency effort to select and construct a disposal facility for contaminated sediments; and implementing guidelines for disposing of relatively clean sediments. We also manage a multi-agency sediment cleanup pilot project which is designed to integrate cross-agency actions and accelerate sediment cleanup.

Results

The Puget Sound Dredge Disposal Analysis is an example of a multi-agency partnership which has established guidelines and procedures for managing relatively clean sediments. This interagency partnership (involving Ecology, Department of Natural Resources, EPA, and the Corps) has served as a model for regional dredging teams in other parts of the country. These four agencies, together with the Department of Transportation and the Puget Sound Action Team, are also working closely to improve programs for managing contaminated sediments.

Data and Information

A major effort of the Toxics Cleanup Program is to turn data into usable information for the purpose of helping to direct work, ensure what we do has value, and to know that what we do is supported by our stakeholders.

The Toxics Cleanup Program has recently completed an evaluation of how to better manage our data and deliver even more useful information. Staff has begun implementing high priority recommendations for improving delivery of information to the program and outside interests.

Our goal continues to be better cleanups through:

- ✤ An informed and involved public
- ✤ Good decisions based on solid data
- Making useable information more available to the public

Knowledgeable communities (including multi-lingual translations)

★ Environmental Indicators: An area where the program has taken a leadership role is in measuring environmental results with environmental indicators. Three years ago, we created a pilot project which resulted in five indicator groups. Data are tracked annually for each cleanup site. The summary information is now a part of our annual report to the legislature. In these early stages of information collection and scrutiny, we have not seen clear trends in all of the information. We will continue to monitor which contaminants have been treated, removed, recycled, or isolated at a site. Eventually, we should be able to measure environmental status and trends at cleanup sites.

✤ Data Management: The Toxics Cleanup Program has developed several systems to manage our data. These include the Integrated Site Information System, the Underground Storage Tanks/Leaking Underground Storage Tanks database, and several smaller systems that do specific tasks. These systems are essential for taking raw data and turning it into useable information to help guide our Program's effort.

Results

People can access information readily; information systems are helping in the decision making process; and our environmental indicators provide information about cleanup successes. Toxics cleanup information is available on the Internet at: *http://www.wa.gov/ecol-ogy/tcp/cleanup.html*. We have just recently added even more information to this site.

Federal Agency involvement

Department of Defense

Ecology's Toxics Cleanup Program is a national leader in the cleanup of military sites. Through partnering with the Department of Defense, the Toxics Cleanup Program has overseen cleanup decisions for more military sites than any other state. The first military site delisted from the EPA's National Priorities List was in Washington state. A total of at least seven federal facilities with multiple cleanup sites have completed cleanups at their bases.

Environmental Protection Agency

✤ Washington is the only state approved by the EPA to be lead regulator, with no federal involvement, for a number of superfund cleanup sites.

✤ In a landmark agreement in October 1994, EPA and Ecology divided up additional military and Superfund sites, including privately owned sites. This redefinition of state and federal roles eliminates duplication and leads to more efficient cleanups. The agreement has received national recognition as a model of inter-governmental cooperation.

State Agency Involvement

Ecology has signed Memorandums of Understanding with the Department of Health, Department of Transportation, Department of Natural Resources, and the Pollution Liability Insurance Agency. Each of these documents serves to define, in part, how the respective agencies will perform their responsibilities for the cleanup of sites throughout the state.

We recognize that the success of a Brownfields Initiative is dependent upon the coordination and cooperation of many state agencies. Ecology has played a key role in coordinating this effort with the Department of Community Trade and Economic Development, the Office of the Insurance Commissioner, and the Department of Revenue.

Local Government Involvement

Under the Model Toxics Control Act, persons conducting remedial actions under a consent decree, order, or agreed order are exempt from the procedural requirements of many state and local permits. Ecology has the responsibility of ensuring compliance with the substantive requirements of these permits and works with state agencies and local governments to ensure that necessary measures are taken.

Ecology is working with several Port Districts to clean up contaminated properties and to help ports prepare for the future.

Major Issues

Statute and Rule Changes

To implement the recommendations of the Model Toxics Control Act (MTCA) Policy Advisory Committee, the statute was amended in a number of areas to facilitate faster, better, cheaper cleanups. Ecology has established an external advisory workgroup to review and advise the agency on draft rule language. Except for legislative members, the same interest groups that participated on the Policy Advisory Committee are assisting Ecology on the external advisory workgroup. Key issues being addressed by this proposed rule amendment include:

Providing for increased use of site specific information in conducting risk assessments

✤ Developing a new method to evaluate petroleum contamination

Defining processes for protecting ecological aspects of the environment

Providing clarification to the remedy selection process

Establishing a citizen technical advisor or "ombudsperson" program

✤ Facilitating the redevelopment of area-wide contamination through clearer administrative procedures These rule amendments are being proposed in November 1999. We expect formal adoption in the spring of 2000.

Sediment Management Activities

New to the Toxics Cleanup Program during 1999 is Ecology's Sediment Management Unit. This has improved our ability to oversee cleanup sites with contaminated sediments. They also provide technical support to Ecology permit writers and enhance communication and coordination on sediment issues within Ecology. The Sediments Unit is also responsible for:

Sediment Management Standards Rule Amendment

The Department is currently in the process of amending the current sediment standards. The additional area of focus is the establishment of human health criteria. Other aspects included in the amendment include the development of Freshwater Cleanup Criteria, coordination with the Endangered Species Act; establishing and implementing a strategy for Sediment TMDLs (Total Maximum Daily Loads) for sediment locations in violation of the Federal Clean Water Act, providing technical support to Ecology permit writers, and enhancing communication and coordination on sediment issues within Ecology.

Improving Sediment Cleanup Programs

We are working with federal, state, and local agencies to improve the efficiency and effectiveness of sediment cleanup programs. This includes a pilot project to integrate and streamline sediment cleanup decision making, and identifying and siting a Multi-User Disposal Site (MUDS) for contaminated sediments.

Updating Standards based on New Scientific Information

The Sediment Quality Criteria developed in 1991 are the foundation of the Sediment Program. We are working to update sediment quality criteria based on new scientific information and to establish human health criteria values.

Strengthening Inter-Agency Partnerships

Ecology is working to improve overall government effectiveness and efficiency on sediment related issues through the Cooperative Sediment Management Program, which is designed to build upon strengths and integrate multiple activities.

Information Management

Large amounts of information are required to support sound decision making on sediment cleanup, source control, and sediment quality criteria. Continued improvements in our information management capabilities will be needed to support agency decision making and evolving interagency working relationships.

Everett Smelter Site

The Everett Smelter Site is a quintessential cleanup site: the discovery of persistent hazardous substances, most notably arsenic and lead, resulting from the operation and subsequent demolition of a long-abandoned and forgotten smelter, on property that has been developed into an urban area with residential, commercial, and recreational use.

ASARCO, Incorporated, the party identified as responsible for contamination of the site, has brought suit against Ecology, challenging the constitutionality of the state cleanup law. The suit will be heard in the summer of 2000 in Thurston County Superior Court.

Upon refusal by Asarco to initiate cleanup, in the summer of 1999, the Toxics Cleanup Program successfully completed cleanup of the 10 most contaminated homes as part of an interim cleanup action.

The Toxics Cleanup Program is finalizing the cleanup plans for the entire Upland Area of the Everett Smelter Site. Draft cleanup plans were presented for public comment in January 1999. Ecology has carefully considered all of the comments received and has responded to those comments in a Responsiveness Summary. The final plans will be described in the *Integrated Final Cleanup Action Plan and Final Environmental Impact Statement for the Upland Area.*

The Toxics Cleanup Program anticipates issuing an enforcement order to ASARCO, Incorporated (Asarco), in January 2000, directing Asarco to implement the specified cleanup actions. The schedule for implementing the specified cleanup actions will depend on whether Asarco complies with the enforcement order and the availability of funding if Ecology conducts the cleanup actions.

The Toxics Cleanup Program continues to be committed to cleaning up this site and is pursuing additional funding from the Legislature to conduct cleanup in the summer of 2000 if Asarco should refuse to comply with the enforcement order.

Area-wide Contamination

Pursuant to the recommendations of the Model Toxics Control Act (MTCA) Policy Advisory Committee, Ecology is evaluating the problem of area-wide contamination, including the development of area-wide investigations and remedies. The current law was designed for sites that were typically industrial sites with contamination. Increasingly, our concern has turned to the area-wide contamination problem, which doesn't fit as neatly into our current cleanup law which addresses single sites.

The soil and groundwater in many existing and proposed residential, commercial, and industrial areas in Washington State are contaminated from the accumulation of pesticides, aerial discharges from industrial manufacturing or smelters, or from the past operations and disposal practices of businesses of all sizes. In many instances the contaminants are found in concentration above the cleanup standards specified under MTCA that have been determined to be protective of human health and the environment. Communities in both eastern and western Washington have been impacted by area-wide contamination.

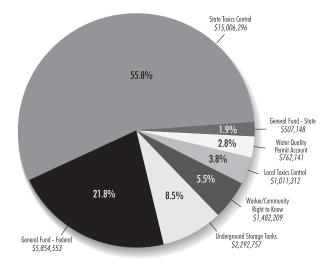
Many of the contaminated properties are small lots owned by individual families, but others are owned by commercial and business interests in present and proposed Brownfields areas. These areas of contamination range from several acres to many square miles. Some areas with wide spread contamination are affected by a single contaminant, such as arsenic applied to agricultural lands. The Brownfields areas, however, may be affected by diverse sources and multiple contaminants.

Toxics Cleanup Program Funding

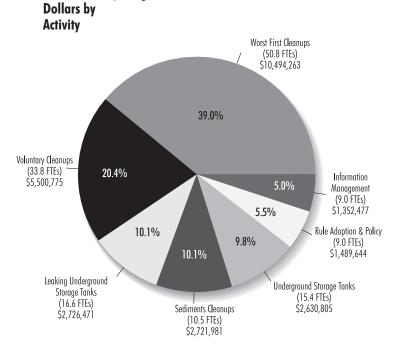
Budget: \$26,916,416; Staffing: 145 FTEs

Fund	Amount (\$)	Sources	Uses
State Toxics Con- trol Account	\$15,006,296	Hazardous substance tax; recov- ered remedial actions and penal- ties collected	Cleanup of toxic sites; investigation and ranking of new toxic sites; prepayment cleanup; technical assistance; site information management; and natural resource damage assessment
General Fund - Federal	\$5,854,553	Federal Grants	Grant funds received from EPA and Dept. of Defense for cleanup at National Priorities List sites and federal Superfund sites at military facilities; and technical assis- tance/cleanup related to leaking underground storage tanks
State Underground Storage Tank Ac- count	\$2,292,757	Annual tank fees	Pollution prevention; inspection and permitting activi- ties related to underground storage tanks
General Fund State	\$507,148	Multiple	Sediments activities
Worker Comm Right to Know	\$1,482,209	Hazardous Material Mfg	Public Information compilation and dissemination
Local Toxics Con- trol Acc't	\$1,011,312	Haz Substance Tax	Sediments disposal project (MUDS)
Water Quality Per- mit Acc't	\$762,141	Fees on Waste Water Discharge	Sediment source control





Toxics Cleanup Program



Program Mission

To ensure sound statewide management of mixed waste and to facilitate the effective, efficient cleanup of Hanford. Besides site cleanup, the Nuclear Waste Program must work with other states to address Hanford's role in the storage and stabilization of the nation's nuclear waste and nuclear materials inventory.

Environmental Threats

Hanford's half century of nuclear materials production has created one of the world's most polluted areas. The Nuclear Waste Program leads the State of Washington's oversight of the cleanup of the 560 square mile Hanford Site in southeast Washington. The cleanup challenge includes:

✤ Removal and vitrification of an estimated 55 million gallons of radioactive and chemically hazardous waste in Hanford's 177 underground storage tanks

Removal of 2,100 tons of leaking fuel rods stored in a basin near the Columbia River

✤ An estimated 230 square miles of contaminated groundwater which flows toward and eventually enters the Columbia River

✤ Operation and closure of 50 hazardous waste treatment, storage and disposal sites ranging from small demolition sites to half-mile long concrete canyons

Cleanup of 1,500 waste sites ranging from liquid waste disposal ditches to former reactor facilities

Program Origins and Laws

The Nuclear Waste Program was formed in 1989 with the signing of the Tri-Party Agreement (TPA). This landmark agreement between the state of Washington, the U.S. Department of Energy (USDOE) and the U.S. Environmental Protection Agency (EPA) directs the cleanup of the former nuclear materials production site at Hanford. Because USDOE was not required to comply with hazardous waste and air and water pollution standards until the late 1980's, the Tri-Party Agreement will bring the Hanford Site into compliance with the same rules that regulate private industry over the next 30 years. Laws which govern the program include:

Federal

Resource Conservation and Recovery Act (RCRA)

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, or Superfund)

State

- Chapter 90.48 RCW, Clean Water Act
- Chapter 70.94 RCW, Clean Air Act

✤ Chapter 70.105 WAC, Hazardous Waste Management Act

Chapter 70.105D WAC, Model Toxics Control Act

Constituents/Stakeholders

Federal

Ecology has long recognized that the successful cleanup of Hanford is dependent in large measure on an effective national program to cleanup all USDOE facilities. To forge a strong national cleanup program, Ecology has worked with other states hosting USDOE facilities, the Congress, USDOE, EPA, the Nuclear Regulatory Commission, the Defense Nuclear Facility Safety Board, and USDOE's Environmental Management Advisory Board.

Ecology works with EPA on two fronts. As parties to the Tri-Party Agreement at Hanford, Ecology and EPA work closely to ensure a well coordinated and efficient regulatory program. Ecology also works closely with EPA Region X and EPA Headquarters on broad regulatory issues affecting the cleanup of federal facilities such as Hanford.

States

Cooperation with other states occurs primarily through the National Governors Association, the Western Governors Association, and USDOE's State and Tribal Government Working Group. Areas of interstate cooperation include federal legislation affecting cleanup activities, federal appropriations, waste transportation safety, interstate waste shipments, and regulatory streamlining.

Oregon

Given the proximity of Hanford to Oregon, Ecology maintains an active working relationship with the Oregon Office of Energy. The two states discuss not only general issues relating to the cleanup program, but also detailed technical issues, particularly those associated with the Columbia River and groundwater contamination.

Tribes

As the state's lead for natural resource damage assessments at the Hanford site, Ecology works with USDOE, the U.S. Fish and Wildlife Service and the Yakama, Umatilla, and Nez Perce Indian Nations, as well as with the state Department of Fish and Wildlife to ensure adequate consideration is given to natural resource values in planning and conducting cleanup work.

Given the cultural significance of lands on the Hanford Site, Ecology consults on a one-on-one basis with the affected tribes on cleanup goals, priorities, and technical issues.

Local government

Ecology consults with Franklin, Benton, and Grant counties and the cities of Pasco, Richland, Kennewick, Benton City, and West Richland on Hanford issues, including cleanup goals and priorities.

Public interest groups

Public interest groups involved in Nuclear Waste Program activities include the Hanford Advisory Board as well as Heart of America Northwest, Hanford Watch of Oregon, Hanford Education Action League, Physicians for Social Responsibility, Washington League of Women Voters, Columbia River United, and the Lower Columbia Basin Audubon Society.

Business

Principal Tri-Cities area business and labor groups interested in program activities include the Tri-City Industrial Development Council, the Central Washington Building Trades Council, the Hanford Atomic Trades Council, and the Hanford Family.

Other

Washington is the host state for the commercial low-level radioactive waste disposal facility operated by U.S. Ecology at the Hanford Site. This facility serves the Northwest Compact, which was established in 1981 and ratified by Congress in 1985. In this capacity, Washington chairs the compact, which consists of Alaska, Hawaii, Idaho, Montana, Oregon, Utah, and Wyoming.

In addition, Washington, through the Department of Ecology, participates in the national low-level waste forum. The forum, which is an association of state and regional compact members appointed by governors and compact commissions, facilitates the implementation of state and regional waste compacts.

Major Activities

The Tri-Party Agreement acts as a framework for Hanford Site cleanup. It contains target dates (or milestones) to accomplish cleanup work and is reviewed and updated periodically.

Major program priorities at Hanford

✤ Remove, treat and dispose of 55 million gallons of radioactive and chemically hazardous tank waste

Clean up contamination near the Columbia River site boundary and work inland

Clean up areas within the Hanford site where groundwater contamination may impact the river

Prevent additional releases to the environment by stabilizing tanks, other structures, and contaminated areas, and improve waste management practices

Selected accomplishments

Single Shell Tank C-106 waste removal completed

USDOE signed Tank Waste Treatment Complex contract with British Nuclear Fuels (BNFL) authorizing design phase

✤ Negotiated and implemented TPA milestones for "Corrective Action Vadose Zone Characterization" under the tanks

Eliminated all unpermitted wastewater discharges into the ground

Ecology and USDOE agreed to a Consent Decree to ensure the liquids in the Single-Shell Tanks are removed. The first year's performance of the Consent Decree resulted in the pumping of almost 500,000 gallons of liquid, which exceeded the performance measure of 7% liquid removal

Commenced strong on-site presence regarding tank SY-101 and its associated safety issues (gas retention versus level growth)

Treated over 600 million gallons of groundwater and excavated approximately 2 million tons of contaminated soil

Removed or stabilized hazardous and radioactive material in B Plant facility

✤ Soil cleanup began in the 100 H Area. Soil cleanup is almost complete in the D Area's high priority sites, and cleanup plans have been approved for N Area

✤ The major TPA milestone dealing with the 324 Facility (M-89-00) was successfully changed from a TBD to a set date of October 31, 2005. In addition, Ecology and USDOE agreed to change the 324 Closure Plan to facilitate cleanup of the facility. The process for changing the Closure Plan has begun.

Major Issues

The USDOE Environmental Restoration and Waste Management Program is the largest environmental program in the nation. The cleanup of Hanford is the largest element of this program.

Tank waste cleanup

The cleanup of Hanford underground tanks will be one of the longest and most costly public works projects ever undertaken. A key element of the cleanup work is the retrieval and treatment of tank wastes. Actual waste treatment is scheduled to begin in 2007. Ecology believes this privatized cleanup program should be closely monitored to ensure that the cleanup meets Tri-Party Agreement goals and timetables. In August 1998, USDOE entered into a privatization contract with BNFL to design, construct, and operate facilities to vitrify tank waste. BNFL is proceeding with the first phase of the contract which includes preliminary facility design to help develop a reliable cost estimate, environmental permitting, and a financing plan incorporating the use of private market capital. A decision to move forward with the second phase of the contract, including final facility design, construction and operations is expected by August 2000. For the project to be viable, Congress will need to appropriate about \$6.9 billion dollars over the eighteen-year life of the project.

Continuation of Hanford Cleanup progress

Cleanup progress has started on major Hanford facilities. USDOE must be encouraged to continue to seek ways to maintain progress on the stabilization and decommissioning of these facilities to reduce hazards to site workers and the environment. Progress must be maintained on issuance of closure or final operating permits for Hanford sites for waste transportation, storage and disposal.

Protection of the Columbia River

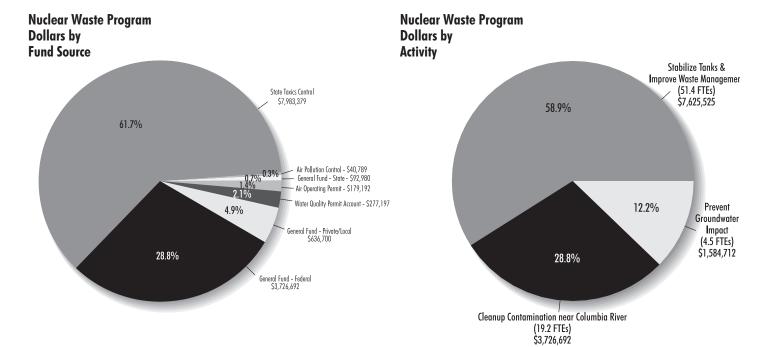
Work must continue to clean up those sites, which could add to groundwater or river contamination, including the removal of decaying fuel rods from concrete storage areas located near the river. Groundwater cleanup and close monitoring of liquid waste discharges and cleanup must also continue.

Decisions about additional waste storage or treatment at Hanford

A number of national level decisions are pending regarding the future storage and treatment of hazardous and radioactive waste from foreign and domestic nuclear power plants, decommissioned nuclear warships, defense production site cleanups, and the disposition of surplus weapons materials. Hanford is a potential storage and treatment site for much of this waste. The Nuclear Waste Program plays an active role in helping the state respond to these cleanup plans.

Nuclear Waste Program Budget Budget: \$12,936,929; Staffing: 75 FTEs

Fund	Amount (\$)	Sources	Uses
State Toxics Control Ac- count - Mixed Waste Fee	7,983,379	Permit fees for Mixed Waste Facilities	Remove radiological and heavy metal contaminants from soils; remove and store spent nuclear fuel; provide regulatory assis- tance to USDOE
General Fund - Federal	3,726,692	Federal grants	Remove radiological and heavy metal contaminants from soils; remove and store spent nuclear fuel. Provide regional manage- ment of low-level radioactive waste. Educate public on Hanford Environmental DOSE Reconstruction Project
General Fund - Private Local	636,700	Site use permit fee for gen- erators, packagers, or bro- kers using the Hanford Low-Level Radioactive Waste Disposal Facility	Policy oversight of commercial low-level radioactive waste disposal within the state and the Northwest Interstate Com- pact on low-level radioactive waste management
Water Quality Permit Fees	277,197	Fees collected for wastewater discharge per- mits	Actions needed to maintain safe facilities which treat wastewater discharges on the Hanford site
Air Oper- ating Permit	179,192	Permit fees collected for air contaminant sources	Actions needed to maintain safe facilities which treat waste discharges on the Hanford site
General Fund - State	92,980	Multiple	Congressional liaison for Hanford cleanup
Air Pollution Control	40,789		



Program Mission

To prevent pollution and promote safe waste management.

Environmental Threats

Currently, over 229 million pounds of hazardous waste are generated annually by about 7,000 generators. These wastes, when improperly managed, can cause severe hazards to the public's health and to the environment through air pollution, water pollution, and soil contamination. Because of its physical characteristics, hazardous waste is often toxic to living organisms, including humans. Many of these wastes remain toxic for a very long time - they are persistent, some building up or bio-accumulating in the food chain. Ecology's Hazardous Waste and Toxics Reduction Program addresses two primary environmental threats: improper hazardous waste handling and disposal, and long-term inherent risks of hazardous waste, even when handled and disposed of properly. Therefore, waste reduction is our top priority. Our second focus is ensuring that hazardous waste that is generated is managed safely.

Program Laws and Origins

Hazardous Waste Management

Chapter 70.105 RCW, Washington's Hazardous Waste Management Act

This act, passed in 1976, defines dangerous wastes as non-radioactive wastes that are disposed of in such quantity or concentration as to pose a substantial present or potential hazard to human health, wildlife or the environment. To implement this act, Ecology adopted Dangerous Waste Regulations in late 1977. These rules empowered Ecology to define, track, and regulate the disposal of extremely hazardous wastes (a subset of dangerous wastes that are higher hazard wastes).

Federal regulations

In May 1980, EPA established federal hazardous waste regulations under the Resource Conservation and Recovery Act (RCRA). RCRA requires EPA to develop nationwide standards for controlling hazardous waste handling, transportation, treatment, and disposal. It also requires that states that want to operate hazardous waste programs in lieu of the federal program must adopt state regulations that are essentially equivalent to EPA's rules.

In 1980, the Washington State Legislature amended the Hazardous Waste Management Act to give Ecology authority to regulate dangerous waste as well as extremely hazardous waste, and to gain federal authorization for the state's hazardous waste program from EPA. The companion Dangerous Waste Regulations were subsequently amended. In broad terms, the purpose of Washington's Dangerous Waste Regulations is to set out a system for safely managing and disposing of dangerous waste.

While the Dangerous Waste Regulations are consistent with federal regulations, their degree of risk classification system is unique to Washington State. Prior to 1978, the waste classification system used to designate that degree of hazard included assessing wastes by three criteria: level of toxicity, persistence in nature, and potential carcinogenic risk. Wastes were also assessed by their tendency to ignite, corrode, and explode, or to fail EPA's toxicity test.

When updating the Dangerous Waste Regulations in 1978, Ecology designed the regulations to be at least as stringent as federal RCRA standards. The three criteria mentioned above were also added to supplement the federal system of lists and characteristics, which included the tendency to ignite, corrode, or explode, plus the tendency to leach certain chemicals to groundwater. The result is more wastes being classified as dangerous than by using the federal approach alone, thereby making the criteria for listing the basis of the regulation.

Pollution Prevention

During the late 1980's, pollution prevention gained recognition nationally as a better way to address hazardous waste management. The concept of avoiding waste generation, rather than treating it after generation, made an inordinate amount of sense. Innovative programs that featured planning for source reduction and waste reduction, supported by technical assistance, began to move into the forefront.

Chapter 70.95 RCW, Hazardous Waste Reduction Act This act, passed in 1990, authorized Ecology's pollution prevention activities by establishing state policies and goals that encourage the reduction of hazardous substance use and hazardous waste. To achieve these goals, the law requires certain hazardous waste generators and hazardous substance users to prepare plans for voluntary reduction of hazardous substance use and hazardous waste generation. These plans must address current hazardous substance use; waste reduction, recycling and treatment activities; analysis of further reduction opportunities; and five-year performance goals.

In addition, the act funds technical assistance services to the affected facilities through fees. Ecology staff provide businesses with advice and consultation on waste reduction and hazardous substance use reduction techniques. Technical assistance specialists help prepare or modify pollution prevention plans, executive summaries, and annual progress reports and provide technical assistance to carry out the plans.

Community Right-to-Know

Chapter 70.102.020 RCW,

Hazardous Substance Information Act

In Bhopal, India, in 1984, a large chemical release to the air killed or injured thousands of people. Similar events have happened elsewhere. A major reason for these catastrophes was that the public was not informed or prepared for such an event. As a result, in 1985, both Congress and the Washington legislature passed Community Right-to-Know laws. The Washington State Legislature also established the Hazardous Substance Information Office, which is located in Ecology's Hazardous Waste & Toxics Reduction Program. The primary duties of this office are to:

✤ Facilitate access to existing information on hazardous substances within a community. Request and obtain information about hazardous substances at specific locations and facilities from agencies that regulate those locations and facilities

✤ At the request of citizens or public health/safety organizations, compile existing information about hazardous substances used at specific locations

✤ Provide education to the public on the proper production, use, storage, and disposal of hazardous substances We receive funding from the Worker and Community Right to Know Fund.

Chapter 15.54 RCW, Fertilizer Regulation Act This act, passed in 1998, directs Department of Agriculture to protect human health and the environment by ensuring that all fertilizers meet standards for allowable metals. It also clarifies the Department of Ecology's oversight authority over waste-derived fertilizers. To implement this authority, Ecology has developed criteria for a pre-registration review of these waste-derived fertilizers. The criteria is now a proposed rule, amending the Dangerous Waste Regulations. The act also directed Ecology to conduct a study of dioxins in soils and fertilizer. This study is now completed and published.

Constituents and Stakeholders

Stakeholders include:

- ✤ Public
- Regulated businesses and agencies
- Local governments
- Tribes
- Business groups and associations
- Environmental groups
- ✤ EPA

State Agencies: Department of Agriculture; Department of Health; Washington State University

Local Governments and Other Agencies

Because we regulate agencies that produce hazardous waste, we can also assist them in reducing and safely managing waste.

We work in partnership with local governments since they have jurisdiction over smaller waste generators and provide local governments with the tools (materials, training) they need to regulate and educate these smaller generators. Some local governments can more easily respond to complaints received by Ecology due to geographic proximity.

Funding from EPA allows us to implement the federal hazardous waste program in Washington State and to enhance the state's pollution prevention program.

We work with the Department of Agriculture, Washington State University, and the Department of Health, in addressing waste issues that include pesticides and fertilizers.

Major Activities

Increasing Contact with Businesses

Over the past five years, Ecology has concentrated efforts on providing information to businesses through personal (face to face) visits. Though concentrating our efforts on larger businesses is important, data shows that wastes generated by smaller businesses can also be a significant environmental problem. Reaching smaller businesses through site visits and providing clearly written materials on how to reduce and handle wastes has been very effective and has been appreciated by the business community. The following are some of the major tools we use to reach businesses:

★ Short Technical Assistance Visits: Staff in Ecology's regional field offices are making an effort to visit all businesses which handle wastes within either a specific geographic area (county or industrial park) or in a specific business sector (i.e., radiator shops). The goal of these visits is to educate business on safe waste management. These visits are not enforcement related and no written record of the visit is kept (except for the name of the business for tracking purposes). Recently these short technical assistance visits have involved projects designed to increase Ecology's field visits in counties, cities and industrial parks. Examples include:

— Increased Generator Contact Project: Ecology provided outreach to 256 businesses that are in business parks served by septic systems. Their goal was to prevent discharges of hazardous waste or industrial wastewater to septic systems.

Staff from Ecology started by creating a complete list of businesses in industrial parks served by on-site septic systems. Then the businesses were notified about the project through the local press and letters sent directly to them. Site visits were scheduled. At each site visit, after explaining the purpose of the visit, the discussion focused on the wastes they generated, and how these wastes should be properly disposed of. Business people were given an information sheet, a survey, and stamped envelope so that they could evaluate the effectiveness of the visit.

The surveys showed that the visits resulted in increased compliance with state and county regulations, more waste diverted to proper disposal, and reduction in the potential for pollution from business sources getting into the ground and groundwater through the septic system.

✤ General Pollution Prevention and Regulatory Assistance: Ecology field staff respond to ongoing requests for assistance through on-site consultations. Many of these consultations include state of the art technical assistance on process changes that can help a business reduce or eliminate the use of toxic materials that create hazardous wastes. Whenever possible, staff provide pertinent regulatory information regarding compliance with air, hazardous waste, and water regulations.

Results

From July 1997 through June 1999, we conducted 3,640 site visits, resulting in businesses managing their hazardous wastes better than ever. Ecology inspectors have greatly increased their ability to target their efforts; they focus on finding environmental threats not minor violations. In 1996 an inspector had a 26% chance of finding a significant environmental threat during an inspection. Today, inspectors find significant environmental threats on about 50% of their inspections. We believe that increase is due to our enhanced targeting efforts and not due to an overall increase in environmental threats at businesses that manage hazardous waste.

Safe Waste Management and Industry Partnerships

The following examples illustrate how Ecology has used creativity and common sense to work with business and other stakeholders in addressing problem areas within the Dangerous Waste rules while still protecting human health and the environment.

★ "You Auto Recycle" Project: Promoting environment friendly practices at auto wrecking yards was the focus of the "You Auto Recycle" project in central and eastern Washington. Ecology staff from the Hazardous Waste and Toxics Reduction Program worked closely with the Automotive Recyclers of Washington

(AROW).<R> Finding new uses for old cars and old car parts is a valuable service provided by auto recyclers. Ecology's project went a step further by showing auto wreckers how to safely collect vehicle fluids, handle old batteries, and avoid spills and accidents at the work site.

The "You Auto Recycle" project resulted in distribution of 500 vehicle recycling manuals and videos. There were three workshops conducted, with 120 people in attendance.

✤ Metal Machining Sector Project: A team of Ecology staff, representing all four regions, worked with the Metal Machining Sector statewide. The purpose of the Metal Machining Sector Project was to:

- Research the environmental and regulatory issues in this industry sector

— Evaluate the industry's current pollution prevention (P2) practices to identify technical assistance needs

— Highlight the most significant P2 opportunities and provide resources for future P2 actions

- Conduct site visits to a cross-section of metal machining facilities

— Educate the agency on P2 issues and opportunities in this sector

—Share the project's results with the industry.

These objectives were achieved through research, site visits to 12 facilities, the publication of a sector report, hosting an industry roundtable, and presenting the results to agency staff.

The overall benefits to the metal machining industries within Washington include a better understanding of pollution prevention opportunities, best management practices, waste management guidelines, overview of disposal options, and vendor listings. These companies were also given the option of attending a discussion on the pertinent issues relating to metal machining.

✤ Used Oil Management: Ecology is developing a rulemaking for adopting EPA's used oil management standards. In developing these rules, Ecology has worked closely with local government environmental groups and various businesses within the industry of recycling used oil. The challenge from the beginning has been balancing state and federal requirements. Traditionally local government in Washington has been responsible for the collection of used oil. Ecology has strived to preserve this established program, which has been working well, while meeting the requirements of the federal rules. After working with the various stakeholders for nearly two years Ecology believes it has established a working balance between these competing requirements that will meet the needs of our state.

★ Corrective Action and Closures: Ecology staff conduct site-specific corrective action (cleanups) and closure/post closure work at contaminated sites that have treated, stored or disposed of hazardous wastes. Sites that present the greatest hazards to human health and the environment are addressed first. We are currently working on 27 corrective action sites.

★ Information Management/Electronic Reporting of Dangerous Waste: TurboWaste is an electronic reporting software program developed by Ecology. It is used by generators to submit dangerous waste annual reporting data electronically to the state. Since its use began with the 1996 annual reporting year, the volume of paper data reported to Ecology has decreased from 100% to 14% (84% is received electronically). A few of the benefits of electronic reporting include: improved data quality, data is available sooner, reduction of Ecology staff review and data entry time, reduced paper waste and storage space.

Promoting Pollution Prevention

Ecology actively promotes reducing waste and chemical use as the best way to protect public health. The following describes our work in this area:

Pollution Prevention Planning and Technical Assis*tance:* Pollution prevention planning is a system to help facilities examine their current operations in an attempt to reduce waste and chemical use and increase recycling and treatment of waste that is produced. The planning process is a sequential set of steps that lead to identification of pollution prevention opportunities. Facilities are encouraged to establish reachable goals for reduction, recycling, and treatment and to report their progress annually. This information helps the facility recognize its positive environmental actions and helps Ecology measure the effectiveness of the pollution prevention program. Data collected for 1998, and adjusted for changing economic conditions, show a 48% reduction in hazardous waste generation as compared to 1992. Ecology provides technical assistance in preparing plans and progress reports and during implementation. Many pollution prevention techniques are common to industrial processes and industrial sectors, and Ecology staff are in a unique position to share this information to the benefit of the facilities. Technical assistance can include on-site visits, phone consultations and workshops.

♦ Green Purchasing: After realizing that state government was the single largest purchaser of goods and services in the state, Ecology decided to embark on a project to incorporate environmental criteria into selected state contracts. Toward that goal, Ecology staff have worked with the Department of General Administration (GA) this past year to develop a new state contract for Environmentally Responsible Cleaning Products. Ecology staff designed environmental criteria and worked with GA staff to educate potential vendors.

✤ Toxics Reduction Engineer Exchange: Ecology's Toxics Reduction Engineer Exchange (TREE) team uses engineering analysis to reduce environmental impacts, facility costs and regulatory requirements. The technical assistance is provided at no cost to the company. Ecology started the TREE program in 1997 when the agency realized that general technical assistance was sometimes not enough to help companies achieve pollution prevention.

Most recently, the TREE team helped Basin Frozen Foods, a potato processor, reduce the amount of water they were using to produce frozen hashbrowns. The company will use the saved water to allow them to add a french fry line within their existing water resource and discharge permits. This prevented an increase in discharge that was scheduled with the new fry line.

Using suggestions from the TREE team's report, Basin Frozen Foods reduced water use by 80,000 gallons per day. The report identified an additional 121,000 gallons of water per day that can be eliminated. (Most of this water will be redirected to the new french fry operation). The quality of the water discharged was also improved by removing much of the starch contaminants from the water. The company's wastewater should become about 80% cleaner. Basin Frozen Foods gave a positive recommendation to Prototron Circuits, another company that applied for TREE assistance.

✤ Governor's Award for Outstanding Achievement in Pollution Prevention: This annual award program recognizes businesses and facilities that have demonstrated success in pollution prevention. It is administered by Ecology for the Governor of Washington State.

Applications are reviewed and judged by an external panel of experts. Winning facilities are selected because they have demonstrated the benefits of reducing or eliminating use of toxic materials, generation of hazardous waste, emissions to the air and discharges to water. They have demonstrated excellence in overall environmental commitment and willingness to share their knowledge with the community.

The 1999 Governor's Award was issued to eight winners. Some examples include:

— *Apollo Spas* reduced its styrene emissions to the air by 99 percent — and they're actively working to achieve "zero discharge."

— *Canyon Creek Cabinet Company* in Monroe implemented a pollution-prevention plan and adopted a goal of becoming an environmental leader. Working closely with Department of Ecology and the Puget Sound Clean Air Agency, Canyon Creek became the only wood-finishing company in the state to switch to water-borne products. The change greatly reduced hazardous air emissions, and avoided the requirement for a special air permit.

—*Hytek Finishes Company*, located in Kent, has a comprehensive pollution prevention program. Their efforts have resulted in reduced use of toxic materials and generation of waste, reduced atmospheric emissions, and improved water conservation.

Enforcement of the Most Egregious Violations

A credible enforcement capability is essential to preserving the effectiveness of Ecology's technical assistance program. Over the last 6 1/2 years, the department has issued 28 penalties. The Hazardous Waste program offers technical assistance to help businesses correct problems before any enforcement actions are taken, unless the problem poses an imminent threat to human health or the environment or remains uncorrected on a continuing basis.

The Department of Ecology has two full-time, professional criminal investigators who pursue environmental crimes, such as deliberate, illegal dumping of hazardous materials or intentional pollution which is not authorized by law or regulation. These two investigators serve the entire agency (all media) and are located at EPA offices in Seattle, which allows them to work effectively as a team with federal investigators. Over the last 10 years, these investigative efforts have resulted in several criminal prosecutions for serious environmental crimes.

Keeping the Public Informed

We have several efforts underway that provide information for public use and assist us in measuring our results. We routinely provide all of the below-listed types of information to the public. Reports like our Toxic Release Inventory Report are now being offered electronically. We are also able to support software used by local governments that put the Hazardous Chemical Inventory Reports in all of the 911 centers in the state.

✤ Community Right-to-Know: Ecology receives and distributes information on storage and releases of toxic chemicals under federal Community Right-to-Know legislation. The two main reports filed by businesses are:

— *Hazardous Chemical Inventory (Tier Two) Reports:* This annual report is filed by 3,500 Washington businesses. These reports, which are filed with fire departments, county emergency management and Ecology, provide information on year-to-year changes in quantities of chemicals that are being stored in businesses in the state. Communities use this information for hazardous materials planning and emergency response. This information is also used by the State Patrol in emergency 911 centers.

— *Toxic Release Inventory (TRI) Report:* This annual report, which is prepared by Washington's larger manufacturers and federal facilities, provides information on annual releases and waste management activities of certain toxic chemicals. These are typically permitted releases. The public, news media, industry, academic institutions, and environmental organizations find the TRI report especially valuable because the report provides information about releases to air, land, water, and sewer. The report also provides information about waste management operations like recycling and energy. This one environmental report is most noted for its impact on encouraging reductions in toxic chemical releases throughout the country.

✤ Dangerous Waste Reporting: The hazardous waste data reported to us from businesses is the cornerstone of our information management program. It tells us whom, what, how much, where it goes, how it is managed and how much pollution prevention is accomplished and allows Ecology to assess environmental trends and results. We get thousands of requests anHWTR

nually from the public, environmental interest groups, and the regulated community seeking information on waste types and volumes, waste management, hazardous substances and waste reduction. Information on hazardous waste generators is provided to local governments for use in developing or supplementing waste programs at the city/county level.

◆ Shoptalk: This program produces and distributes several publications to help businesses reduce and safely manage waste. One example is Shoptalk, a quarterly publication produced in easy-to-read format, which provides the latest information and reminders on ways to deal with waste. Shoptalk is mailed to approximately 25,000 businesses. Program staff are currently exploring ways to increase electronic distribution as an efficiency measure.

✤ 1-800 Hazardous Substance Line: We answer approximately 800 calls per month from the public requesting assistance with hazardous substance questions. A recent caller needed assistance getting information about the materials used in a mattress she had purchased that was causing contamination of her house. We were able to get information that she could provide to her doctor. The toll-free line is also used to provide technical assistance to businesses with questions about Community Right-to-Know laws or requesting publications provided by the program.

Major Issues

Pollution Prevention

The requirement for pollution prevention planning continues to be a major stimulus for the successful reduction of hazardous substance use and hazardous waste generation by planning facilities. As we implement into the second five-year planning cycle, the following modifications to the planning program have been offered:

✤ Facilities with an Environmental Management System (EMS) can ask Ecology to accept their EMS as an alternative to the traditional pollution prevention plan

Guidance manuals for plans and annual progress reports simplify and clarify requirements, guidance and worksheets

Only changes within a facility need to be fully addressed in the five-year plan updates

An increased emphasis on technical assistance is being accomplished through industry sector studies, and integrated site visits.

Large universe of hazardous waste generators

Approximately 8,000 hazardous waste generators are regulated in Washington State. Approximately 10,000 businesses produce some quantity of dangerous waste.

New approaches to reach out to more businesses include:

Short technical assistance visits

✤ Workshops: this year, more than 800 people attended over 30 workshops that we conducted across the state to help businesses safely manage waste

Streamlined inspection format

Speeding up availability of annual report information for public use.

Waste being incorporated in agricultural products for application to land

These include cement kiln dust, electric arc furnace dust, and sludge/flux ban and hydrated elbow residues from metal manufacturing industries.

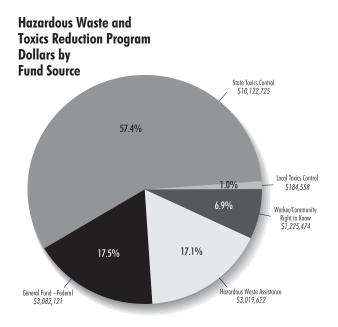
This past year, Ecology in cooperation with the Washington State departments of Agriculture and Health conducted studies to: (1) quantify metals and dioxins in bulk and home use fertilizer products, (2) determine if certain metals have accumulated in agriculture soils of the Columbia Basin, (3) provide an initial assessment of typical concentrations of dioxins in statewide soils. The results of the study are discussed in publication #99-309, Final Report: Screening Survey for Metals and Dioxins in fertilizer Products and Soils in Washington State. An addendum to this report, Dioxins in Washington's Agricultural Soils (Publication #99-333).

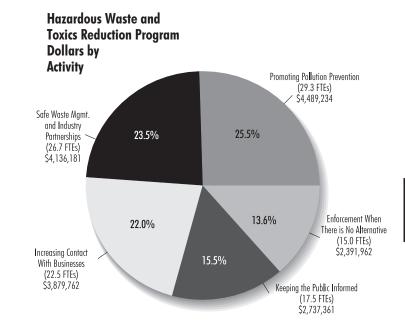
In addition to these studies, Ecology is now reviewing waste derived fertilizers as part of Washington State Department of Agriculture's fertilizer registration process. The results of this review will be available on Ecology's fertilizer database website (http://www.wa.gov/ecology/hwtr/fertilizer).

Hazardous Waste and Toxics Reduction Program Budget

Budget: \$17,634,500; Staffing: 111 FTEs

Fund	Amount	Sources	Uses
State Toxics Con- trol Account	\$10,122,725	Hazardous substance tax; recov- ered remedial actions and penal- ties collected	To promote pollution prevention and safe waste manage- ment; primarily through technical assistance to businesses; inspections of large quantity generators of hazardous waste and permitted treatment, storage and disposal facili- ties; and hazardous waste cleanups. To conduct criminal investigations and enforcement actions.
Hazardous Waste Assistance Account	3,019,622	Hazardous Waste Fees	Technical assistance to hazardous waste generators and hazardous substance users
General Fund - Federal	3,082,121	Federal Grants	Grant funds received from EPA for implementing federal Resource Conservation and Recovery Act (RCRA); and for pollution prevention
Workers Right-to-Know	1,225,474	Labor and Industries fee on em- ployers reporting more than 10,400 worker hours per year in designated industries	Dedicated fund used to compile information on hazardous substance use and to make this information available to cit- izens and other public entities
Local Toxics Control Account	184,558	Hazardous substance tax.	Quantify metals and dioxins in fertilizer, assess concentra- tions of dioxin in state soils, and review and analyze waste derived fertilizers as a part of the fertilizer registration pro- cess.





Hazardous Waste and Toxics Reduction Program

Program Mission

To provide for the proper environmental management of solid waste through waste reduction, recycling and safe disposal; to provide technical assistance, education, planning assistance and regulatory interpretation to local governments who implement solid waste management programs; to assist local governments through grants to develop and implement these programs; and to ensure consistent and effective enforcement of air, water and waste laws for major industries (pulp and paper, aluminum smelters and petroleum refineries).

Environmental Threats

The most imposing threats addressed by the program include:

✤ Improper disposal of wastes (including litter) can result in the pollution of the state's ground water, surface water and air. Some of the biggest cleanup sites in our state are former solid waste landfills.

✤ Washington's pulp and paper, aluminum smelting, and oil refining industries produce a tremendous amount of waste water, air contaminants and dangerous waste.

✤ Increased recycling of former waste materials, including composting and land spreading of soil amendments and wastes used as fertilizers, can result in pollution problems if improperly applied.

Constituents/Stakeholders

Local Governments

City and county public works departments and utility districts are responsible for developing and implementing local solid waste plans and are responsible constructing and maintaining for their facilities. SW&FAP provides technical and financial assistance.

Cities, counties, ports and other local jurisdictions are responsible parties for the cleanup of a large number of hazardous waste sites. SW&FAP provides remedial action grants to these jurisdictions to clean up contaminated sites.

Environmental Interests

The Industrial Section works with various environmental groups, including the Washington Environmental Council, Sierra Club, People for Puget Sound, Friends of the Earth, Nature Conservancy, and Washington Toxics Coalition.

Citizens

The Information Hotline (1-800-RECYCLE) provides citizens and businesses with information about waste reduction and recycling.

Citizen groups are eligible to receive grants through the Public Participation Grants program to become informed about activities at hazardous waste cleanup sites and to implement the state's solid and hazardous waste management priorities.

SW&FAP works with various groups in the development of policies associated with recycling and other aspects of solid waste management. These groups include

- Washington Refuse and Recycling Association
- Washington Citizens for Resource Conservation
- Washington State Recycling Association
- Washington Toxics Coalition
- Washington Organics Recycling Council

Private Sector/Businesses

Private owners and operators of solid waste facilities are given technical support through SW&FAP work with local health departments. In some cases, Ecology directly permits and works with the facility to help it meet all environmental regulatory requirements.

The Industrial Section works with the Association of Washington Business, Western States Petroleum Association, Northwest Pulp and Paper Association, as well as oil refineries, pulp mills, aluminum smelters.

State Agencies

Washington Utilities and Transportation Commission and Ecology review draft local solid waste plans, ensuring that plans meet their cost assessment requirements.

The Department of Health (DOH) works with Ecology to identify areas that meet the requirements for drinking water grants. Ecology is currently working with DOH and the Department of Agriculture in dealing with the issue of wastes being used as fertilizers.

On statewide litter control efforts, Ecology works with Washington State Departments of Transportation (DOT), Natural Resources (DNR), Revenue (DOR) and Corrections (DOC).

The Industrial Section also has ties to DNR and air authorities.

Program Origin and Laws

Chapter 70.95 RCW, Solid Waste Management Act

The solid waste program in Washington state began at the State Department of Health and expanded with the passage of the Solid Waste Management Act in 1969. Enabling legislation, which created the Department of Ecology in 1970, moved the functions of the existing solid waste program from the Department of Health to the Department of Ecology.

In accordance with the Solid Waste Management Act, local health departments have primary authority for solid waste permitting and enforcement, and Ecology provides technical assistance through engineering and hydrogeologic services, including permit review. Ecology also provides technical assistance for solid waste facility inspections, enforcement and moderate risk waste plan implementation, and financial assistance through enforcement grants, grants for moderate risk waste programs, and grants for site hazard assessments.

The Industrial Section was formed to assure that the major industries (pulp and paper, aluminum smelters and petroleum refineries) in Washington were given a high priority and consistent focus. Primary laws include Chapter 90.48 RCW, Water Pollution Control, Chapter 70.94 RCW, the Clean Air Act, and Chapter 70.105A RCW, Dangerous Waste Regulation. Under federal delegation from EPA, we implement the counterpart federal air, water and waste laws that affect these industries.

Chapter 70.93 RCW, the Waste Reduction, Recycling, and Model Litter Control Act

(Formerly called Model Litter Control and Recycling Act) Also passed in 1972, this act authorizes Ecology to promote and stimulate recycling, encourage litter abatement, and provide employment in litter cleanup and related activities for the state's youth.

Chapter 70.105 RCW, Hazardous Waste Management Act

This act, passed in 1975, separated hazardous waste management from solid waste management. It requires Ecology to prepare guidelines and approve moderate risk waste management plans prepared by local governments.

Resource Conservation and Recovery Act

In 1976, the federal government passed the Resource Conservation and Recovery Act (RCRA), which set standards for the management of solid waste landfills. Ecology received delegation for implementation of the program in the early 1980's. Amendments to federal Municipal Solid Waste Landfills regulations required Ecology to revise its municipal landfill standards in 1993. Ecology received delegation of the new federal program in January 1994.

Chapter 70.138 RCW, Incinerator Ash Residue

Concerns over potential contamination from municipal solid waste incinerator ash prompted the passage of the Incinerator Ash Residue Act in 1987. This act authorizes Ecology to develop rules requiring Ecology approved ash management plans and to permit ash disposal facilities.

Chapter 70.105D RCW, Model Toxics Control Act

This act, passed by voter initiative in 1988, directs Ecology to provide grants to local government for remedial actions, implementation of local solid and hazardous waste plans and programs, and for public participation in decisions made at hazardous waste sites.

Chapter 70.95D RCW, Solid Waste Incinerators and Landfill Operators

Passed in 1989, this law directs Ecology to develop rules and establish the operator certification program for all solid waste landfill and incinerator operators.

Chapter 79.95J RCW, Municipal Sewage Sludge (Biosolids)

This law, passed in 1992, directs Ecology to develop a state biosolids management program, including regulations to implement sections of the federal Clean Water Act.

Major Activities

Environmental Monitoring, Permitting and Engineering Services

✤ Solid Waste Facilities: Environmental regulations dealing with the siting, design and construction of solid waste facilities are developed by the program to protect the state's air, land, surface and ground water.

✤ Industrial Compliance: The Industrial Section manages all regulatory requirements for 29 of the state's largest, most complex industrial facilities. These facilities include pulp mills, aluminum smelters, and oil refineries. Section staff are responsible for assuring compliance with state and federal regulations for air, water and waste management activities. Because of the high profile and national significance of these industries, the section works closely with the federal Environmental Protection Agency.

✤ Incinerator Ash: Ecology develops rules requiring Ecology-approved ash management plans and permits ash disposal facilities.

✤ Operator Certification: Certification programs for landfills and incinerators train operators in the proper procedures to safely operate facilities in compliance with environmental protection regulations.

Results

★ We provide technical assistance to the permit applicant, facility owner/operator, and the jurisdictional health department for over 300 solid waste facilities. For example, Ecology staff have been providing engineering and hydrogeology technical support to the Klickitat County Health District in their review of the operations and expansion of the Roosevelt Regional Landfill. The size of the site and its hydrogeologic regime have produced innovative solutions. Ecology has also recently assisted with major landfill construction in Pierce, King, Kitsap, Okanogan and Kittitas Counties.

Major industrial facilities in Washington State do a good job of complying with state environmental laws. Only a small number of penalties are issued each year to these facilities for violations detected during self-monitoring and inspections.

✤ Currently, four operating municipal solid waste incinerators have approved ash management plans, and one ash monofill has been permitted for the disposal of incinerator ash.

✤ Since 1993, over 900 operators of landfills and incinerators have been certified.

State/Local Planning, Policy and Reporting

Statewide policy forms a backdrop for local government development of solid waste and hazardous waste plans. Local plans, in turn, form the basis for the permitting systems for solid waste facilities in the state. SW&FAP provides technical assistance to counties in writing, revising, and implementing solid and moderate risk waste plans, participating in local solid waste advisory committees as they develop and implement local plans, and reviewing and approving local solid and moderate risk waste management plans.

Data collection and reporting activities include preparing an annual status report on solid waste, a statewide recycling survey, and quarterly interstate waste tracking reports. Information received assists in developing or modifying policies on various aspects of pollution prevention, recycling, solid waste management and moderate risk waste management.

Results

Most counties have approved local solid waste management plans which include waste reduction and recycling. Thirty-three moderate risk waste plans, representing all of Washington's 41 jurisdictions, were approved by January 1992, and most have been updated to include used oil amendments. Currently, many counties are amending their local solid waste plans to reflect changes in the solid waste handling system.

Waste Management Grants

The program operates the following three grant programs:

✤ Remedial Action Grants: assist local governments, which are responsible parties for hazardous waste sites study and cleanup. Grants also help local health districts investigate suspected hazardous waste sites. Grants help public water purveyors re-establish safe drinking water supplies where drinking water has become contaminated from hazardous waste sites.

Coordinated Prevention Grants: provide money to local governments for solid waste planning, enforcement of solid waste regulations, groundwater monitoring wells at landfills, moderate risk waste planning, implementation of moderate risk waste plans, and recycling activities and infrastructure.

✤ Public Participation Grants: are provided to citizen groups and not-for-profit organizations to help people participate in the decisions made at hazardous waste cleanup sites. The grants also provide funding for projects that promote proper waste management practices by citizens and businesses.

Results

Since 1972, over \$48 million of Referendum 26 funds have been allocated for waste projects, including recycling facilities. Over \$99 million of Referendum 39 funds have been allocated for waste projects since 1980, mainly to three waste-to-energy facilities. Over \$214 million in grants resulting from the Model Toxics Control Act have been issued since 1988.

Pollution Prevention, Waste Reduction and Recycling

✤ Pollution Prevention (P2): The program's pollution prevention strategy centers around five focus areas: providing technical assistance to local governments and to contractors, as requested, on methods for reducing and reusing construction and demolition materials; providing grants to support pollution prevention initiatives by local governments, trade associations and citizen groups; providing grants for collecting moderate risk waste from households and small quantity generators, as well as toxicity reduction efforts; providing technical assistance to local governments to implement waste and toxicity reduction; and working with industries in preparing and measuring progress of pollution prevention plans.

Elements of both the Coordinated Prevention Grants Program (CPG) and Public Participation Grants Program (PPG) address pollution prevention issues. The CPG Program provides funding for waste and toxicity reduction activities in local government solid waste management programs. A sizable portion of PPG awards goes to business and trade associations for pollution prevention. Technical assistance to small quantity generators is provided, as well as implementation assistance on plan waste or toxicity reduction elements.

Ecology works with local government on moderate risk waste efforts, through shop-sweep type campaigns, and with small quantity generators to properly manage/reduce their waste streams. Guidance on used oil management is also provided.

The Industrial Section works with industries to identify and implement pollution prevention, as well as to prepare pollution prevention plans and annual progress reports.

✤ Waste Reduction and Recycling Assistance: Ecology staff provide critical assistance in the establishment and continued operation of recycling programs, including technical information on collection and processing of materials, financial data, legal mechanisms, marketing options, educational materials, and policy issues to consider.

The program operates a toll-free line through which public and businesses can receive advice on recycling and safe disposal of solid wastes and alternatives to using products that produce household toxic wastes. The toll-free line also provides methods and locations for the safe disposal of household hazardous waste, information on small quantity generator events, and locations for the recycling and disposal of construction, demolition and landclearing debris. Referrals are made to companies who offer commercial pickup for business recycling.

Results

✤ In this biennium, \$9.5 million in grants has been provided for waste reduction and recycling efforts. About \$7.3 million in grants has been provided for moderate risk waste activities.

♦ Criteria developed by the Hazardous Waste and Toxics Reduction Program, with input from the Industrial Section, is being used to ensure that an Environmental Management System substituted for a Pollution Prevention Plan still addresses P2 preferentially. The goal is to get pollution prevention into the business planning and quality management operations of industry.

✤ Over 20 of the required 27 Industrial Section industries have submitted five-year, updated plans. Two industries have opted for the Environmental Management Systems approach.

✤ Preliminary numbers indicate that in 1998, a statewide recycling rate of almost 34% was achieved.

Litter Control

★ Litter Task Force: During the 1997 Legislative session, a concern over the increased amount of litter on the state's highways led to additional funds for litter pickup. Concerns about litter and the use of litter funds led SW&FAP to convene a Litter Task Force to evaluate the best and most efficient methods for picking up litter in Washington. This effort led to legislation that put Ecology in a coordinating role for litter statewide. Ecology now works directly to fund and monitor efforts by DOT, DOC, DNR and the State Parks Department. Ecology is also required to perform a litter survey.

Ecology Youth Corps (EYC): With the additional funds provided by the 1997 Legislature, SW&FAP made some immediate changes in the EYC program. Working spring, summer and fall, median crews that focused on medians, interchanges and on/off ramps were added, as were additional traditional summer crews that work road shoulders and public access areas.

✤ Litter Grants for Local Governments: SW&FAP is currently developing a new grant program for local governments that focuses on the cleanup and disposal of illegal dumping areas.

Results

✤ In 1996, a total of 20,865 bags of litter and recyclables were collected from over 1,838 miles of roads. In 1998, over 80,000 bags of litter and recyclables were collected from over 4,000 miles of road. ✤ 1999 will see the completion of Ecology's litter survey: Nearly 200 sites around the state were carefully screened to determine littering rate and composition. The data from this survey will be used to develop a litter prevention campaign.

Organics Strategy

Organics continue to be a major portion of the waste stream. New methods of handling these materials are being used by the public and private sector. SW&FAP will be examining several portions of the organic waste stream and the new handling methods used for the management of those wastes, which include biosolids, composting, managing wastes from the agricultural industry, and land application of solid wastes. Biosolids: The land application of biosolids, if not done under proper conditions, can contaminate ground and surface water, as well as land, particularly if heavy metals are present. To ensure proper management, SW&FAP developed Chapter 173-308 WAC, Biosolids Management, which was adopted in February 1998. As part of this new program, Ecology will assume the role of permitting these applications in Washington, replacing the federal EPA. Permitting activities include review of applications, land application plans, review of technical data on biosolids quality and soils, and verification of agronomic rates.

★ Composting: Composting is essential in meeting the 50% waste reduction and recycling goal. Concerns exist regarding how compost facilities are designed and operated to eliminate leaching and runoff which can contaminate ground and surface water. Concerns also exist regarding air quality, especially odor. Ecology is committed to clarifying existing regulations and recommending best management practice guidance to compost facility operators, health departments, municipalities and entrepreneurs.

★ Land Application of Materials/Agricultural Wastes: Land application involves applying various types of solid wastes to the land as fertilizers or soil amendments. Such wastes may include gypsum wallboard mixed with yard waste, wastewater from chicken processing plants (chicken DAF), by-products from meat packing plants, cement kiln dust, or industrial wastewater treatment plant sludges. It is expected that public awareness, concern, and controversy will increase as the practice of land application increases. Increasing volumes of waste from hazardous waste deregulatory activities and cleanup activities involving sediments, air and water, also make this an important issue.

Agricultural wastes are currently being handled in a variety of ways: landfill disposal, agricultural land application, soil amendment, composting, and illegal piling. Local health departments have noticed an increase of improper handling of this material. In addition, there seems to be an emerging problem with the existing law used to determine when animal wastes are fertilizers and when they are solid wastes requiring regulations. Clarification of the statute may help to ease confusion in the regulated community.

Results

✤ SW&FAP has issued a working draft "Compost Facility Resource Handbook" to assist in facility siting, design and operation to meet all environmental protection standards. The handbook will be revised based on comments received, and completed early in 1998. We continue to provide technical assistance to local health jurisdictions and compost facilities.

Working closely with the Northwest Food Processors Association and the jurisdictional health departments, we provide specific technical assistance on permitting land application of these organic waste materials.

Major Issues

Changes in the Solid Waste Regulatory Structure

In the last 10 years, solid waste management has undergone many changes and improvements. In the past, the majority of waste was disposed of in landfills or by incineration. Landfills were not required to be lined and often contaminated the ground and surface water.

The Solid Waste Management Act establishes the environmental and regulatory requirements for solid waste. It views all components of the solid waste stream as waste. By law, the definition of solid waste includes recyclables, which means recyclable materials and their processing facilities are subject to the same environmental regulations and permitting requirements as other types of solid waste handling, even when there is little or no environmental risk associated with the material.

Solid Waste Permitting System Review

The 1997 Legislature directed Ecology to review the solid waste permit system to determine how the use and reuse of materials can be improved. Areas to be reviewed include alternative statutory definitions, permitting requirements, risk assessment, and the overall solid waste and recyclables regulatory system.

Revision of chapter 173-304 WAC

Chapter 173-304 WAC, Minimum Functional Standards for Solid Waste Handling, was last revised in 1985. Since that time, there have been many changes in the handling of solid waste. These changes include land application of material for beneficial use, new recycling and reuse methods for woodwaste and demolition wastes, the movement of wastes into the solid waste system from the hazardous waste system through deregulation, and the increasing emphasis on SWFA

different facilities, such as compost facilities, rather than landfills. In addition, in 1991, Chapter 173-351 WAC, Criteria for Municipal Solid Waste Landfills set new standards for municipal solid waste landfills. SW&FAP is revising the solid waste rules to address legislative direction. Ecology will have a public draft late in 1999. The rule making process will be used to examine ways to increase recycling and beneficial use.

Recycling Panel

The Recycling Panel was formed by SW&FAP in response to the decreased recycling rates and the most effective way to reinvigorate recycling. The panel work will be completed by the end of 1999. Issues include:

✤ Increased credit for good efforts already in place.

✤ Better reporting mechanisms and data analysis.

✤ Residential, commercial and agricultural recycling ideas.

✤ An implementation agenda – with assigned responsibilities to carry out recommendations.

Industrial Activities

Odors, the discharge of dioxin and dioxin-like compounds into water, and the tremendous amount of chemicals used by the pulp and paper industry result in a high degree of public scrutiny, which increases as the state's population grows. The Industrial Section will be working with the pulp and paper industries to implement the new federal air toxic rules and wastewater effluent limits. A key concern of the environmental community is the use of chlorine bleach in the process, which is allowed under EPA regulation. The environmental community wants the state to require chlorine-free bleaching.

For refineries, current NPDES permit effluent limits are tied to production in accordance with federal guidelines. The environmental community does not feel pollution should be tied to production rates, but would rather have set pollution levels that would not increase with an increase in production.

Spent pot liners from the aluminum industry make up one of the largest hazardous waste streams in the state. Though many ideas have been proposed for their reuse and recycling, the environmental community wants them to remain under the dangerous waste permit system rather than being removed from that system if redesignated for beneficial use.

By December 1997, the Industrial Section will issue new Air Operating Permits for the pulp and paper industry and primary aluminum industry. This new permit program is based on federal and state laws established in 1990 and 1991. One of the key issues has been that new limits cannot be set in the new Air Operating Permits. All existing requirements need to be consolidated into one document and system to do the monitoring and ensure compliance. One of the problems is many of the old rules and regulations did not have precisely defined limits and now compliance methods must be defined. A template permit has been completed for the pulp and paper industry and one for the aluminum industry is about 90% complete. Once approved, the rest will be quicker and easier to issue.

Privatization of Waste Disposal

Even with today's level of recycling, disposal is still a significant part of the solid waste management system. Large mega-landfills in Eastern Washington and Oregon are now replacing local county landfills. In the next five years, fewer than 20 municipal solid waste landfills will remain in the state.

Local Government's Need for Financial Support of the Recycling Infrastructure

With over 100 programs in Washington state, curbside recycling is now available to over 70% of the population. Several of the traditional commodities, including aluminum cans, glass, and newspaper, are typically collected. A strong collection infrastructure, supported in large part by grants to local governments, has resulted in a private sector willing to invest in the use of recyclables. Limited resources at the local level result in criminal justice and public health taking priority over recycling. Because many counties rely on tipping fees to support recycling programs, landfills moving out of their sphere of control will result in fewer dollars available. Local jurisdictions are speaking more and more about the need for a stable funding source for solid waste disposal and recycling.

Public Education

There is a continuing need for statewide public education regarding correct disposal and recycling techniques continues. Issues include preventative anti-litter education and continuing to increase recycling in new commodity areas and from new generators.

Waste-To-Fertilizer

Presently, the law allows reclassification of industrial by-products from solid waste or hazardous waste if legitimately used in a product which has beneficial uses, such as fertilizer. Though current data does not support the perception that use of industrial wastes in fertilizer is unsafe, Governor Locke has asked the Departments of Ecology, Agriculture, and Health to gather information and make a determination regarding its potential as a public health problem.

The Hazardous Waste and Toxics Reduction Program at Ecology is the lead program for this effort. SW&FAP is involved in the process because of certain solid wastes that are used for fertilizer and soil amendments.

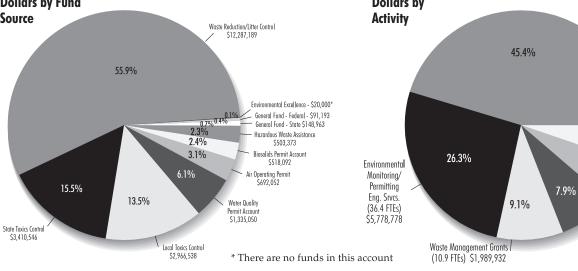
Solid Waste and Financial Assistance Program Budget

Operating Budget: \$21,972,996; Staffing: 104 FTEs

Fund	Amount (\$)	Sources	Uses
Local Toxics Control Account	2,966,538	Hazardous substance tax	Administration of grants to local governments for the investigation and cleanup of hazardous waste sites and to implement solid and hazardous waste
State Toxics Control Account	3,410,546	Hazardous substance tax; recovered remedial actions and penalties collected	plans and programs Provide technical assistance to local health depart- ments; pollution prevention initiatives; regulatory re- form; industrial dangerous waste and cleanup activi-
Waste Reduction/ Litter Control Ac- count	12,287,189	Litter tax	ties; public participation grants Supports youth hired to clean up litter (50%); 1-800 Recycle Hotline; technical assistance in waste reduc- tion, pollution prevention initiatives and recycling (30%); litter grants to local government (20%)
General Fund - Federal	91,193	Environmental Protection Agency	Watershed Biosolids Grants; develop Environmental Excellence program, public education and outreach
Water Quality Permit Fees	1,335,050	Permit fees collected for wastewater discharge per- mits	Industrial water quality permit activities; sediment source control
Hazardous Waste As- sistance	503,373	Hazardous Waste Fees	Grants to local governments to provide technical as- sistance and education to small businesses on proper hazardous waste management
General Fund - State	148,963	Multiple	Water quality permitting, inspection, enforcement
Air Operating Permit	692,052	Permit fees collected for air contaminant sources	Industrial air quality permitting, inspections, en- forcement
Biosolids Permit	518,092	Fee on sewage treatment facilities	Develop and implement the biosolids program
Environmental Excellence Account	\$20,000	Application fees from projects	Project review and technical assistance to achieve en- vironmental protection with flexible permitting
Capital Budget Fundin	ng: \$69,890,291		
Local Toxics Control Account	66,968,822 (\$24,489,822 Reappropriation and \$42,479,000 new appropriation	Hazardous substance tax	Grants to local governments for remedial action; co- ordinated prevention program and public participa- tion
Referendum 26	976,600 (reappropriation)	Sale of bonds; loan repay- ments and interest pay- ments	Grants to local governments for coordinated preven- tion program - waste reduction and recycling facili- ties
Referendum 39	976,600 (reappropriation)	Sale of bonds; loan repay- ments and interest payments	Grants to local governments for coordinated preven- tion program - waste reduction and recycling facilities

Solid Waste and Financial Assistance Program **Dollars by Fund**





Solid Waste and Financial Assistance Program **Dollars by** Litter Contro

Organics Strategy - (8.8 FTEs)

\$1,135,077

Pollution Prevention,

Waste Reduction/Recycling

(9.8 FTEs)

\$1,363,357

(26.5 FTEs) \$9,980,117

5.2%

State/Local Planning, Policy & Reporting

(11.1 FTEs) \$1,725,735

6.2%

Program Mission

To protect Washington's environment and public health and safety through a comprehensive spill prevention, preparedness, and response program. The Spills Program focuses on prevention of oil spills to Washington waters and land and on effective response to oil and hazardous substance spills whenever they occur.

Major Goals

Prevent oil spills and mitigate damage from oil and hazardous substance spills that do occur

✤ Provide leadership on all oil spill issues, with particular focus on prevention

Develop strong partnerships with public and private stakeholders

Promote environmental stewardship and voluntary compliance through education and outreach

Seek fairness in enforcing state laws and rules

Maintain credibility and program effectiveness through established expertise in marine safety, oil spill prevention, spill preparedness, and spill response

Environmental Threats

The Spills Program is concerned with releases of oil and hazardous waste material to air, land, and water. In particular, releases into the waters of our state result in threats to some of the richest and most diverse ecosystems in the world. These ecosystems support hundreds of plant and animal species. Impacts from a large oil or hazardous substance spill can range from immediate destruction to a multitude of more subtle effects to habitats, fish, and wildlife. Aggressive prevention measures are the keys to protecting and preserving the state's extraordinary marine environment for ourselves and future generations.

Program Origins and Laws

A number of major oil handling facility spills, the 1988 tank barge *Nestucca* spill off Grays Harbor County, and the 1989 Alaskan *Exxon Valdez* tanker spill, precipitated several spill prevention and response bills in the state Legislature between 1989 and 1991, the most significant of which created a new agency, the Office of Marine Safety. The Spill Prevention, Preparedness, and Response Program was created on July 1, 1997, by the merger of the Office of Marine Safety (OMS) with Ecology's Spill Management Program. Other major laws governing this program are Chapter 88.40 RCW, Financial Responsibility, and state hazardous waste cleanup laws.

Chapter 88.46 RCW, Vessel Oil Spill Prevention and Response

This law seeks prevention of vessel oil spills through three efforts. First, it requires oil spill prevention plans for all oil tankers and tank barges. These plans must demonstrate compliance with Washington's Best Achievable Protection Standards and Chapter 317-21 WAC, Tank Vessel Oil Spill Prevention Plans.

Second, this law requires annual inspections for tank vessels to ensure compliance with state prevention plans and federal requirements. Cargo and passenger vessels greater than 300 gross tons are screened to identify vessels that may pose a substantial risk. Vessels may be boarded to mitigate that risk.

Third, vessel refueling practices are monitored to ensure compliance with Washington standards.

Chapter 90.56 RCW, Oil and Hazardous Substance Spill Prevention and Response

Under this law, all of Washington's 43 regulated oil handling facilities and transmission pipelines must submit oil spill contingency plans. Once reviewed and approved, these contingency plans must be tested through a rigorous drill and exercise program to prepare vessel crews, facility personnel, and local, tribal, state, and federal agency personnel. Ecology is the lead state agency for the spill drill program.

Ecology is also responsible for prevention of spills at the state's 43 largest oil handling facilities and transmission pipelines. The program is implemented through four complementary rules: 1) Chapter 173-180A WAC, Facility Operations and Design Standards, establishes minimum performance standards for oil transfer, storage and monitoring activities; 2) Facilities are required to document these operational procedures under Chapter173-180B WAC, Facility Operations Manual Standards; 3) Chapter 173-180C WAC, Facility Personnel Oil Handling Training and Certification, requires established and documented operational procedures to be reflected in each facility's training program; 4) After the prevention rules are implemented, Chapter173-180D WAC, Facility Oil Spill Prevention Standards, allows Ecology to look at each

facility as a whole and to address concerns not covered by previous rules.

Under this law, Ecology works closely with other state and federal agencies, local governments, tribes, industry, and members of the spill response community to develop Geographic Response Plans that prioritize booming and collection strategies and identify natural and logistical resources within a certain region.

Chapter 90.48 RCW, Water Pollution Control

This law requires Ecology to adopt procedures for Natural Resource Damage Assessments of environmental losses from an oil spill. Ecology chairs the Natural Resource Damage Assessment Committee which brings together state natural resource agencies to determine environmental losses and identify restoration projects.

Other Laws

The authority to ensure comprehensive response and cleanup to oil and hazardous material spills that pose an immediate threat to public health and safety and the environment is found under numerous state laws, including Chapter 69.40 RCW, Uniform Controlled Substances Act; Chapter 70.94 RCW, Clean Air Act; Chapter 70.105 RCW, Hazardous Waste Management Act; Chapter 70.105D RCW, Model Toxics Control Act; Chapter 70.136 RCW, Hazardous Materials Incidents; Chapter 88.46 RCW, Vessel Oil Spill Prevention and Response; Chapter 90.48 RCW, Water Pollution Control Act; Chapter 90.56 RCW, Oil and Hazardous Substance Spill Prevention and Response; and Chapter 90.76 RCW, Underground Storage Tank Act.

Constituents/Stakeholders

To undertake effective education and outreach, the Spills Program works with a number of stakeholders including local, state and federal agencies, Indian tribes, business interests, the oil spill response community, resource user groups, environmental groups, shipping and transportation companies, the petroleum industry, and the general public. Depending on the circumstances, Ecology's constituents include:

Local Government

City and county environmental health departments, waste management departments, public works departments, HazMat teams and fire departments, law enforcement agencies, ports, economic development councils, elected officials, and emergency management departments. Due to the high number of participants, contact with this constituent group is most important and the most difficult to maintain.

State Government

Governor's office; Washington Departments of Fish and Wildlife; Natural Resources; Health; Agriculture; Community, Trade, and Economic Development; Transportation; the Military Emergency Management Division; Washington State Patrol; Utilities and Transportation Commission; Puget Sound Water Quality Action Team; and Parks and Recreation Commission

Federal Agencies

Environmental Protection Agency, Coast Guard, National Oceanic Atmospheric Administration, Fish and Wildlife Service, Department of the Interior, Park Service, National Marine Fishery Service, Federal Emergency Management Agency, Department of Transportation, Department of Defense, Office of Pipeline Safety, and Corps of Engineers

Tribes

All Washington tribes and the NW Indian Fisheries Commission are important stakeholders since oil or hazardous material spills can affect tribal lands or resources.

Businesses/Industry

Western States Petroleum Association, American Petroleum Institute, Independent Liquid Terminals Association, oil-handling facilities, marine industry associations, vessels, marinas, and marine resource user groups

Environmental Community

Washington Environmental Council, People for Puget Sound, Friends of the Earth, Sierra Club, Audubon Society, Nature Conservancy, Surfrider Foundation, Ocean Advocates, Greenpeace, Center for Marine Conservation, National Coastal Alliance, and Washington Toxics Coalition

Public

Homeowners, business owners and operators, boat owners, waterfront property owners, and interested citizens

Other States

Activities are coordinated through the States/B.C. Oil Spill Task Force for West Coast States, and the National Governors Association Oil Spill Work Group

Foreign Countries

Canada and the International Maritime Organization

Media

Newspaper, television, radio, newsletters, and the Internet

Academia

Universities, school districts, and community colleges

Major Activities

Prevention

Prevention Plans: Vessel oil spill prevention plans submitted by tanker and tank barge owners and operators are reviewed for compliance with Best Achievable Protection Standards and Chapter 317-21 WAC, Tank Vessel Oil Spill Prevention Plans. Tankers and tank barges are then inspected to ensure compliance with approved prevention plans. The state's four largest oil handling facilities and oil transmission pipelines are also required to submit oil spill prevention plans. We work closely with state regulated oil handling facilities to ensure compliance with facility spill prevention rules. This includes conducting courtesy inspections. We also work with the Coast Guard on a national pilot project that will mesh federal and state spill prevention plan activities and allow facilities greater flexibility in meeting prevention plan requirements by reducing federal and state inspections.

★ Accident and Incident Investigations: Accident and incident investigations assist in evaluating the risk a vessel, vessel activity, oil facility or oil facility activity may pose to Washington resources. Staff conduct investigations and complete investigation reports, prevention bulletins, safety advisory bulletins, and other appropriate reports. Publications distributed to the regulated community and other interested parties detail prevention lessons learned which aid in preventing similar incidents.

Vessel and Facility Inspections: Marine Safety Field Office staff inspect cargo, passenger, and fishing vessels over 300 gross tons to determine if they pose a substantial risk of harm to public health and safety and the environment. In 1993, a screening process was developed to predict risk and prioritize vessels for inspection. This screening process involves researching vessel information, such as physical characteristics, ownership, casualty and spill history, and previous inspection information. The inspection process is also used to inform vessel crews about safe maritime practices and to verify compliance with state laws. Vessels are also inspected to evaluate compliance with Washington's rules for safe bunkering (refueling), reducing the likelihood of oil spills occurring during bunkering operations. We continue extensive efforts to inform the industry about safe bunkering practices, including the production of an educational video and information packets in seven languages. Oil handling facilities are inspected by Regional Spill Unit personnel and facility prevention planners to inform and educate facility personnel and to verify compliance with state law.

Results

♦ Recent trends involving oil spills greater than 10,000 gallons indicate a substantial decrease in the frequency of tank vessel oil spills, suggesting that prevention programs have made a difference. Requiring compliance has encouraged the creation of new safety technology, such as emergency towing systems. Such policies are still controversial. Though Washington has received national and international acclaim for developing the world's most comprehensive tank vessel safety program, INTERTANKO has sued the state for allegedly overstepping its legal authority.

✤ Technical publications with recommendations for improved vessel and facility operations have received positive industry response. The Nautical Institute, a prestigious international maritime association, has reprinted several such publications in their monthly journal SEAWAYS. Lloyd's List, an international daily newspaper, called attention to Washington's aggressive maritime safety and spill prevention program through an article summarizing the findings and recommendations of a prevention bulletin. Data on the nature and number of incidents are collected and reviewed for the purpose of developing better spill prevention strategies and for focusing spill prevention efforts.

✤ Follow-up substantial risk inspections of vessels indicate that approximately 80 percent have improved their operational and management practices. Washington has experienced only one major bunker spill since the adoption of the bunkering rules and the establishment of the inspection program in the fall of 1994.

Preparedness

✤ Northwest Area (Washington, Oregon, and Idaho) Contingency Plan: A steering committee made up of member agencies coordinates research and recommends information to be included in the Northwest Area Contingency Plan. Workgroups, which include representatives from all stakeholder groups, address specific subjects and unique problems.

♦ Contingency Plan Review and Oil Spill Drills: All major oil handling facilities, tank vessels, and cargo and passenger vessels 300 gross tons and larger, must have an approved oil spill contingency plan to operate in Washington waters. These comprehensive plans are submitted to the Spills Program for review and approval. Plans must be updated and resubmitted every five years following approval. Contingency plan holders are required to perform oil spill drills to ensure readiness in the event of an oil spill.

✤ Natural Resource Damage Assessment: The Spills Program may take a wide range of actions against those responsible for an oil spill. We may fine the responsible party for allowing or causing oil to enter state waters, seek reimbursement for state costs surrounding the spill response, and assess damages for any natural resources that were affected by the spill. Ecology chairs the state Resource Damage Assessment Committee, develops damage assessment claims for oil spills in state waters, and manages the State Coastal Protection Fund/Restoration process.

✤ Interagency Coordination: The purpose of the States/B.C. Oil Spill Task Force is to develop a coordinated and consistent approach to oil spill prevention, preparedness, and response activities among the states and provinces along the West Coast. Activities include developing mechanisms for mutual aid during major spill responses, as well as developing uniformly consistent rules for prevention planning, contingency planning, and response command structure. The Task Force also serves as a clearinghouse for exchanging spill prevention, preparedness, and response information.

★ Education and Outreach Activities: Ecology's Spills Program is engaged in a wide range of education and outreach activities. During spill incidents and drills, these activities include taking public and media calls, writing press releases, and coordinating and conducting media interviews. The program also undertakes long- and short-term communications strategies to identify audiences and reinforce messages. Other education and outreach activities involve working directly with stakeholders and other constituents on advisory committees, conducting training sessions, and holding public workshops, meetings, and hearings. Our quarterly newsletter, *Spill Scene*, is distributed worldwide, along with annual activity reports and other technical outreach documents.

Results

✤ Workgroups chaired by Ecology have developed guidelines for alternative response technologies (in situ burn, dispersants, decanting) and contacts with the public, press, and electronic media through the Joint Information Center Manual. Geographic Response Plans (GRPs) identify sensitive public resources and prioritize protection strategies for a particular region. GRPs are the operative planning document during the initial response phase of an oil spill. Eighteen GRPs have been developed for Washington marine waters and the Columbia/Snake river system. A training and outreach program on GRPs is being initiated to provide technical assistance and public outreach to local and tribal governments and other stakeholders.

✤ We design, conduct, and evaluate more than 60 oil facility spill drills each year. In addition, 68 vessel plans have been submitted for approval since July 1, 1992. Ten Shipboard Notification Drills, five No Notice Two-hour Response Drills, and fourteen Preparedness for Response Exercise Program drills have been conducted in Washington since 1993. ★ Since the adoption of state resource damage assessment regulations in 1992, nearly \$6 million in oil spill damages have been collected. While \$5.2 million of this amount reflects a settlement for the major 1991 *Tenyo Maru* oil spill, the state compensation schedule has successfully resulted in damage payments for over 100 small/moderate spills. These funds are used for several major habitat restoration projects, including a recent effort to help remove the invasive grass, *Spartina*, from Puget Sound mudflats.

✤ Many Spills Program clients are mobile (particularly the tank and cargo vessels) and visit other West Coast states. Therefore, it is imperative that we coordinate with, learn from, and be as consistent as possible with, other states. Assertion of state's rights to protect sensitive habitats and commercial values from the environmentally damaging effects of oil spills is also facilitated by Task Force participation.

✤ During a spill incident, the program strives to keep the media and the public informed regarding what is being done by the state, by the responsible party and by federal authorities to contain and clean up the spill and assess and recover damages to natural resources. More in-depth communication strategies have been developed for long-term issues, such as in situ burning, merger of the former OMS into Ecology, and the INTERTANKO lawsuit.

Response

The Spills Program responds to oil and hazardous materials spills to minimize risk to public health and safety and damage to the environment. Response goals are to work with industry, federal, state, local, and tribal agencies to prevent spills from occurring and to respond quickly and effectively to spills that do occur. Program staff work closely with the oil and transportation industries in developing proper handling procedures to prevent spills, and developing and maintaining spill contingency plans to ensure preparedness for spills. We also work closely with the U.S. Coast Guard regarding marine oil spills, and with city and county government agencies and the EPA regarding hazardous materials spills.

Results

Regional spill teams respond to over 800 spills each year. Overall, the size and number of oil and hazardous materials spills in the state has declined slightly due, in part, to state regulatory programs and industry efforts to prevent and minimize spills.

Ecology is responding to a growing number of clandestine drug lab cleanup operations at the request of state and local law enforcement agencies. Ecology's role is to remove suspected hazardous substances using state cleanup contractors or when appropriate, Ecology cleanup and disposal equipment. We responded to 153 drug lab cleanup requests in 1996. The workload has ballooned to 619 cleanups through October 1999.

Major Issues

Puget Sound Risk Assessment

Ecology has seized the opportunity presented by the Office of Marine Safety/Spills Management merger to assume a leading role in the development and implementation of a comprehensive Risk Management Plan for Puget Sound. The plan will be based on credible risk assessment that includes both verifiable incident data and simulated data for low probability, high impact oil spills. The risk assessment is expected to begin in 1998 and will take more than a year to complete.

The INTERTANKO Lawsuit

On July 19, 1995, the International Association of Independent Tanker Owners (INTERTANKO) filed suit in federal district court in Seattle claiming that Washington's statute and rules requiring best achievable protection from the harm of tanker oil spills were preempted by federal law and regulations. In November 1996, U.S. District Court Judge Coughenor issued an order upholding Washington's law and rules. In December 1996, INTERTANKO appealed to the Ninth Circuit Court of Appeals. Briefs by all parties are filed but no date has been set for oral argument.

Spill Drills and Contingency Plans – Next Cycle

1997 marks the end of the first three-year drill cycle for oil handling facilities regulated by Ecology. During the past three years, agency drill and exercise evaluations have enabled staff to assess the effectiveness of facility oil spill contingency plans and the ability of plan holders to implement these plans. We will seek input from the regulated community and other stakeholders as part of an effort to refine and provide a new focus to the drill and exercise program for the next three-year drill cycle.

Contingency Plan Coverage for Canada-Bound Vessels

Vessels bound for British Columbia ports through Washington waters are currently meeting Washington State contingency plan regulations by enrolling with the Washington State Maritime Cooperative (WSMC). WSMC has provided free coverage to these vessels for several years. Canadian law requires vessels leaving Washington ports on their way out to sea through Canadian waters to have oil spill coverage. Ecology is working with the shipping industry to find a way to allow reciprocity of oil spill coverage for those vessels transiting Washington and British Columbia waters so they won't be charged for oil spill coverage both ways.

Alternate Response Technologies (In Situ Burning and Dispersants)

The use of dispersants continues to be an area of interest for response contractors. An Environmental Impact Statement (EIS) prepared for dispersant use described areas for pre-approval, case-by-case approval, and no-use scenarios. This year, the issue will be revisited by all parties to see if better technology may provide new opportunities for use.

After the public expressed significant concerns, Ecology and other Northwest Area Committee members canceled development of an EIS and any further plans for an open water in situ test burn. A number of implementation issues, such as boom design and personnel training, still need to be addressed before in situ burning can be considered an effective oil spill tool in Washington. Plans are underway to work on these issues through projects such as major non-discharge deployment drill and developing test protocols for accidental spills-of-opportunity. New federal air quality standards will soon require a reexamination of the existing in situ burning policy.

Stabilization and Sustainability of the Oil Spill Administration Account

The stability of this fund source has recently become problematic due to large and unpredictable refunds to taxpayers. This is a significant new source of revenue volatility that may have the effect of permanently reducing the revenues deposited into the account. In the last calendar year, a large refund required rapid legislative action to prevent sharp reductions in the capacity of the program to protect the environment. Ecology is working with the Department of Revenue and stakeholders to understand this phenomenon and explore potential solutions.

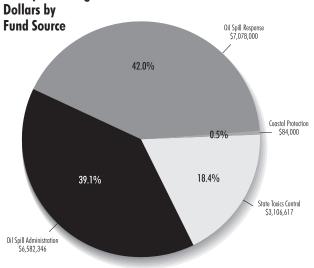
In addition, Ecology is increasingly concerned that the revenue flowing into this account may not be able to keep pace with the standard inflationary costs affecting the program. Revenue collections have been relatively constant over time. As inflation erodes the value of the appropriations supported by these revenues, the state will be forced to decide between reductions in the capacity of the program and identifying supplemental funding sources to offset these costs. Ecology will be monitoring these issues and communicating with stakeholders and the legislature as appropriate.

Spill Prevention, Preparedness, & Response Program Budget

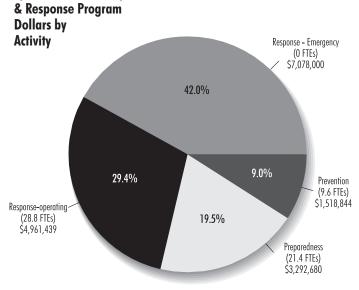
Budget: \$16,850,963; Staffing: 60 FTEs

Fund	Amount (\$)	Sources	Uses
State Toxics Control	3,106,617	Hazardous substance tax; remedial ac-	Spill response
		tions and penalties collected	
Oil Spill Administration	6,582,346	Oil Spill Administration tax	Oil spill prevention
Oil Spill Response	7,078,000	Oil Spill Response tax	Major oil spills costing more than \$50,000
Coastal Protection	84,000	Spill damages and penalties collected;	Restoration of natural resources related to oil
		charge on Marine Use Tax Refund claim	and hazardous materials spills

Spill Prevention, Preparedness, & Response Program



Spill Prevention, Preparedness,



Agency Administration

Contacts: Legislative and Intergovernmental Relations: Bill Alkire (360) 407-7003 Information and Education: Sheryl Hutchison (360) 407-7004 Financial Services: Nancy Stevenson (360) 407-7005 Administrative Services: Carol Fleskes (360) 407-7012 Employee Services: Joy St. Germain (360) 407-6218

Program Mission

To support the agency in accomplishing its mission to protect, preserve and enhance Washington's environment, and promote the wise management of our air, land and water for the benefit of current and future generations.

Program Origin and Laws

Chapter 43.21A RCW, Department of Ecology

In 1970, this law created the Department of Ecology to consolidate water, air, solid waste and other environmental management protection and development programs authorized by the legislature. Sections 090 through 150 state the powers, duties and functions that allow the director of Ecology to create administrative divisions within the agency.

Constituents and Stakeholders

Internal management and staff

- ✤ The legislature and legislative staff
- Office of Financial Management

✤ Other natural resource agencies (Departments of Natural Resources, Health, Agriculture, Transportation)

- ✤ Joint Natural Resources Cabinet
- General Administration

 $\boldsymbol{\bigstar}$ State Treasurers Office, Auditors Office and Revenue

 Federal agencies (for instance, US Environmental Protection Agency)

 Local governments and the federal government (grant management)

Tribal governments (communication and coordination)

Major Activities

Office of Communication and Education

✤ Advises management on education and information on involvement aspects of environmental issues

Prepares public information and education strategies for major agency issues

✤ Assists programs in designing education and outreach plans, tools, materials and activities

Responds to media and public inquiries

Intergovernmental Relations

Leadership, policy support and coordination for federal and state legislative issues, as well as issues effecting local government and tribes

Rule development assistance and coordination

Economic analysis, including Small Business Economic Impact Statements, cost/benefit studies, and agency fee and cost management guidelines

Employee Services

✤ Responsible for ensuring that appointments, recruitment, classification and pay, corrective/disciplinary actions, reduction-in-force actions, and grievances are in compliance with civil service laws, merit system rules, and agency policy

Provides the full scope of human resources functions, including safety and training and development, to support organizational requirements and needs

Assists in creating a supportive work environment that reflects the diversity of the community Ecology serves

Regional and Field Offices

Executive management representation within Ecology's four regional offices (Lacey, Yakima, Spokane, Bellevue) and two field offices (Bellingham, Vancouver)

Outreach through information and assistance to local communities

Cross program coordination and management of large, multiple-program environmental review and permitting projects

Core administrative support to regional office staff in the areas of reception, mail, records management, complaint tracking and central library

Executive, Financial and Administrative Services

Direction and leadership

Centralized financial services (fiscal, accounting and budget, purchasing and inventory)

Centralized forms, records and mail services

Security for agency staff, facilities and property

Strategic planning and environmental indicator development

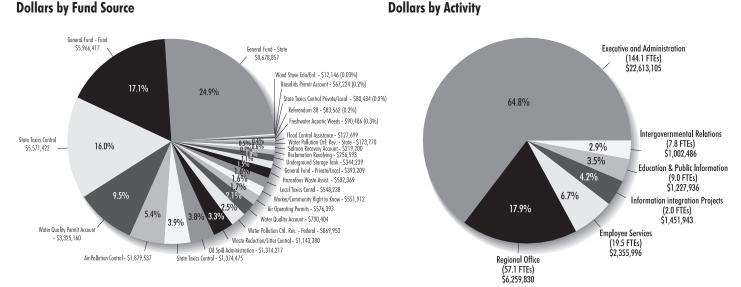
✤ Books, periodicals, and research: manages extensive library resources at headquarters and in regions

Information management, including the Information Integration Project

Facility and building management

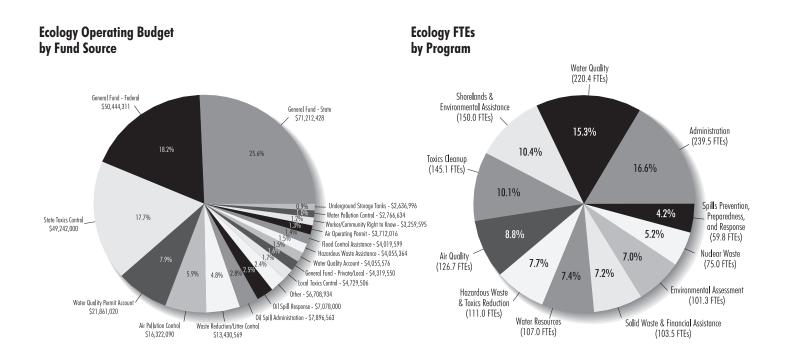
Agency Administration

Agency administration is supported by each fund source available to the Department of Ecology. Each fund contributes to the Administrative Program in the same percentage that each fund contributes to the total of the environmental program's salaries and benefits.

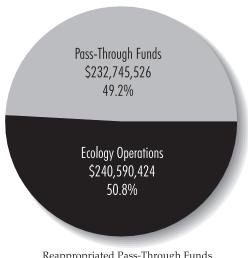


Agency Administration Dollars by Fund Source

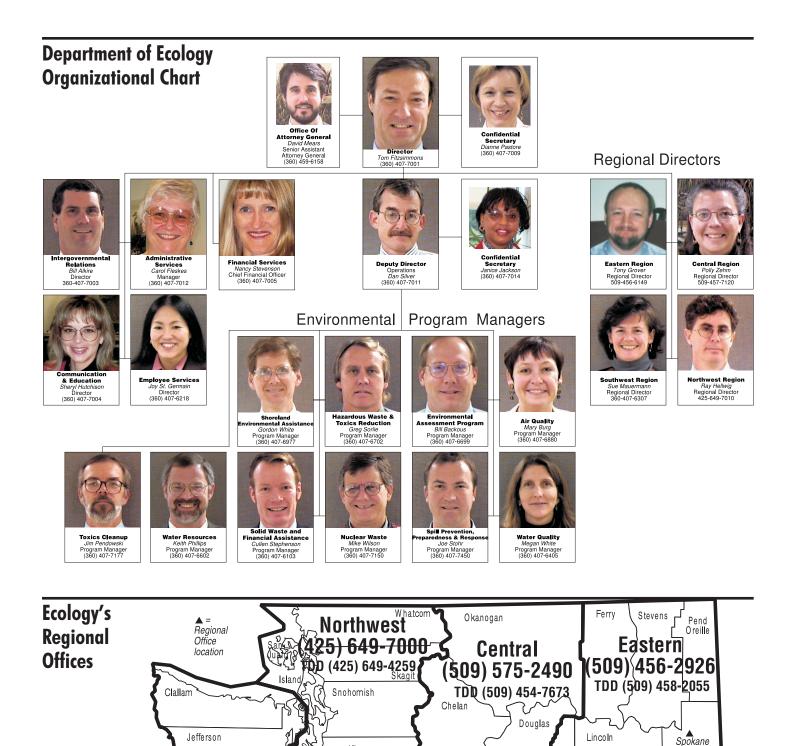
Agency Information



Ecology Pass-Through Funding to Local Governments and Communities



Reappropriated Pass-Through Funds not shown on chart: \$164,000,000



King

Skamania

Kittitas

Yakima

Klickita.t

Yakima

Grant

Benton

Adams

W a.IIa. W a.IIa.

Franklin

Bellevue

Pierce

L. M

Mason

Pacific

Wahkiakum

R

Lacey

Thurston

Lewis Southwest

Cowlitz

Clark

(360) 407-6300

TDD (360) 407-6306

Grays Harbor

Asotin

Spokane

Whitman

Garfield

Columbia