Ecology Publication no. 90-09-050

WASHINGTON STATE
DEPARTMENT OF
ECOLOGY

Model Toxics Control Act
1989 Annual Report

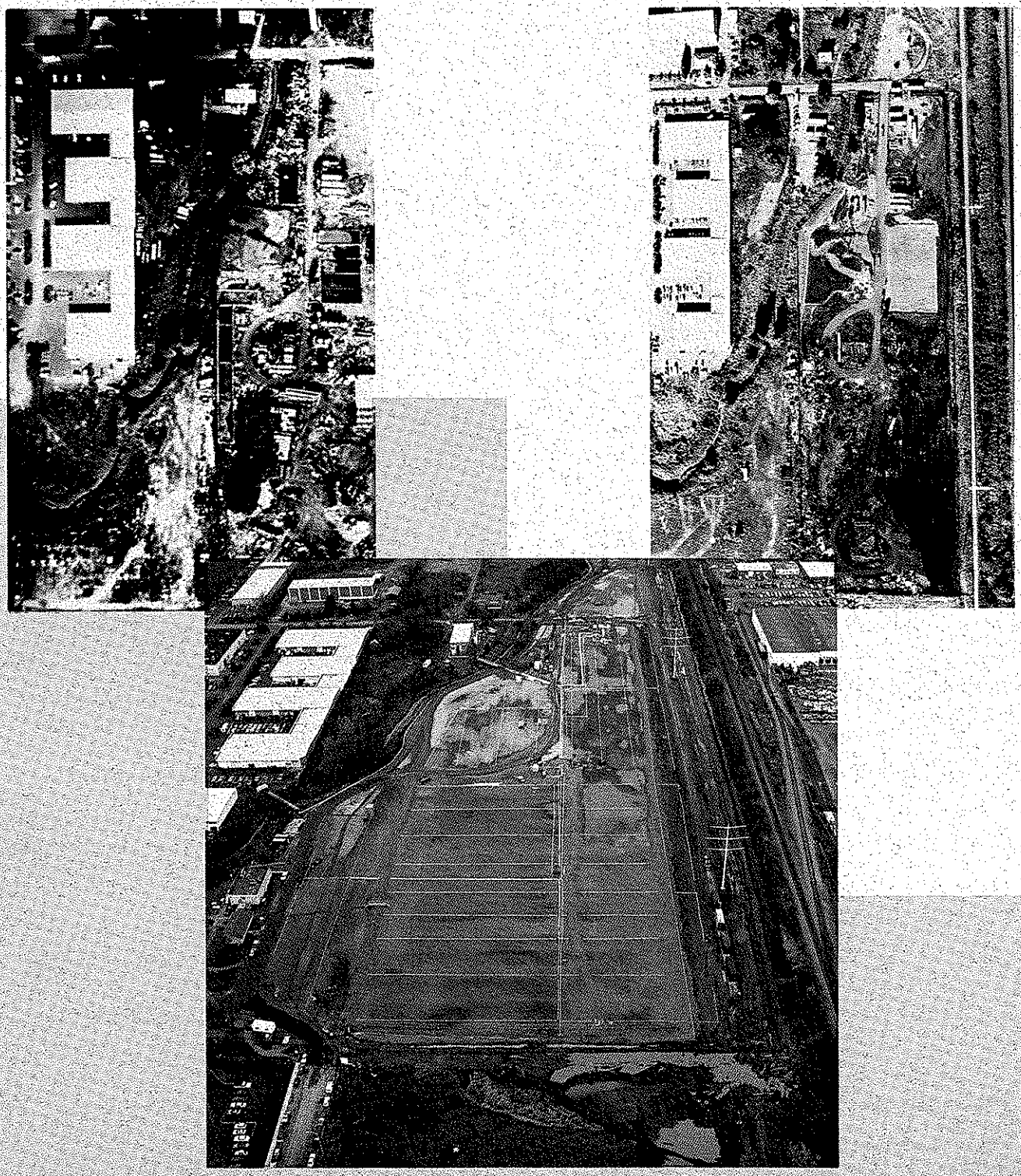


Table of Contents

Cover:

Upper left:
1983: At the 13-acre Western Processing site in Kent, contaminated soil and ground water resulted from 30 years of industrial recycling practices that discharged chemicals to the environment. It was listed as a federal Superfund priority in 1984 and was considered among the 50 most contaminated sites in the nations.

Upper right:
Large treatment ponds, holding tanks, barrels, structures and equipment were among the first priorities for removal during the initial stages of the Western Processing cleanup. About 60,000 tons of contaminated soil and materials were hauled offsite for treatment and disposal.

Bottom:
1989: With surface cleanup completed, a state-of-the-art ground water pumping and soil flushing treatment system will continue operating for another five to seven years. Ahead of the national average for meeting Superfund cleanup milestones, the Western Processing effort has become a benchmark for other sites.

Published 1990 by the Washington State Department of Ecology
Hazardous Waste Cleanup Program
Edited by Joan Pelley

Introduction
A Message from the Director

This report reviews the year's achievements under the Model Toxics Control Act. It seems fitting to expand the perspective to include a look at the toxic cleanup program's evolution through the 1980s. Too often we forget how far we've come in ten years.

Prior to passage of the federal Superfund Act in December 1980, toxic cleanup was conducted on an ad hoc basis. There existed little governmental oversight or documentation of toxic spills or releases. State police and local fire departments were most often called on to respond to a toxic spill or release. Funds were seldom available for long-term cleanups such as those required for abandoned landfills or bankrupt chemical processors.

During the following years, as Superfund was implemented, federal funds became available to help states deal with their most severely contaminated sites. But it was apparent to everyone that the federal program would only solve a fraction of the states' toxic waste problems.

In 1983, the state legislature created the Hazardous Waste Fee Act and dedicated $4.3 million in state general fund to clean up hazardous wastes.

Between 1983 and 1985, ten cleanup sites in Washington state were nominated to the federal Superfund program. Today, there are 45 state sites on the Superfund list, with several more being nominated each year.

In 1984, the first state and federal cleanup activity began at the Western Processing site in Kent and the first community-wide meeting on Commencement Bay was held, attracting many interested citizens.

In the 1985 - 1987 biennium, $14.2 million in state general fund revenues were available to clean up hazardous wastes and respond to spills. During this time, cleanup at Superfund sites throughout the nation slowed down as speculation about continued funding and reauthorization of federal Superfund mounted.

In October 1987, the state legislature passed the Hazardous Waste Cleanup Act. Funds generated from a tax on toxic substances helped provide some long-term planning and growth capability to a cleanup program whose monetary foundation had been tentative, at best. Ecology's cleanup program made considerable progress during its year of operation under the Hazardous Waste Cleanup Act.

Then, in 1988, Washington voters overturned the legislature's cleanup law and enacted the citizens' Model Toxics Control Act. The new law went into effect in March 1989 and is the subject of this report.

Of approximately 550 potential sites identified in the state, preliminary studies have confirmed toxic contamination in roughly half. With our current funding level, we are continuing our investigations or cleaning up about 140 of those sites. While much of the past five years has been devoted to studying and investigating major sites, we are now in the design phase at many sites. This means we're working with the site owners to develop the best methods for cleanup.

If toxics tax revenues continue at or above the current level, we look forward to major achievements from the cleanup program in the coming decade. For the first time, we have a law and regulations, a relatively stable funding source, and most important, the strong mandate of Washington's citizens.

To prevent new toxic sites being created, waste reduction and prevention remain our top priorities. We are gratified that Washington residents have achieved the nation's highest recycling rate. Our goal of recycling 50 percent by the year 1995 is definitely attainable.

Together, we are deciding what our environmental future should be. The Department of Ecology welcomes your comments and suggestions.

Sincerely,

Chris Gregoire

Christine O. Gregoire,
Director

Executive Summary

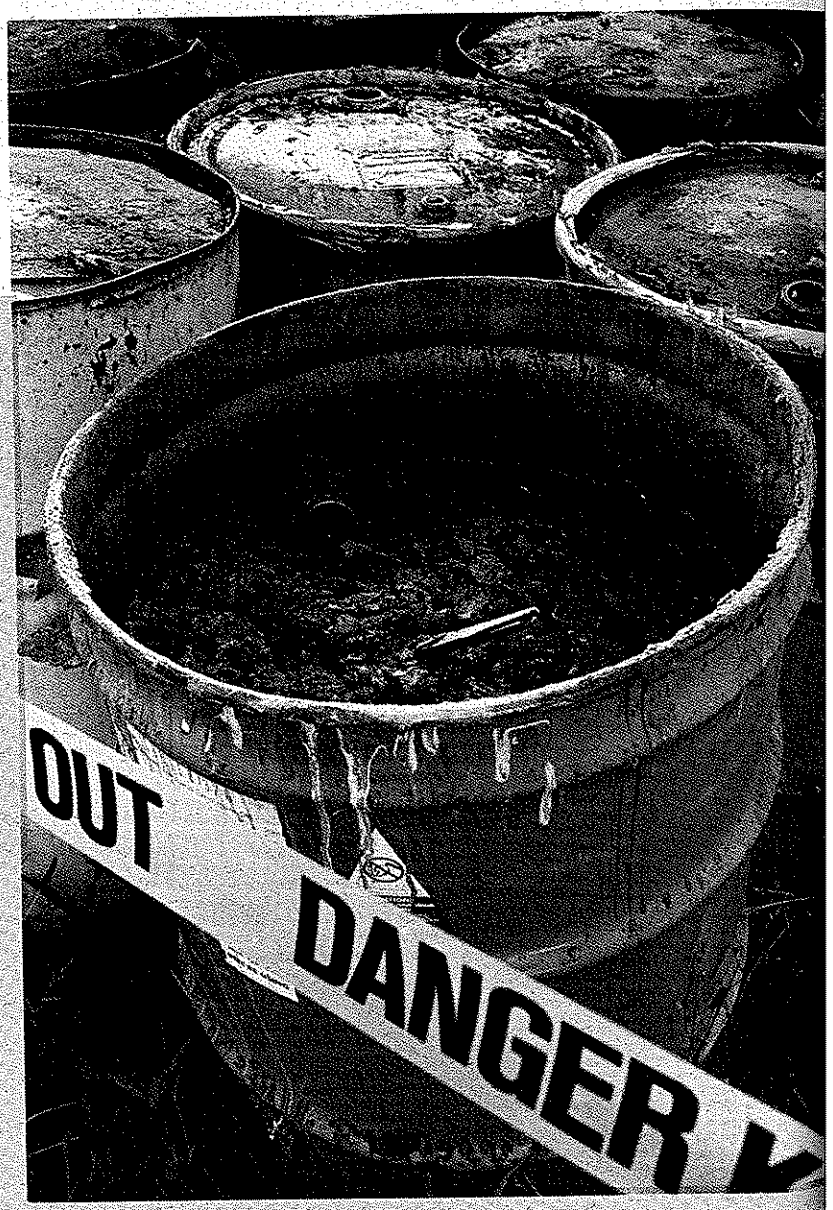
The Model Toxics Control Act established two accounts for cleaning up and managing hazardous and solid wastes in Washington state. These accounts are the State Toxics Control Account and the Local Toxics Control Account.

A total of $18.6 million was spent to implement the cleanup law in FY 1989 by the Departments of Ecology, Agriculture, Community Development, Revenue and Social and Health Services.

From the state account, $ 6.2 million was spent for hazardous waste investigations and cleanup, $ 2.3 million for solid and hazardous waste management, $297,000 for waste reduction and recycling, and $950,500 for related programs in other state agencies.

Approximately $ 8.9 million from the local account was spent for grants to local governments for cleaning up and managing hazardous and solid wastes.

In a separate account, $5.6 million was spent to develop and administer the water quality permit fee program and $3.4 million was billed in fees to dischargers and treatment plants.



Department of Ecology
Rule Making

Citizens Participate in the Rule-Making Process

In developing the nine regulations to implement the Model Toxics Control Act, Ecology has relied heavily on involvement by citizens. In addition to the statutory Science Advisory Board, advisory groups have been working with Ecology staff on rule and policy development. Some people are members of more than one group to ensure communication and consistency.

Ecology is grateful for the contributions made by the following people in developing regulations for I-97:

Cleanup Process

The cleanup process work group is addressing many of the procedures for characterizing and cleaning up a contaminated site. The group has also reviewed such issues as citizen involvement, liability, mixed funding and cost recovery.

Members of the group include: John Daniel Ballbach, Perkins Coie; Jim Brewer, King County Prosecutor's Office; David Bricklin, Washington Environmental Council (WEC); Lynda Brothers, Association of Washington Business (AWB), Heller Ehrman; Rod Brown, Citizens Toxic Cleanup Coalition, Riddell Williams; Kathleen Collins, Association of Washington Cities; Don Cordell, Sweet-Edwards/EMCON; Errett Deck, Western Ag/Chem Association; Loren Dunn, Riddell Williams; Jay Geck, Washington State Attorney General's Office; Kris Hendrickson, Boeing; Ted Hunter, Pacific Energy Institute (PEI); Randy Scott, Washington State Association of Counties (WSAC); and Ken Weiner, Washington Public Ports Association (WPPA).

Cleanup Standards

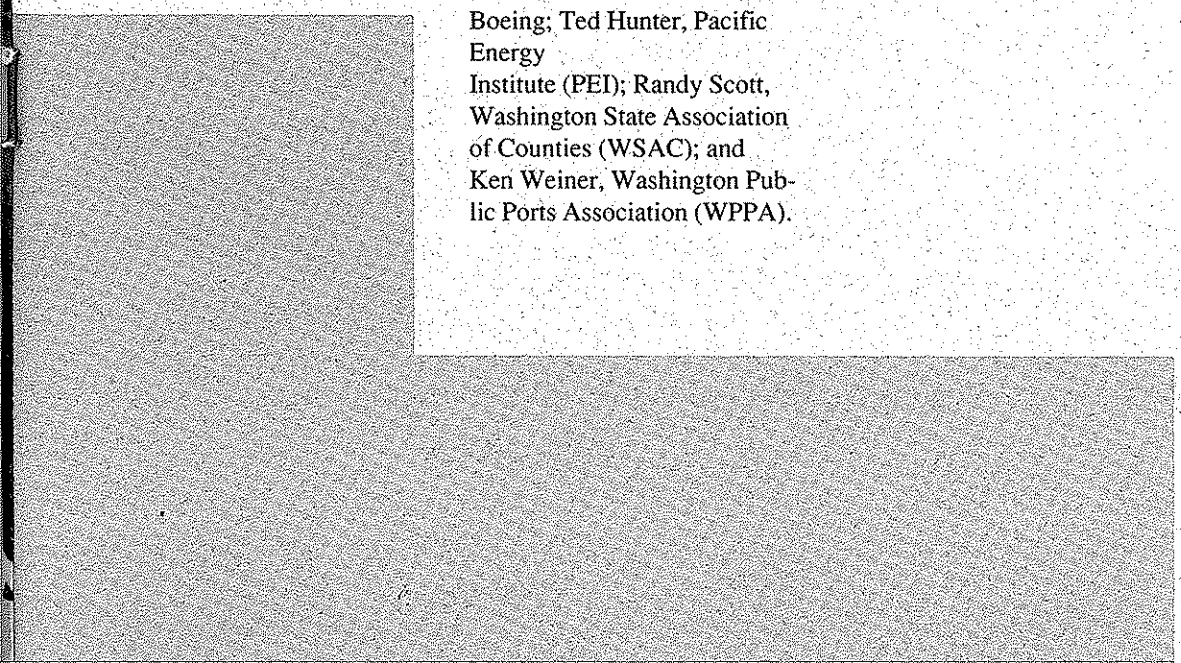
The cleanup standards work group is intended to provide the agency with advice and opinions to address the critical question: *How clean is clean?*

Members are: Stuart Brown, CH2M Hill; Patricia Cirone, EPA; Phil Clark, Department of Natural Resources; Joe Darcy, League of Women Voters (LWV); Gary Goodman, Western States Petroleum Association; Eric Johnson, WPPA; Llewellyn Matthews, Northwest Pulp and Paper Association; Joel Mulder, Agency for Toxic Substances and Disease Registry; Randy Ray, AEQUUS; Randy Scott, WSAC; Gary Smith, Independent Business Association; Baz Stevens, Sierra Club; Dan Syrdal, AWB, Heller Ehrman; Betty Tabbutt, WEC; Phil Williams, City of Spokane; and Vim Wright, Puget Sound Alliance.

Public Participation Grants

Public participation grants will be awarded to qualifying citizen groups in communities potentially affected by a contaminated site. Rules defining the grant application process are being developed by:

Doris Cellarius, Sierra Club; Dick Dorsett, Pierce County Intergovernmental Affairs; Jan Fields, Ecology; Rick Hall, Parametrix; Ted Hunter, cleanup process work group; Darlene Madenwald, Citizens for Clean Industry; Harris Martin, City of Seattle; Grechen Schmidt, EPA; Ray Schindler, Washington Agricultural Council; Ann Watanabe, Ecology.



Citizen Proponent Negotiation Grants

Involvement by eligible citizens in negotiating the siting of a waste facility may be funded through citizen proponent negotiation grants. Those grant guidelines are being developed by:

Georg Buchheim, City of Royal City; Eileen D'Armon, ECOS; Dick Dorsett, Pierce County Intergovernmental Affairs; Darlene Madenwald, Citizens for Clean Industry; Tim Nord, Ecology; Gerald Smedes, Rabanco; Betty Tabbutt, WEC.

Remedial Action Grants

Rules defining how funds will be allocated for cleaning up municipal landfills are being developed by:

Rod Brown, cleanup process work group; Lance Caputo, City of Hoquium Planning Department; Curtis Dahlgren, Ecology; Dean Fowler, Spokane County Utilities; Cynthia Howarth, Jefferson County Environmental Health Department; Bruce Jones, Seattle City Engineering Department; Pete Kmet, Ecology; Jeff Myers, Attorney General's Office; Jerry Morse, Clark County Public Services Department; Leslie Nellermoe, Heller Ehrman; Ted Pankowski, WEC; Jay Reich, WPPA; Phil Ringrose, Tacoma Refuse Utility Division; Roland Ugochuku, Ecology; Phil Williams, City of Spokane, and cleanup standards work group.

Gregoire Appoints Advisory Board

Ecology Director Christine Gregoire selected University of Washington toxicologist David Eaton as chairman of the five-member Science Advisory Board under Initiative 97.

Eaton, who directs the toxicology program at the UW School of Public Health and Medicine, has served as a consultant on toxic exposure incidents to state and federal agencies.

Also appointed are Frieda Taub of the University of Washington School of Fisheries; KNona Liddell, associate professor of chemical engineering at Washington State University; Henry Landau, president and principal engineer of Landau Associates of Edmonds; and Donald Wood, a fellow scientist with Westinghouse Hanford in Richland.

Under the Model Toxics Control Act, the board is providing technical advice to Ecology on toxic cleanup issues. Development of the state's hazard ranking system and standards for site cleanup are among topics to be discussed by the board.

Initial appointments of one, two and three years are intended to achieve a staggered distribution of board membership. All future appointments will be for three years, with a new chair appointed annually.

Hazardous Waste Investigations and Cleanup Program

With a strong mandate from the citizens in 1989, Ecology launched an aggressive cleanup program aimed at more than 500 potential toxic sites around the state. Funds were used for overseeing investigations and cleanup activity at 140 sites, responding to emergency spills and releases, conducting initial investigations and site assessments at 28 sites, implementing the new law with regulation and policy development, and further upgrading the Site Management Information System (a computerized summary of information on cleanup sites).

In fiscal year 1989, Ecology's Hazardous Waste Investigations and Cleanup Program spent nearly $6,172,000 from the State Toxics Control Account. Funds were used in the following five categories:

Salaries and Benefits:
$3,602,737

Cleanup Contracts:
1,496,921

Goods and Services:
391,624

Travel:
182,890

Equipment:
497,512

Total: $6,171,684

(Note: *Federal funds provided to Ecology for cleanup in fiscal year 1989 totaled $793,424.*)

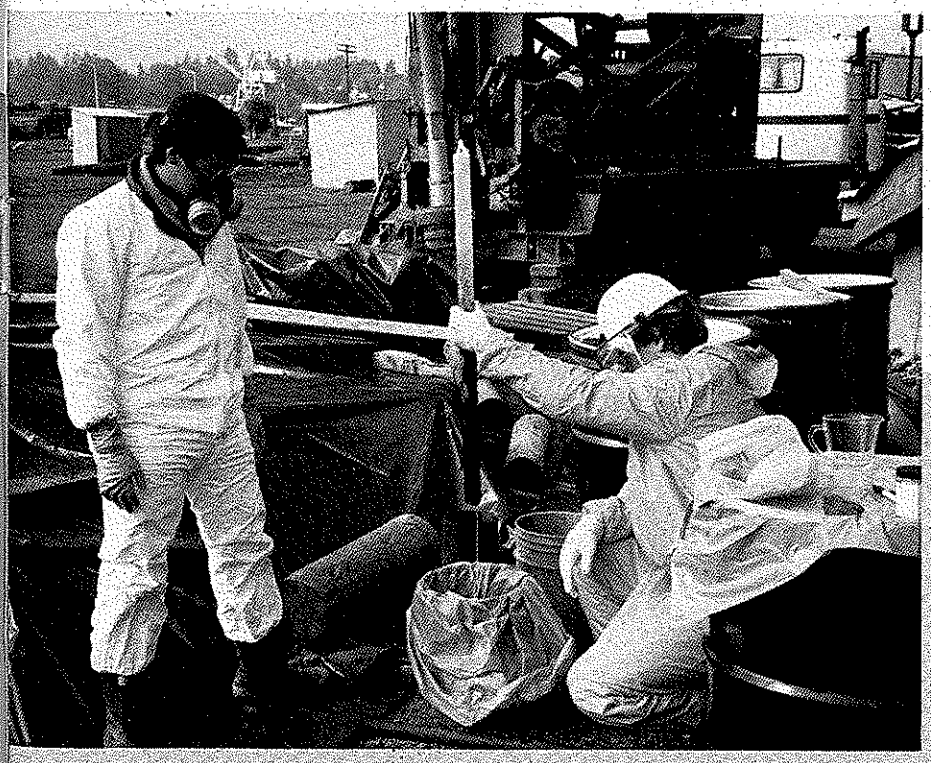
Negotiated Rule-Making

To define the entire site cleanup process, Ecology worked with advisory groups in a negotiated rule-making effort. Representatives of agriculture, business, environmental groups, and local governments donated countless hours and expertise to help draft the best possible rules. In October 1989, leaders of those interest groups joined together to publicly commend Ecology for its innovative rule-making process and commitment to developing consensus among diverse constituencies.

Investigating, Ranking and Tracking Sites

A 15-month effort to develop a site hazard ranking system was completed with field testing of the model system on 30 sites. The ranking system helps Ecology prioritize sites for cleanup according to their risk to public health and the environment. It is a tool for evaluating potential and actual hazards by assessing soils, water and air contamination, human and non-human exposure, contaminant toxicity, and more.

The computerized Site Management Information System (SMIS) was also developed to accommodate a wide range of data on more than 500 potential sites throughout the state. The SMIS will eventually include a site's hazard ranking score. Reports from the system will be a valuable resource for buyers and sellers of property, lending institutions, legislators, environmental advocates and citizens living near toxic sites.



Technicians Ching Pi Wang, hydrogeologist with Ecology and Martin Carlson of Applied Geotechnology, Inc. prepare samples for testing at the Cascade Pole Site

Site Cleanup Highlights

On-site work occurred in nearly every Washington county. Certain cleanup milestones and innovations deserve particular attention.

Commencement Bay

One of the nation's largest and most complex toxic sites, Commencement Bay is a 12-square-mile Superfund site located near Tacoma at the southern end of Puget Sound. After several years of study and investigation, Ecology and EPA reached a cleanup decision in the fall of 1989. Ecology will oversee the first phase of cleanup by eliminating pollution entering the bay from such sources as industry and storm water run-off.

Following source control, EPA will oversee contaminated sediment cleanup. The entire effort, including long-term monitoring to ensure cleanup goals have been met, could take 20 to 30 years. Parties responsible for the pollution are expected to pay for source control and cleanup.

Military Sites

An agreement among Ecology, EPA, and the U.S. Air Force will guide the cleanup of two Superfund sites at the McChord Base and set the stage for cleaning up other military sites in the Northwest. The McChord agreement is one of only eleven similar military cleanup efforts in the nation.

Urban Bay Action Teams

Ecology has created seven Urban Bay Action Teams to control and clean up pollution entering marine waters. In addition to using a variety of enforcement and investigation authorities, the action teams are working with local citizen advisory committees to develop long-term environmental strategies for urban bays. Teams at the Southwest Regional Office deal with Budd Inlet and Commencement Bay. At Ecology's Northwest Regional Office in Redmond, teams are working on Bellingham Bay, Everett Harbor, Lake Union, Elliott Bay and the Sinclair/Dyes Inlets.

EDB Contamination

Ecology paid for most of a new water system for Skagit County residents affected by EDB contamination of drinking water. The system features an 80,000-gallon reservoir, 60 residential hookups, and two wells. Prior to a 1984 ban on its use, ethylene dibromide (EDB) was used as a pesticide to fumigate soil, grains, fruits and vegetables. Its health effects have not been fully documented, but EDB is a suspected human carcinogen. Ecology is seeking to recover costs from the EDB manufacturer, Great Lakes Chemical Company.

Colbert Landfill

The first phase of cleanup began at the Colbert Landfill in Spokane following signing of a consent decree in late 1988. To determine the full extent of contamination and locations for pilot extraction wells and treatment systems, monitoring wells are being drilled in selected locations. In addition, Ecology, EPA, and Spokane County developed an aggressive community relations plan to keep area residents informed of cleanup progress.

Midway Landfill

Ecology and the City of Seattle agreed to a re-design of the proposed cap for the Midway Landfill when evidence provided by a former waste transport employee corroborated that as much as 60,000 to 70,000 barrels of industrial wastes were hauled to the landfill in the 1970's. The 67-acre landfill was designated a Superfund site in 1986 and cleanup work has included extensive investigations, construction of a storm water collection system, and a methane gas extraction system.

Tacoma Landfill

Agreement was reached by Ecology, EPA, and the City of Tacoma in November 1989 on cleanup of the 190-acre Tacoma Landfill near Fircrest. The consent decree establishes cleanup levels, and requires closure of the landfill by 1999 and ground water cleanup within 10 years of closure. Estimated to cost $24 million, the cleanup will include an impermeable cap to reduce infiltration of rain water which leaches contaminants from the garbage into the ground water, a ground water pump-and-treat system, expansion of the methane gas extraction system, alternate domestic water supplies, and long-term monitoring.

Bioremediation

Ecology worked with the Union Oil Company to devise a cleanup plan that relies on bacteria to turn petroleum contamination into harmless carbon dioxide and water. The UNOCAL project in downtown Seattle is the most extensive bioremediation project in the state and among the largest on the West Coast. Bioremediation technology is being perfected through research and development in Washington state and offers great promise for cleaning up pollution from leaking underground storage tanks.

Leaking Underground Storage Tanks

The federal Leaking Underground Storage Tank (LUST) Trust Fund was established in October 1986 as Section 205 of the Superfund Amendments and Reauthorization Act (SARA). The purpose of the fund is to address corrective action for petroleum releases from underground storage tanks regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA).

In fiscal year 1989, Ecology began receiving money from the LUST Trust Fund through a cooperative agreement with EPA. Under the agreement, Ecology began developing policies and procedures for LUST corrective actions, as well as providing information and technical assistance to owners and operators of LUST sites. EPA authorized use of the fund for cleaning up high priority sites in September 1989.

In fiscal year 1989, 177 petroleum LUST incidents were reported to Ecology. During the first half of fiscal year 1990, an additional 339 LUST sites were reported. The petroleum releases have been brought under control at nearly all of these sites by the owners or operators of the sites.

The cost for program development and technical assistance from the LUST Trust Fund in fiscal year 1989 was $166,221. In addition, $48,450 in state money was spent on four emergencies at LUST sites. Because owners and operators are not required to provide financial information on independent cleanups, Ecology does not have information on the cost of corrective actions taken by owners and operators of LUST sites.

During this biennium, Ecology will begin using the LUST Trust Fund for site cleanups, site management, and tracking. Ecology will continue to provide technical assistance to owners and operators, and to develop rules and guidance for implementing the program. The estimated cost to the LUST Trust Fund for this biennium is $1,873,500.

Site Management Information System

The Site Management Information System tracks such information as a site's location, owner and operator, affected environments (air, water, soil), types of contaminants, how the contamination occurred, and the stage of investigation or cleanup. When the hazard ranking system is fully operational, a site's hazard ranking score will also be included in the data base. Inclusion in the list does not establish a person's legal liability for cleanup costs.

The site list in this report shows accomplishments at sites during 1989 and planned activities for the future.

The "site activity" terms used in the list are explained in the glossary on page 22. Following the glossary is a flow chart summarizing the usual progression of activities at a site.

Remember

The role of cleanup program staff at these sites varies. They may oversee cleanup actions by potentially liable persons or Ecology's enforcement measures. Ecology's role may include direct action using state funds with the intention of recovering costs later.

The site list may show completed activities at a site, but no planned activities. This may be for one of several reasons.

1. The next activity may depend on a court action.
2. The site may need further work, but further actions may have been delayed due to shortages in human and financial resources.
3. Occasionally, the site may be determined to have little or no need for further attention.

The sequence of activities at a site does not always follow the pattern described in the flow chart. Good reasons can cause the pattern to vary. For example, a remedial investigation normally does not begin until a consent decree or order has been filed for the remedial investigation and feasibility study. However, some potentially liable persons choose to begin a remedial investigation at their own risk before the consent order or decree is filed.

Sometimes the information on a site may not correlate with what you know about the site. This report is intended primarily to provide information on cleanup program activities in fiscal year 1989. More activities will have occurred than can be presented here. A more complete profile of a site can be obtained by contacting Kathy Reed at the address and telephone number listed on this page.

Reports Available From the Site Management Information System

Confirmed and Suspected Hazardous Waste Sites

Includes site name and location, county, nearest city, and site category.

Site Management Information System Fact Sheet

Provides summaries by site category, ownership type (public or private), and waste management practice (drum, landfill, tank, etc.).

Affected Environments and Contaminants

Includes site name, location and category, county, city, affected environments (ground water, surface water, air, soil, sediment, drinking water), contaminants (pesticides, metals, dioxin, etc.), and waste management practice.

To request a standard report, contact Kathy Reed, Department of Ecology HWICP, MAIL STOP PV-11, Olympia, Washington 98504, or telephone (206) 438-3000. In many cases, a "Request for Public Information" form must be completed in order to receive a report.

Site Management Information System Summary

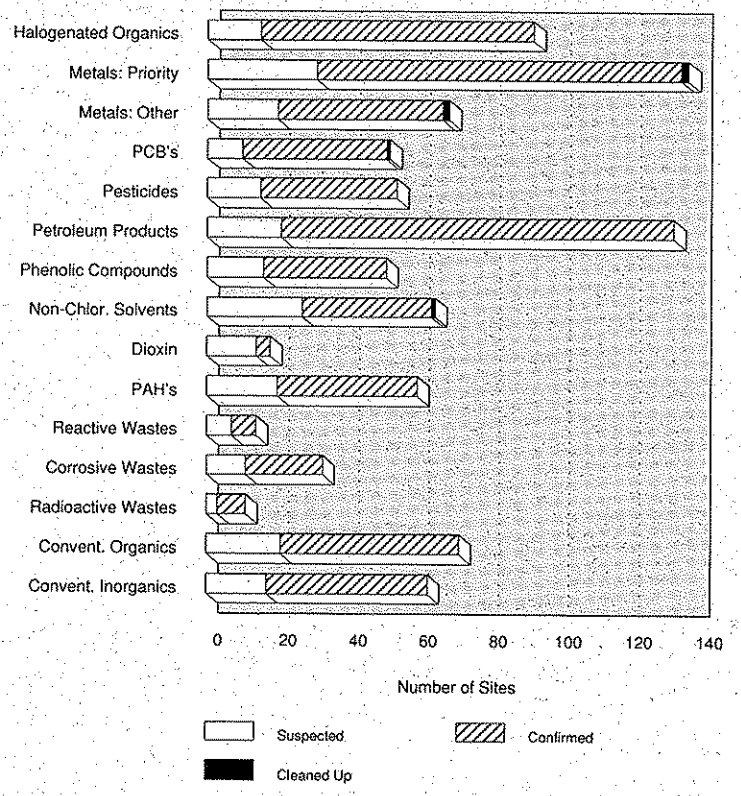
Site Categories (includes known and suspected sites)
Federal-Lead NPL Sites - 34
State-Lead NPL Sites - 11
Confirmed State Sites - 223
Potential State Sites - 254
Long-Term Monitoring - 21
Total Sites - 542

Sites by Ownership Type
Public/County - 38
Municipal - 38
Federal - 43
State - 16
Tribal - 4
Public-Owned (bankrupt) - 3
Private - 326
Financial Institution Owned (bankrupt) - 2
Other - Mixed - 15
Unknown - 57
Total Sites - 542

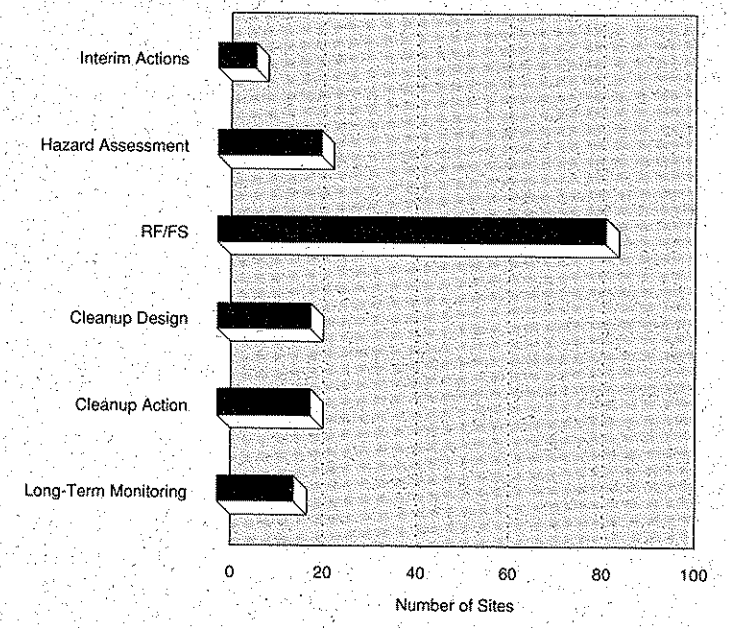
Landfills by Ownership Type
Public/County - 31
Municipal - 25
Federal - 15
State - 8
Tribal - 3
Public-Owned (bankrupt) - 0
Private - 43
Financial Institution Owned (bankrupt) - 1
Other - Mixed - 7
Unknown - 6
Total Sites - 139

Sites by Waste Management Practice Category
Drug Lab - 2
Drum - 38
Impoundment - 31
Improper Handling - 152
Landfill - 138
Land Application - 8
Pesticide Application - 8
Pesticide Disposal - 19
Spill - 135
Storm Drain - 7
Tank - 82

Site Management Information System Major Waste Categories at Toxic Sites



Number of Sites in Cleanup Phases



Major Chemical Groups Found at Toxic Sites

Citizens often are concerned about the types of chemicals and toxicants that can contaminate air, land, and water from hazardous waste sites. The following is intended to provide a general overview.
A professional toxicologist or chemist should be contacted for more in-depth information.

Conventional Inorganic Contaminants.
These include such chemicals as nitrates or sulfates, and the high concentrations of solids dissolved in water. Measurements of these contaminants give an indication of the amount of different contaminants and general water quality. Some, such as ammonia and nitrate, have unacceptable health effects at high concentration levels. Their presence may also indicate such contaminant sources as agriculture or domestic sewage.

Conventional Organic Contaminants.
These, which include such naturally occurring bacteria as E-choli, are measurements of organic content. Their presence in water can result in death to fish and other aquatic organisms by lowering oxygen levels in the water.

Corrosive Wastes.
Chemicals such as acids which can react easily with other substances or cause injury to living organisms are called corrosive wastes. Most people are familiar with such strong corrosives as battery acid and drain cleaners.

Dioxins.
Dioxins are a "family" of chemicals that are formed when other chemicals are manufactured. They are found in pesticides and as by-products from some pulp and paper processes and other products made with chlorine. The effect of exposure varies greatly depending on the specific dioxin and the affected animal. Dioxins can cause cancer or birth defects at extremely low levels in some animals.

Halogenated Organics.
These compounds, such as chloroform, vinyl chloride, and trichloroethylene are solvents used in dry cleaning chemicals, degreasers, plastic manufacturing, fire extinguishers, refrigerants, some paint products and numerous other chemical manufacturing. Most are toxic and some are known to cause cancer.

Heavy Metals.
These are metals such as arsenic, lead and mercury. They have been used to make pesticides, paints, and many other chemical products. They occur naturally, but only in very small amounts. Living organisms cannot tolerate excessive exposure. To breathe some forms of these metals is very dangerous.

Non-Halogenated Organics.
Solvents (such as acetone, toluene and paint thinners) are commonly used in industry and the home. They also include cancer-causing chemicals such as styrene and a very common industrial chemical called benzene, which is also found in gasoline.

Other Metals.
These metals (such as aluminum, calcium, and iron) are fairly common in the environment. Living organisms not only can tolerate exposure, but require minimum amounts to sustain life, as is the case with sodium and iron. However, at higher levels they become objectionable or even toxic.

PCBs or Polychlorinated Biphenyls.
PCBs are a specific group of halogenated organics that were commonly used as fire resistant liquids in electric devices, transformers, and heaters. They can no longer be used in manufacturing such products because they can cause cancer and reproductive damage.

Pesticides.
Pesticides are chemicals that control pests by killing, repelling, or limiting their reproduction. Most are "artificial" and are usually toxic to other animals and plants.

Petroleum Products.
These are the common fuels and lubricants such as gasoline, diesel fuel and motor oils. These are composed of many different chemicals. Some of the chemicals, such as benzene in gasoline, can cause cancer. They may also have toxic components.

Phenolic Compounds.
These are chemicals that are used to manufacture many types of glues, paints, disinfectants, pesticides, and even some food products. Most are very toxic. They usually have a very noticeable disinfectant odor.

Polynuclear Aromatic Hydrocarbons.
Often abbreviated as either "PNA" or "PAH." Some of these compounds, usually found in coal tar, can cause cancer. They are also created by the incomplete combustion of fossil fuels.

Radioactive Wastes.
Substances which cause cell damage by radiation and whose exposure can have immediate health consequences or long-term injury such as reproductive damage or cancer.

Reactive Wastes.
Substances which can explode, react violently with water, or produce dangerous gases if mishandled are included in this category.

Waste Reduction and Recycling

Washington residents have achieved the highest recycling rate in the nation with more than 28 percent of solid wastes being recycled. Ecology has targeted a goal of 50 percent solid waste recycling by 1995. Waste reduction and recycling, two priorities at the top of Ecology's action agenda, are an important part of the Model Toxics Control Act.

Funds from the state toxics control account are provided for "state government programs for the safe reduction, recycling or disposal of hazardous wastes from households, small businesses and agriculture." Ecology's recently-formed Waste Reduction, Recycling and Litter Control (WRRLC) Program manages these programs.

The 1988 Legislature established an Office of Waste Reduction in Ecology. Later, the 16-year-old Litter Control and Recycling Program merged with the new office and brought several related activities aboard, including the "A-Way with Waste" public school curriculum, Ecology Youth Corps, the Hazardous Substances Information Office, the Recycling Hotline, and major recycling efforts for used motor oil, waste tires, and vehicle batteries.

The Model Toxics Control Act, followed by the 1989 Waste Not Washington Act, added more responsibilities. The result: a busy and challenging WRRLC agenda whose major accomplishments of 1989 included:

- Setting up a technical resource center and information database on waste reduction and recycling for small businesses. One of the center's features is a network of businesses who share information on hazardous waste reduction.
- Conducting statewide hazardous waste reduction and recycling workshops for pesticide applicators, metal platers, wood treaters, paint manufacturers, automobile repair shops, dry cleaners, printers, and photo processors.
- Completing site visits and industrial audits to help service and manufacturing industries reduce and recycle wastes.
- Preparing a manual for business on waste reduction, tentatively titled "Waste Reduction in Your Business."
- Hosting a symposium entitled "Achieving Waste Reduction: From Policy to Product." It was attended by more than 180 public officials, waste managers, business leaders, educators, and environmental groups.
- Organizing a statewide local government recycling coordinators' support group, with regular meetings to discuss community recycling and household hazardous waste collection projects, public information and education techniques, composting and community curbside collection.
- Reviewing local government moderate risk waste and solid waste management plans.
- Evaluating grant proposals for possible funding of waste reduction and recycling projects.
- Reviewing Environmental Impact Statements to identify waste reduction and recycling opportunities.
- Establishing an in-house waste reduction and recycling resource center.
- Preparing a survey of Washington and Oregon businesses that provide waste reduction and waste management services.
- Working toward revising hazardous waste fees to provide incentives for waste reduction and recycling.
- Organizing a task force on the issue of automobile "fluff" — the contaminated residue left after auto metals are recycled and the recyclability of "white goods" (consumer appliances).

With these programs, the State Toxics Control Account joins with other funding sources to tackle a significant environmental and health issue — reducing Washington's waste stream and recycling to stop waste before it starts.

Local Government Grants: Helping With Waste Management

In 1989, Ecology awarded more than $8.9 million in grants from the Local Toxics Control Account to 115 local governments. The grants will be matched with local funding to pay for more than $17.5 million in waste management projects.

Eight grant categories were funded during fiscal year 1989 under regulations for the following grant categories:

Remedial action:
$3,838,000 (8 grants)

Local hazardous waste planning:
$1,567,000 (22 grants)*

Recycling facilities:
$980,000 (11 grants)

Ground water monitoring wells:
$930,500 (26 grants)

Local solid waste enforcement:
$819,000 (26 grants)

Local solid waste planning:
$552,000 (14 grants)

Household hazardous waste collection events:
$198,500 (6 grants)

Hazardous waste pilot projects:
$50,000 (1 grant)

*Includes amendments to six grants initially funded by the Water Quality Account.

Additionally, a $1,500 agreement was signed with Washington State University for a public information conference on the citizen/proponent negotiation grant program. The negotiation grants will be used by local government-appointed committees to negotiate mitigation for waste facility siting.

The largest share of Local Toxics Control Account grant funds support remedial actions at municipal landfills. More than 40 percent of the funds awarded in fiscal year 1989 will assist in cleaning up landfills in Hoquiam, Seattle, Tacoma, Spokane, and King and Pierce Counties.

The largest number of grant agreements are devoted to two prevention activities. Grants for ground water monitoring near landfills and enforcing solid waste regulations are two categories that together accounted for about 45 percent of the 115 grant agreements signed in fiscal year 1989.

Grants are used to fund a wide variety of programs. The City of Grandview, which handles large quantities of wastes from the commercial processing of apples and grapes, will use a grant to study the feasibility of composting these wastes, thus reducing their reliance on landfilling. The Benton-Franklin Governmental Conference, using a grant to support a highly successful household hazardous waste collection event, diverted close to 20 tons of hazardous waste from its landfill.

The Local Government Grant Program spent a little less than $500,000 on program administration and development of new regulations in fiscal year 1989. Passage of the Model Toxics Control Act in November 1988 led to the revision of existing regulations and the ongoing development of new regulations to implement that legislation. Citizen advisory groups helped Ecology staff members draft rules covering the remedial action, public participation, and citizen proponent negotiation grant programs. The latter two grants will become available for the first time in fiscal year 1990.

For a complete listing of all grant awards, see the appendix.

Solid and Hazardous Waste Program: Regulating and Managing Wastes

Toxic tax funds are used to carry out inspections and compliance actions at facilities generating and managing hazardous waste. Funds are also used to maintain a federally-authorized program under the Resource Conservation Recovery Act (RCRA), and provide education and technical assistance to the regulated community.

In 1989, $2.3 million from the State Toxics Control Account funded 49 FTEs (full-time equivalent employees) in the Solid and Hazardous Waste Program.

Hazardous waste program development (5 Staff)

Hazardous waste technical assistance (4 Staff)

Solid waste technical assistance (3 Staff)

Hazardous waste permits (7 Staff)

Regional offices: Inspections and enforcement (8 Staff)

Old fee account FTEs: Inspections, enforcement and program development (22 Staff)

Major activities and accomplishments in the regulatory program include:

- Inspecting 100 hazardous waste generators with appropriate follow-up compliance and enforcement actions.
- Inspecting 40 hazardous waste treatment, storage and disposal (TSD) facilities with follow-up compliance and enforcement actions.
- Reviewing 10 (RCRA) permit applications in process.
- Issuing 20 enforcement orders and 18 administrative penalties to prevent further environmental damage and recover costs for damage.
- Providing technical assistance, guidance, and education to the regulated community and other interested persons.
- Establishing a resource library on hazardous wastes for access by the regulated community and state government.
- Developing regulation, amendments, and strategies to carry out expanded federal program under RCRA (Hazardous and Solid Waste Amendments of 1984).
- Developing a hazardous waste fee bill under Section 77 of the cleanup law to encourage waste reduction and recycling. The bill was considered by the 1990 legislature.
- Achieving significant waste reduction or recycling at 49 facilities throughout Washington.
- Completing an Ecology/EPA contaminated site agreement that establishes a process for resolving disputes over how treatment, storage and disposal facilities should be handled.
- Participating in the Pacific Northwest Hazardous Waste Advisory Council.
- Creating a new section with seven FTEs to process federal and state dangerous waste permits.

Hazardous Waste Planning and Assistance to Local Governments

The Solid and Hazardous Waste Program continues to provide assistance to local governments for local hazardous waste planning and hosting of collection events for moderate risk wastes. In addition, progress was made on the state Hazardous Waste Management Plan. Major accomplishments included:

- Initiating moderate risk waste plans in 33 counties.
- Assisting local governments host 23 household hazardous waste collection events.
- Providing guidelines and technical support to 26 counties for local hazardous waste plans and assisting local jurisdictions submit 19 hazardous waste plans.
- Continuing work on the state Capacity Assurance Plan to assess the state's ability to reduce, recycle, treat, store, and dispose of hazardous wastes during the next 20 years.
- Issuing a final environmental impact statement explaining the approach used to develop siting standards for hazardous waste facilities.
- Solid Waste Compliance and Assistance to Local Governments.
- The state Solid Waste Management Act (Chapter 70.95 RCW) gives Ecology a major role in establishing a comprehensive statewide program for solid waste management. State Toxics Control Account funds were used to support compliance monitoring, permitting and assisting local governments to develop comprehensive solid waste plans. Major accomplishments included:
- Reviewing seven local plans for state approval (Walla Walla, Pacific, Whatcom, King, Grays Harbor, and Klickitat Counties, and the City of Seattle).
- Developing guidelines and providing local solid waste planning assistance to 27 local jurisdictions.
- Assisting local governments to interpret minimum functional standards and development of local solid waste management plans.

Thurston County received grant funds to host a household hazardous waste collection event.

Water Quality Permit Fee Program

In fiscal year 1989, Ecology billed $3.4 million in fees to 680 industrial dischargers and 254 municipal treatment plants. More than $3.3 million of those fees were collected by November 1989.

To develop and administer the program, $5.6 million was spent to fund 79.4 FTEs in the following budget categories:

Permit processing, monitoring and inspection:
$2,382,622

Laboratory:
$383,655

Pretreatment Program Oversight:
$104,737

Program Development:
$859,524

General Overhead:
$1,903,163

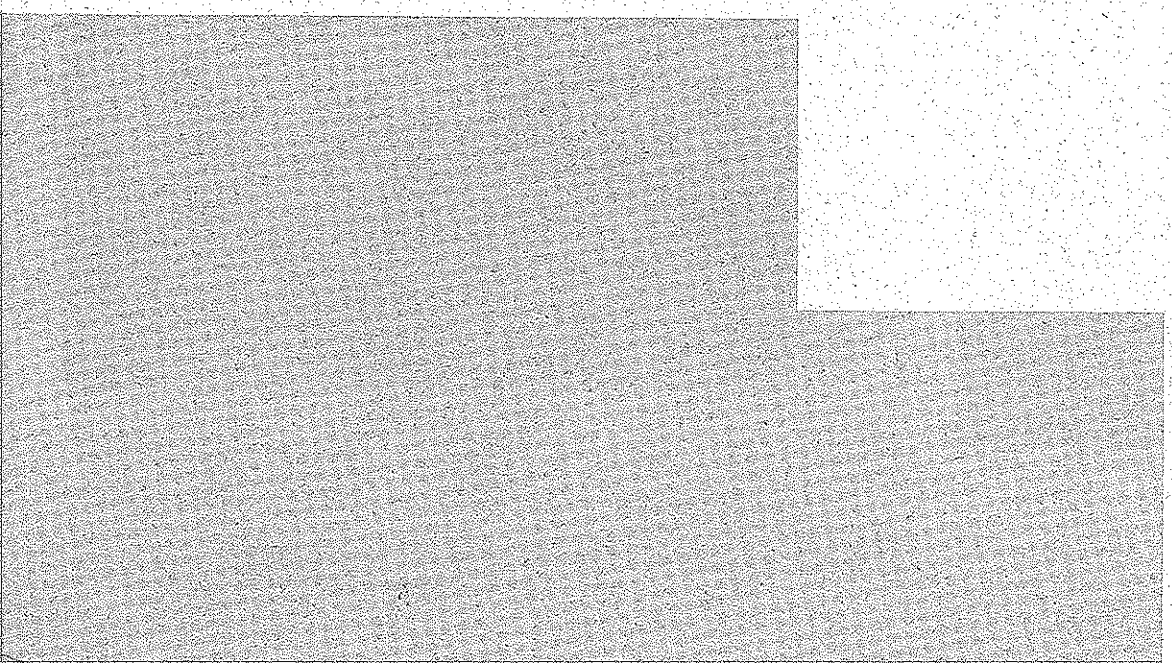
Ecology administers waste discharge programs under the Federal Clean Water Act and the State Water Pollution Control Act. Nearly 1,000 dischargers have National Pollutant Discharge Elimination system (NPDES) permits or state waste discharge permits. These facilities include municipal sewage treatment plants and industrial dischargers.

Under the Model Toxics Control Act, Ecology was authorized to create a fee system that covered the expenses incurred to administer the program.

During the year, the permit fee program:

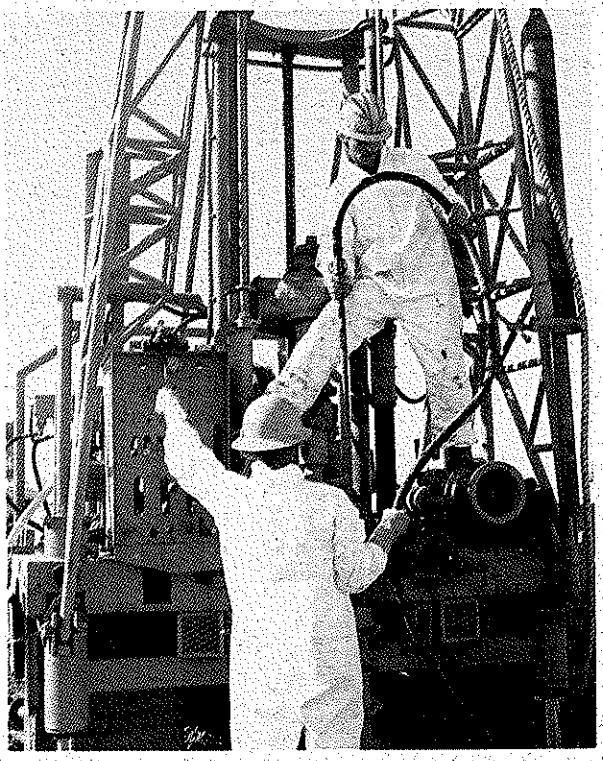
- Created a new time accounting system that is on the leading edge of new cost distribution and tracking systems in state government.
- Identified unpermitted dischargers and brought them into the program.
- Conducted a study to determine the feasibility of developing a variable fee component within the fee schedule. Such a system would tie fees to such factors as complexity of permit, pollutant loading, and toxicity.
- Identified, tracked, and documented all expenditures funded by discharge permit fee revenues. This information will be used to improve program administration and direct services to the regulated community.
- Actions taken during the past year will help shift the burden of funding for the discharge permit program from the general fund to the holders of discharge permits. Ecology's Water Quality Program remains committed to an administrative and regulatory effort that assures water quality to the citizens of the state, and accountability to permit holders.

For additional information on the Water Quality Permit Fee Program, see the separate Ecology report to the legislature.

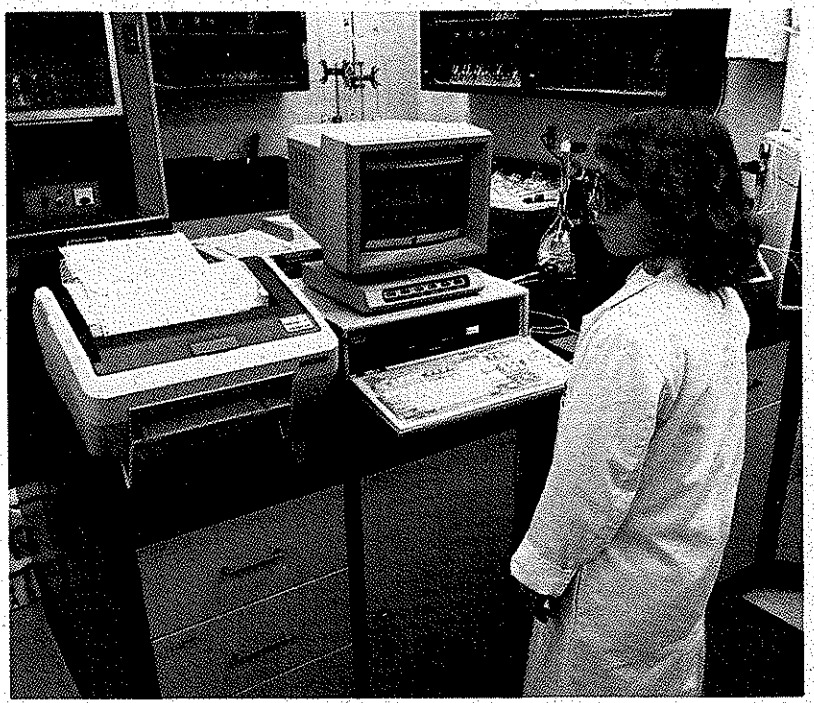


Cleaning up at Western Processing

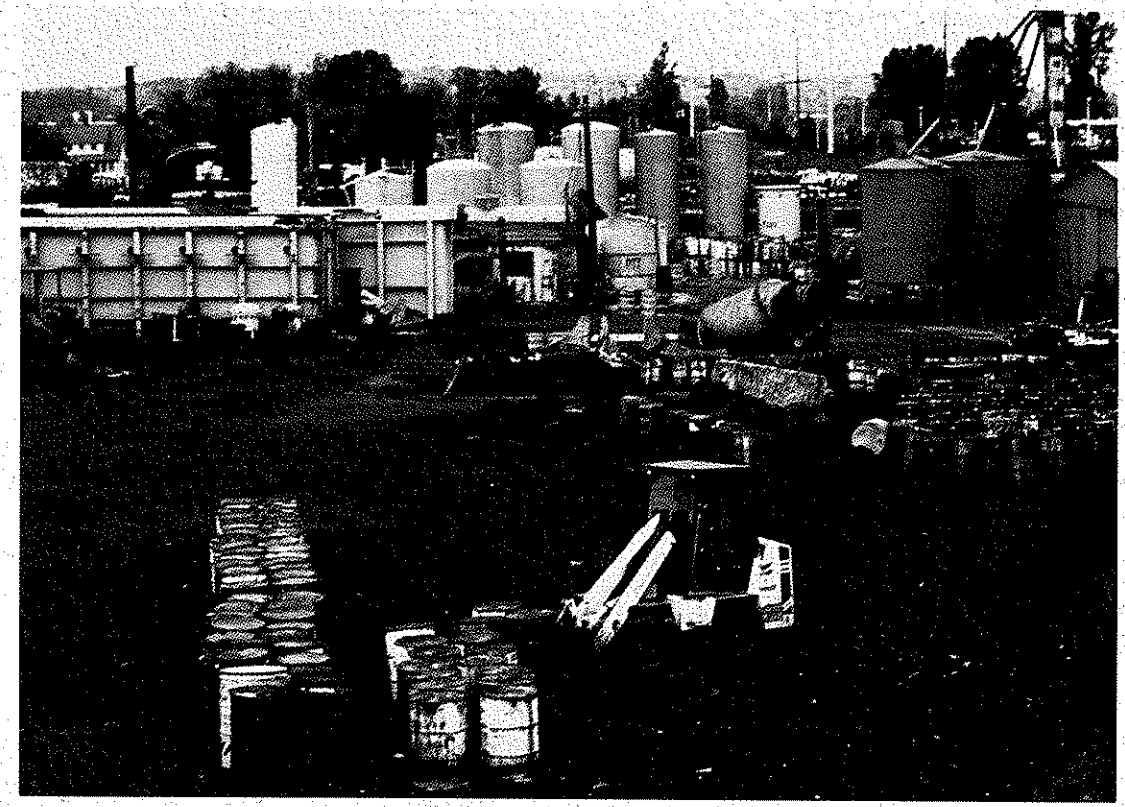
Workers taking samples during the initial emergency cleanup actions wore self-contained breathing apparatus, two layers of clothes and two layers of gloves.



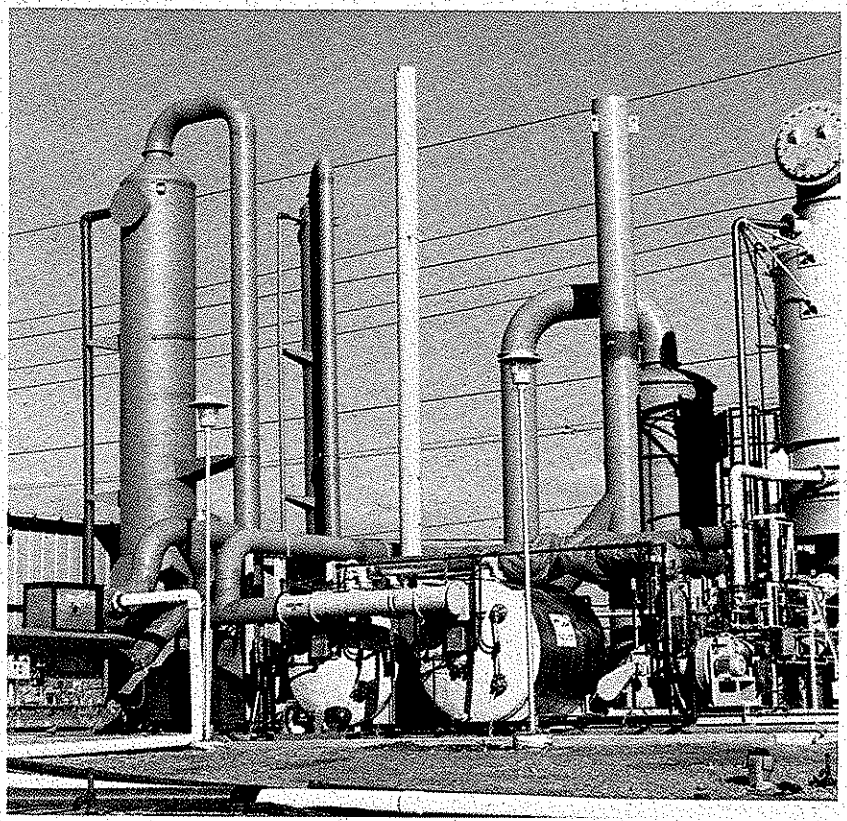
More than 350 wells were drilled to determine the extent of ground water contamination, track movement of contaminants, extract water for pumping and treating, and monitor the effectiveness of the cleanup. Drilling rigs such as the one pictured are commonly used for well installation.



An onsite laboratory provides immediate analysis of samples taken from wells.



After sampling, barrels with similar chemicals were placed together. More than 2,800 barrels were sampled during the emergency cleanup.



A network of piping and wells pumps contaminated ground water for filtering and treatment. The cleaned water is then used to flush contaminated soil. In this "closed loop" system, the ground water is continually pumped, treated and recirculated. The goal is to eventually remove and treat all the contamination to soil and ground water.

Stripping towers and carbon filters remove organic contaminants from the water and air. Organic contaminants can include natural occurring bacteria and a wide range of solvents and chemicals found in petroleum fuels. Ground water is regularly monitored to ensure proper operation of the cleanup system.

Department of Community Development
Hazardous Waste Training for Local Responders

In 1989, the Department of Community Development (DCD) spent $88,500 from the State Toxics Control Account to carry out hazardous waste training for fire fighters.

Funds covered expenditures for curriculum development, course delivery, and administration. More than 2,200 firefighters were trained in 79 classes in planning and executing hazardous waste incident response. The Hazardous Materials Training Program was coordinated through DCD's Division of Fire Protection Services.

The emphasis for the hazardous materials program is to train supervisors and first responders who become directly involved with hands-on procedures. In addition to the courses conducted the previous year, the curriculum was expanded to include:

- Hazardous Materials Incident Analysis
- Hazardous Materials Contingency Planning
- Hazardous Materials Operations
- Hazardous Materials Inspection Practices
- Behavior of Hazardous Materials Chemistry

Additional courses are still being developed and will soon be field tested for addition in the 1990 curriculum.

Lewis County's Hazardous Materials Response Team receives training from the Department of Community Development's Hazardous Waste Training Program.

Department of Social and Health Services
Protecting Drinking Water

In 1989, the Department of Social and Health Services' (now Department of Health) Hazardous Waste Program spent $588,500 in carrying out its public health mission under the Model Toxics Control Act. During 1989, the Department of Social and Health Services (DSHS) responded to concerns from Ecology, citizens, community groups, and local health departments. Major expense categories were:

Monitoring drinking water supplies potentially affected by hazardous waste releases: $222,000

Testing public drinking water supplies for organic chemicals: $78,000

Conducting health assessments and health education programs for communities near toxic sites: $288,500

Of 28 sites investigated, DSHS discovered 17 sites with potentially contaminated drinking water supplies. Eight of those sites warranted immediate action to eliminate or reduce exposure to as many as 120,000 residents. The location of those sites requiring immediate action were:

City of Vancouver, Clark County

Fargher Grocery Well, Clark County

City of Moses Lake, Grant County

Skyline #2, Grant County

Kelly Well, Pierce County (single family water system)

Wallace River Park, Snohomish County

City of Sunnyside, Yakima County

Acme Water System, Whatcom County

To identify chemicals in drinking water that potentially affect human health, DSHS relied on its Drinking Water Laboratory and contracts with three private laboratories.

Health surveys were conducted near the Midway Landfill in King County and the Cedarville Landfill in Whatcom County. DSHS provided health consultations at 24 hazardous waste sites throughout the state. To implement the Model Toxics Control Act, DSHS Hazardous Waste Program staff assisted Ecology in developing rules for cleanup standards, site characterization, and the hazard ranking system.

Services	Numbers
Water Samples Analyzed	528
Water Systems Monitored	28
Health Consultations	24
Health Risk Assessments	10
Epidemiological Studies	2
Health Information	8
Other Health Activities	18

Department of Revenue
Collecting the Hazardous Substance Tax

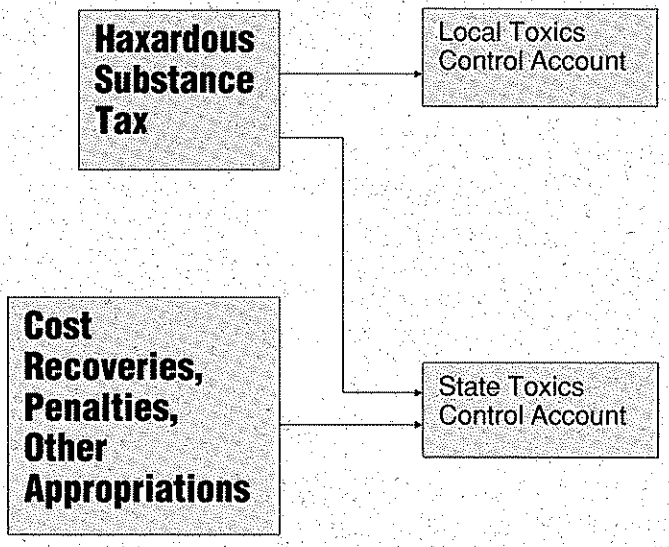
The Department of Revenue spent $112,500 to administer the hazardous substance tax which funds programs under the Model Toxics Control Act. The tax is imposed on the first in-state possessor of hazardous substances at the rate of .7 percent ($7 per $1000), applied to the wholesale value of the substance.

Taxable hazardous substances include:

- Approximately 8,600 pesticide products listed in the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).
- Approximately 700 chemicals listed in the Federal Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA).
- Petroleum products, including crude oil and products intended for use outside Washington.
- Possible additional substances to be designated by the Ecology Director following public review. No substances were proposed for addition in 1989.

To administer the toxics tax, the Department of Revenue:

- Revised rules to reflect changes in the tax brought about by the passage of the Model Toxics Control Act.
- Collaborated with Ecology to create education materials designed to improve voluntary compliance by taxpayers.
- Began auditing for unremitted taxes.



Uses:

Grants/loans to local governments for:

- Remedial actions at hazardous waste sites
- Solid waste plans and programs
- Solid waste disposal and management facilities
- Public participation grants

Uses:

- Hazardous waste planning and management
- Solid waste planning and management
- Hazardous waste cleanup
- State matching funds for federal Superfund site cleanups
- Financial assistance for local programs
- State assistance for households, small businesses and agriculture
- Emergency response training
- Water and environmental health protection
- Public participation
- Assistance to potentially liable persons in remedial actions
- Development of alternative management technologies
- Department of Agriculture: Pesticide disposal
- Department of Community Development: Hazardous materials training
- Department of Revenue: Tax collection and taxpayer education
- Department of Social and Health Services: Exposure and health effects assessment

Department of Agriculture
Waste Pesticide Program

It is estimated that several thousand tons of waste pesticides may be stored on farms throughout Washington. Under the state's toxic cleanup law, the Department of Agriculture has launched a program to eliminate the generation of these agricultural wastes. In 1989, Agriculture spent $161,000 to initiate its Waste Pesticide Identification and Disposal Program. About 25 tons of unusable pesticides were collected from nearly 150 farmers in three pilot counties.

The pesticide program was designed with the assistance of a ten-member advisory group and is a cooperative effort between the Department of Agriculture and county governments. To date, 25 counties have requested participation in the program. Counties provide sites for hosting the collection events and assistance with publicity. County cooperative extension agents play a key role at the local level.

The Department of Agriculture's chemical investigators screen pesticides brought to county collection events to determine if they are still usable. If the materials meet Agriculture's definition of "waste pesticide" (not usable in Washington), they are accepted for appropriate disposal. The Department of Agriculture was specifically authorized by the legislature to become a hazardous waste generator for the purpose of this program. It pays a contractor for packaging, transporting and disposing the waste pesticides.

In cooperation with Ecology and the Washington State University Cooperative Extension Services, the Department of Agriculture is developing a comprehensive education program to emphasize the need for appropriate pesticide management practices.

General Information
Major Site Activities

Glossary of Major Site Activities

Administrative Order (RD/RA)
Same as Administrative Order (RI/FS) except these activities are performed during the remedial design/ remedial action/construction (RD/RA) phase of cleanup.

Administrative Order (RI/FS)
An order issued by the Department of Ecology that describes actions that a potentially liable person (PLP) is required to perform during the remedial investigation/feasibility study (RI/FS) phase of cleanup.

Consent Decree (RD/RA)
Same as consent decree (RI/FS) except this consent decree describes actions that PLP agree to perform during the remedial design/remedial action/construction (RD/RA) phase of cleanup.

Consent Decree (RI/FS)
A legal document, approved by a judge and filed in court, that formalizes an agreement reached between the state and PLPs on sites for which PLPs will perform all or part of a site investigation and cleanup. The consent decree describes actions the PLPs agree to perform during the remedial investigation/feasibility study phases of cleanup. A consent decree is subject to a public comment period prior to judicial approval.

Consent Order (RD/RA)
Same as consent order (RI/FS) except this consent order describes actions that PLPs agree to perform during the remedial design/remedial action/construction phase of cleanup.

Consent Order (RI/FS)
A document similar to a consent decree except that it is issued administratively rather than entered with the courts. This consent order describes actions that PLPs agree to perform during the remedial investigation/feasibility study phase of cleanup.

Cost Recovery
The actions taken by Ecology to recover its costs for investigation and cleanup activities. The costs can include, but are not limited to, contractual costs, agency staff costs and laboratory costs associated with performing the remedial investigation/feasibility study, remedial design, remedial action, long-term monitoring at cleanup sites, and emergency cleanup or response.

Emergency Action
Actions necessary to mitigate an immediate threat to human health or the environment posed by the release or threatened release of hazardous substances.

Expedited Response Action (ERA)
A cleanup action at a site when there is an obvious solution to a threat or potential threat of a release prior to the completion of the remedial investigation or feasibility study. An ERA must be consistent with the final cleanup plan. This is the implementation of a removal action over the short-term to address a release or threatened release of hazardous substances.

Feasibility Study (FS)
A study which describes and evaluates the technical options available for correcting the problems identified during the remedial investigation. The FS and remedial investigation reports are the documents which are the basis for final recommendations for remedial actions to be taken at a site.

Hazard Ranking Score (HRS)
Methodology used to objectively assess the relative degree of hazard to human health and the environment. The site score is based on the types and amounts of hazardous substances found at the site and the proximity of the site to populated areas or sensitive environments (e.g., sole source aquifers, water bodies).

Initial Investigation
Includes a site visit, possibly the collection of a limited number of samples, completion of documentation, and the determination as to whether further work is needed at the site.

Long-Term Monitoring
Monitoring may begin at the operation and maintenance (O&M) phase of cleanup and can continue long after O&M is complete. It is intended to assure that cleanup levels have been achieved and maintained. Long-term monitoring may include such activities as field visits, sampling, and document review.

NPL Nominations
These sites are proposed for the Superfund National Priority List (NPL) and subject to public comment.

Operation and Maintenance (O&M)
Activities conducted at a site after a response action occurs to ensure that the cleanup or containment system is functioning properly.

Preliminary Assessment (PA)
The process of collecting and reviewing available information about a known or suspected hazardous waste site or release. This information is used to determine if the site requires further study. If further study is needed, a site inspection is undertaken.

Record of Decision (ROD)
A public document that explains which cleanup alternative(s) will be used at National Priorities List sites. The record of decision is based on information and technical analysis generated during the remedial investigation/ feasibility study, and consideration of public comments and community concerns.

Remedial Action/ Construction (RA)
This is the actual construction or engineering phase that follows the remedial design of the selected cleanup alternative at a site. Under state law, remedial action can also include any action that is taken to identify, eliminate, or minimize any threat or potential threat posed by hazardous substances to human health or the environment.

Remedial Design (RD)
An action taken where the selected remedy is clearly designed and/or specified in accordance with engineering criteria. For example, plans and specifications in a bid package that enable implementation of the remedy.

Remedial Investigation (RI)
Actions taken to gather data sufficient to determine the nature, extent and magnitude of a release or threatened release of a hazardous substance at a site, and to determine what actions may be necessary to correct the problem.

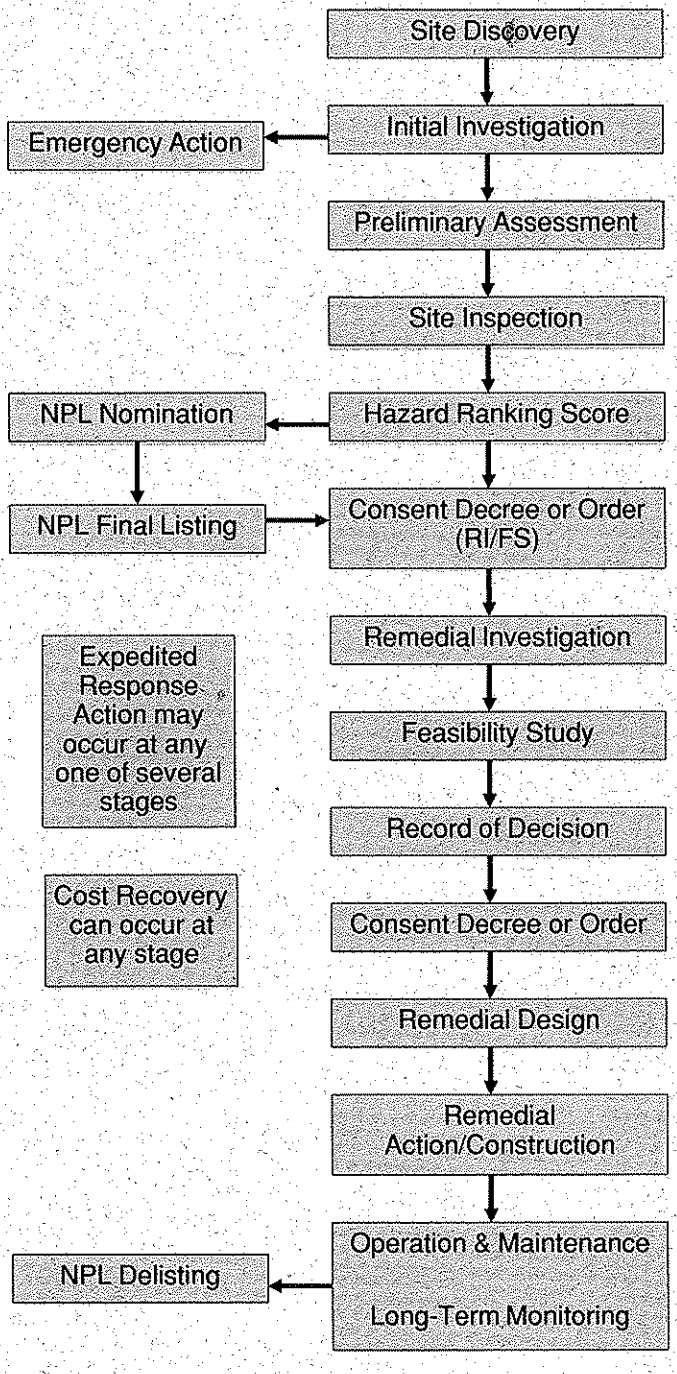
Screening Site Inspection (SSI)
The first of two federally-funded site inspections for evaluating whether a site should be listed on the National Priority List (NPL) of hazardous waste sites.

Site Discovery (SD)
The comprehensive attempt to identify and inventory potential hazardous waste sites that may have been overlooked by existing regulatory agencies. The site identification process relies on historical research, review of current local and state agency records, and information from citizens.

Site Inspection (SI)
The technical phase that follows a preliminary assessment and is designed to collect more extensive information on a hazardous waste site. The information is used to score a site in the hazard ranking system.

Major Site Activities: the Process

Not all sites go through all these steps or in this exact order. However, this is representative of the process followed to investigate and clean up a site. Some of these terms refer to federal Superfund cleanups, 45 of which are currently underway in Washington. Other terms refer to activities under the state's Model Toxics Control Act.



Hazardous Waste Investigations and Cleanup Program Sites and their Major Activities

Fiscal Year 1989

County	Site Name	Nearest City or Town	Site Activity	Status (as of 1/90)	Start Date	Completion Date
Adams	Burlington Northern (Othello)	Othello	Consent Decree (RI/FS)	Planned	02/15/90	05/30/90
			Feasibility Study	Planned	02/15/90	07/01/90
			Remedial Design	Planned	07/01/90	10/01/90
			Remedial Action/Construction	Planned	05/01/91	08/01/91
	CMC Real Estate (Othello)	Othello	Remedial Investigation	Completed	07/01/88	02/28/89
			Consent Decree (RI/FS)	Planned	03/01/90	09/01/90
			Feasibility Study	Planned	04/01/90	06/30/90
	Soil and Crop	Othello	Site Inspection	Completed	06/13/88	12/13/88
	W W T Batum Facility	Batum	Site Inspection	Completed	06/14/88	09/14/88
Asotin	Asotin County Landfill	Clarkston	Site Inspection	Completed	10/23/87	09/23/88
Benton	Benitz Farm Dump	Prosser	Initial Investigation	Completed	05/01/88	10/01/88
Chelan	Cascade Helicopter	Cashmere	Initial Investigation	Completed	03/18/88	03/01/89
			Remedial Investigation	In Process	09/30/89	09/01/90
	Holden Mine Tailing/Wenatchee	Holden	Remedial Investigation	In Process	04/15/89	10/30/90
			Feasibility Study	In Process	04/15/89	10/30/90
Clallam	Daishowa America Company Ltd.	Port Angeles	Remedial Investigation	Completed	08/01/88	03/10/89
			Site Inspection	Completed	09/01/88	10/01/88
			Initial Investigation	Completed	09/01/88	10/01/88
			Feasibility Study	In Process	02/28/89	06/30/90
	Lincoln Square Apartments	Port Angeles	Initial Investigation	Completed	07/20/88	07/20/88
			Site Inspection	Completed	08/01/88	10/01/88
Clark	ALCOA-Vancouver	Vancouver	Consent Decree (RD/RA)	Planned	03/30/90	06/30/90
			Remedial Design	Planned	06/30/90	12/31/90
	Columbia Marine Lines	Vancouver	Long-Term Monitoring	In Process	04/10/86	12/30/91
	Frontier Hard Chrome Inc	Vancouver	Remedial Design	In Process	07/01/88	09/30/90
	L & C Deli	Hazel Dell	Initial Investigation	Completed	05/01/88	10/01/88
			Remedial Investigation	Completed	08/01/88	10/01/88
			Expedited Response Action	Completed	08/01/88	01/31/89
			Remedial Action/Construction	In Process	01/30/89	03/30/90
	Lone Star Diesel	Vancouver	Long-Term Monitoring	Planned	01/30/90	01/30/10
			Administrative Order (RD/RA)	Planned	02/28/90	04/28/90
	McCall Oil	Vancouver	Site Discovery	Completed	04/02/88	08/01/88
			Initial Investigation	Completed	04/02/88	10/01/88
			Preliminary Assessment	Completed	08/01/88	08/31/88
			Remedial Action/Construction	Completed	08/14/89	09/30/89
	McClary Columbia Corp	Washougal	Consent Order (RI/FS)	Completed	08/01/88	08/30/88
	Pacific Northwest Plating	Vancouver	Preliminary Assessment	Completed	07/01/88	07/31/88
	Port of Vancouver	Vancouver	Remedial Investigation	Completed	08/01/87	04/01/89
			Site Inspection	Completed	07/01/88	08/30/88
			Preliminary Assessment	Completed	07/01/88	08/30/88
			Remedial Design	In Process	12/28/89	12/28/90
	Tidewater Barge Lines, Inc.	Vancouver	Consent Decree (RI/FS)	In Process	09/28/89	03/28/90
			Consent Decree (RD/RA)	In Process	12/30/89	09/30/90
	Toftdahl Drum Site	Brush Prairie	Long Term Monitoring	In Process	07/01/88	06/30/91
	USDOE-BPA Ross Complex	Vancouver	Feasibility Study	Planned	04/01/90	02/01/91
			Remedial Investigation	Planned	04/01/90	12/01/91
	Vancouver Ice & Fuel	Vancouver	Site Discovery	Completed	07/15/88	07/30/88
			Initial Investigation	Completed	09/01/88	09/30/88
	Vanrich Casting	Vancouver	Preliminary Assessment	In Process	08/01/89	06/30/90
Cowlitz	Longview Fibre	Longview	Long-Term Monitoring	In Process	01/01/85	01/01/05
			Operation and Maintenance	In Process	12/31/85	12/31/15
	Reynolds Metals - Longview	Richmond	Initial Investigation	Completed	03/01/89	04/29/89
	Reynolds-Metals PCB	Longview, WA	Site Discovery	Completed	12/02/88	01/02/89
	Weyerhaeuser(Wyco) Co Longview	Longview	Initial Investigation	Completed	01/01/89	07/01/89
			Remedial Investigation	In Process	06/01/89	06/01/91
Douglas	Inland Air Service	E. Wenatchee	Site Discovery	Completed	08/01/88	09/01/88
			Initial Investigation	Completed	12/16/88	03/16/89
	Pangborn Field	E. Wenatchee	Long-Term Monitoring	In Process	04/20/88	06/30/98
Ferry	Hecla Knob Hill Mine	Republic	Site Inspection	Completed	06/15/88	09/20/88
Franklin	Pasco Landfill	Pasco	NPL Nomination	In Process	12/21/88	12/25/91
			Feasibility Study	Planned	07/01/90	12/01/90
			Remedial Design	Planned	01/01/91	04/01/91
			Remedial Action/Construction	Planned	05/01/91	11/01/91
			Operation and Maintenance	Planned	11/01/91	11/01/96

County	Site Name	Nearest City or Town	Site Activity	Status (as of 1/90)	Start Date	Completion Date
Grant	Grant Dangerous Waste Site	Royal City	Site Inspection	Completed	07/08/87	09/08/88
	Old Larson Air Force Base	Moses Lake	Initial Investigation	Completed	05/01/88	09/09/88
Grays Harbor	Berg's Marine Const. & Repair	Hoquiam	Preliminary Assessment	In Process	08/01/89	06/30/90
	Roderick Timber Co.	Aberdeen	Remedial Investigation	Completed	09/30/87	05/30/89
			Site Inspection	Completed	08/01/88	08/31/88
Island	US Navy-NAS Whidbey Is-Ault	Oak Harbor	Remedial Investigation	In Process	10/01/88	12/01/90
	US Navy-NAS Whidbey Is-Seaplan	Oak Harbor	Remedial Investigation	In Process	10/01/88	12/09/90
Jefferson	Jefferson County Transit	Port Townsend	Site Inspection	Completed	08/01/88	08/30/88
		Port Townsend	Remedial Action/Construction	Completed	12/01/88	12/30/88
King	Alaska Pacific Fisheries	Seattle	Site Discovery	Completed	03/30/88	11/30/88
			Initial Investigation	Completed	11/30/88	03/30/89
	ARCO - Tank Farm	Seattle	Remedial Investigation	In Process	08/01/88	06/30/90
	Boeing Co- Renton	Renton	Feasibility Study	In Process	04/01/89	06/01/90
	Bronson Way Texaco	Renton	Operation and Maintenance	Completed	02/01/88	07/30/89
			Long-Term Monitoring	In Process	06/01/88	09/30/90
	Cedar Falls Landfill	North Bend	Initial Investigation	Completed	07/06/88	09/06/88
	Cedar Hills Landfill	Issaquah	Initial Investigation	In Process	02/01/89	06/01/90
	Central Painting	Seattle	Remedial Action/Construction	Completed	10/17/88	11/14/88
			Operation and Maintenance	Completed	01/30/89	12/31/89
	Champion Intnatl- Ballard Mill	Seattle	Administrative Order (RI/FS)	Completed	04/01/89	09/29/89
			Remedial Investigation	In Process	10/01/89	06/30/90
			Feasibility Study	In Process	10/01/89	06/30/90
	Chemcentral Solvents Co	Kent	Initial Investigation	Completed	03/01/89	04/01/89
			Remedial Investigation	Completed	06/01/89	11/15/89
	Custom Circuit Technology	Kirkland	Initial Investigation	Completed	01/01/89	02/10/89
	DOT Landfill	Seattle	Remedial Investigation	In Process	07/01/88	04/01/90
	Gas Works Park(Wa Ntl Gas)	Seattle	Remedial Investigation	Completed	06/01/88	10/01/88
			Feasibility Study	In Process	01/01/89	06/01/90
	Harbor Island	Seattle	Remedial Investigation	In Process	01/01/88	06/30/90
	Hobart Landfill	Issaquah	Remedial Design	Completed	07/07/88	11/01/88
			Remedial Action/Construction	Completed	08/01/88	06/15/89
			Operation and Maintenance	In Process	08/15/89	12/31/20
			Long-Term Monitoring	In Process	10/15/89	12/31/20
	H.P. Construction/Arrow Transp	Richmond Beach	Remedial Investigation	Completed	11/01/89	01/01/90
			Consent Order (RI/FS)	In Process	12/15/89	01/31/90
			Expedited Response Action	Planned	02/01/90	08/01/90
			Cost Recovery	Planned	02/01/90	10/31/92
			Operation and Maintenance	Planned	06/01/90	11/01/92
	J H Baxter & Company Inc	Renton	Remedial Investigation	In Process	11/29/88	02/28/90
			Feasibility Study	In Process	08/01/89	08/01/90
	Kent Highlands Landfill	Kent	Remedial Investigation	In Process	05/15/87	02/26/91
			Feasibility Study	In Process	05/15/87	03/26/91
	Kenworth Truck Company	Seattle	Remedial Investigation	Completed	07/01/88	08/30/88
			Feasibility Study	Completed	10/01/88	03/30/89
	Lake Union Drydock	Seattle	Site Discovery	Completed	07/30/88	08/30/88
			Initial Investigation	Completed	09/01/88	09/30/88
			Preliminary Assessment	Completed	10/01/88	10/30/88
			Site Inspection	Completed	11/01/88	09/30/89
	Lake Washington School Dist.	Kirkland	Remedial Investigation	Completed	09/12/88	09/01/89
			Remedial Design	In Process	09/12/88	03/01/90
			Expedited Response Action	In Process	09/12/88	03/01/90
			Remedial Action/Construction	In Process	09/12/88	03/01/90
			Consent Order (RI/FS)	Completed	10/01/88	02/07/89
			Operation and Maintenance	In Process	01/01/90	01/01/92
	LIDCO	Kent	Consent Order (RI/FS)	Completed	05/01/89	01/15/90
			Remedial Investigation	Planned	03/01/90	05/31/90
			Feasibility Study	Planned	06/01/90	12/01/90
			Remedial Action/Construction	Planned	01/01/91	06/01/91
			Operation and Maintenance	Planned	06/01/91	07/01/21
	Lindal Property	Kent	Site Discovery	Completed	02/01/89	02/28/89
			Initial Investigation	Completed	06/01/89	08/01/89
			Hazard Ranking Score (HRS)	Planned	03/01/90	05/31/90
	Longview Fibre Co.	Seattle	Expedited Response Action	Planned	03/01/90	06/30/90
	Malarkey Asphalt Co.	Seattle	Preliminary Assessment	In Process	08/01/89	06/30/98
	Maralco	Kent	Expedited Response Action	Completed	07/01/88	03/30/89
			Site Inspection	Completed	07/01/88	06/15/89
			Remedial Investigation	In Process	01/15/90	03/30/90
			Feasibility Study	In Process	01/15/90	06/30/90
	Marine Vacuum Service	Seattle	Initial Investigation	Completed	03/09/88	08/01/88
			Expedited Response Action	Completed	07/01/88	08/10/88
	Metro North Bus Base	Seattle	Remedial Action/Construction	Completed	07/01/88	07/31/88
			Operation and Maintenance	Completed	07/02/88	09/30/88
	Metro South Base	Seattle	Remedial Action/Construction	Completed	06/30/88	12/30/88
			Operation and Maintenance	In Process	12/01/88	07/01/90
	Midway Landfill	Seattle	Remedial Investigation	In Process	08/15/86	05/30/90
			Feasibility Study	In Process	08/15/87	08/30/90
			Record of Decision	Planned	09/15/90	11/30/90

County	Site Name	Nearest City or Town	Site Activity	Status (as of 1/90)	Start Date	Completion Date
King (continued)	Mobil Bulk Facility- Renton	Renton	Operation and Maintenance	In Process	07/01/88	12/31/90
	Monterey Apartments Site	Seattle	Remedial Investigation	Planned	02/15/90	05/31/90
			Feasibility Study	Planned	04/01/90	09/30/90
	Non-Ferrous Metals, Inc.	Seattle	Remedial Investigation	In Process	12/19/88	06/30/90
	PACCAR	Renton	Cost Recovery	In Process	02/01/88	12/31/92
			Remedial Investigation	Completed	07/01/88	04/30/89
			Consent Decree (RI/FS)	Completed	08/01/88	02/23/89
			Feasibility Study	In Process	09/01/88	04/01/90
			Remedial Design	In Process	01/01/90	06/30/90
			Remedial Action/Construction	Planned	03/01/90	12/01/90
			Record of Decision	Planned	04/01/90	05/31/90
			Consent Decree (RD/RA)	Planned	04/01/90	06/30/90
	Queen City Farms (A)	Issaquah	Remedial Investigation	In Process	06/01/88	09/01/90
			Preliminary Assessment	Completed	02/01/89	04/01/89
			Feasibility Study	In Process	04/15/89	06/15/91
			Record of Decision	Planned	09/01/90	06/30/91
	Queen City Farms (B)	Seattle	Remedial Investigation	In Process	06/15/88	12/15/90
			Record of Decision	Planned	03/30/91	06/30/91
	Quendall Terminals	Renton	Remedial Investigation	In Process	12/15/88	03/01/90
			Feasibility Study	In Process	08/01/89	08/01/90
	Redondo Oil Pit, King Co.	Redondo	Screening Site Inspection	In Process	08/01/89	06/30/90
	Seattle Iron & Metals	Seattle	Remedial Investigation	In Process	12/19/88	06/30/90
	Shell, Old- Term 18/Port of Se	Seattle	Remedial Investigation	In Process	08/01/88	06/30/90
	Shell- Tank Farm	Seattle	Remedial Investigation	Planned	10/01/90	03/31/91
			Feasibility Study	Planned	06/15/91	12/15/91
	Sternoff Metals	Seattle	Preliminary Assessment	In Process	08/01/89	06/30/90
	Texaco Marketing & Refining-HI	Seattle	Remedial Investigation	In Process	08/01/88	06/30/90
	Unocal-Seattle Marketing Term.	Seattle	Feasibility Study	Completed	07/01/88	09/30/88
			Remedial Design	Completed	02/01/89	05/08/89
			Remedial Action/Construction	In Process	05/09/89	06/30/94
	Value Plating & Metal Pol	Seattle	Remedial Investigation	In Process	12/19/88	06/30/90
	Western Processing Co Inc	Kent	Remedial Action/Construction	In Process	07/01/88	12/31/95
	Zandt Brass Foundry	Seattle	Consent Decree (RI/FS)	Completed	07/01/88	10/03/89
			Remedial Investigation	In Process	11/01/89	05/30/90
Kitsap	Bainbridge Isl LF	Bainbridge	Site Discovery	Completed	07/01/88	07/30/88
	Bangor Ordinance Disposal	Bangor	Remedial Investigation	In Process	10/01/88	03/30/90
	Eagle Harbor (Wyckoff)	Bainbridge Is	Remedial Investigation	Completed	01/09/87	12/31/89
	Strandley/Manning Site	Port Orchard	Feasibility Study	In Process	12/01/88	01/31/90
			Remedial Action/Construction	In Process	01/15/90	01/15/93
	US Navy Undersea Warfare St	Keyport	Remedial Investigation	In Process	01/01/89	02/01/91
	US Navy-Bangor Submarine Base	Bangor	Remedial Investigation	In Process	01/01/90	01/01/93
Kittitas	Mid-State Aviation	Ellensburg	Initial Investigation	Completed	03/28/88	03/01/89
			Hazard Ranking Score (HRS)	In Process	04/01/89	06/30/90
			Site Inspection	In Process	04/01/89	03/01/90
Klickitat	Columbia Aluminum Corporation	Goldendale	Site Inspection	Completed	09/01/88	05/15/89
			Preliminary Assessment	Completed	09/01/88	05/15/89
Lewis	American Crossarm & Conduit	Chehalis	Emergency Action	Completed	11/25/86	01/25/89
			Emergency Action	Completed	09/01/88	03/01/89
			Feasibility Study	Planned	02/15/90	06/15/91
			Remedial Investigation	Planned	02/15/90	03/15/91
	Grange Supply - Chehalis	Chehalis	Remedial Investigation	Completed	06/28/87	02/28/89
			Initial Investigation	Completed	06/30/88	10/01/88
			Site Discovery	Completed	06/30/88	11/01/88
			Remedial Design	In Process	01/30/89	03/30/90
	Packwood Lumber Company	Packwood	Preliminary Assessment	In Process	08/01/89	06/30/90
Okanogan	Arden's Country Store	Malott	Remedial Investigation	In Process	07/01/89	07/01/90
	Oroville Dump	Oroville	Remedial Investigation	In Process	07/01/88	04/01/90
	Silver Mountain Mine	Loomis	Remedial Investigation	In Process	10/01/88	06/30/90
			Feasibility Study	In Process	10/01/89	09/30/90
	Tonasket Post & Rail	Tonasket	Site Inspection	In Process	08/01/88	04/01/90
			Remedial Investigation	In Process	08/01/88	08/01/90
Pierce	American Lake Gardens	Tacoma	Remedial Investigation	In Process	09/01/88	03/01/90
			Feasibility Study	In Process	12/01/88	08/01/90
	American Plating	Tacoma	Remedial Investigation	Completed	07/01/88	07/31/88
	ASARCO Inc.	Tacoma	Remedial Investigation	In Process	08/01/87	04/30/90
			Feasibility Study	In Process	07/01/88	04/30/90
	B&L Woodwaste Fill	Tacoma	Consent Decree (RI/FS)	Completed	02/01/89	02/28/89
			Remedial Investigation	In Process	10/02/89	06/02/90
			Feasibility Study	In Process	01/02/90	01/02/91
	Cascade Pole Co (McFarland)	Tacoma	Consent Decree (RI/FS)	Completed	02/01/89	08/01/89
	Cascade Timber #1	Tacoma	Site Inspection	Completed	10/01/88	11/01/88
			Consent Order (RI/FS)	Completed	05/07/89	11/07/89
			Feasibility Study	In Process	10/30/89	02/28/90
			Consent Order (RI/FS)	Planned	03/01/90	09/01/90
	Comm Bay-Nearshore	Tacoma	Record of Decision	Completed	07/01/88	09/30/89
			Feasibility Study	Completed	07/01/88	01/31/89
	Comm Bay-Ruston/Vashon	Tacoma	Expedited Response Action	In Process	07/01/87	03/31/90

County	Site Name	Nearest City or Town	Site Activity	Status (as of 1/90)	Start Date	Completion Date
Pierce (continued)	Comm Bay-Ruston/Vashon	Tacoma	Expedited Response Action	In Process	04/01/89	04/01/90
	DuPont/Weyco	Dupont	Remedial Investigation	Completed	09/30/87	08/01/89
			Feasibility Study	Completed	10/01/88	12/30/88
			Consent Decree (RI/FS)	Completed	07/30/89	12/30/89
	D. Street Petroleum	Tacoma	Remedial Investigation	Completed	10/12/87	06/12/89
			Consent Order (RI/FS)	Completed	01/01/89	01/01/89
			Site Inspection	Completed	01/31/89	03/31/89
			Feasibility Study	In Process	01/01/90	11/01/90
	Edward & Dorothy Dorman	Roy	Preliminary Assessment	In Process	08/01/89	06/30/90
	Fife Mobil Station	Fife	Site Inspection	Completed	11/01/88	11/30/88
			Remedial Action/Construction	In Process	03/01/89	03/31/90
	Flash 1 Hour Photo	Puyallup	Preliminary Assessment	In Process	08/01/89	06/30/90
	General Metals	Tacoma	Remedial Investigation	Completed	03/31/88	04/30/89
			Operation and Maintenance	In Process	07/01/88	12/30/90
			Feasibility Study	Completed	08/01/88	05/15/89
			Remedial Design	In Process	10/01/88	04/30/90
			Remedial Action/Construction	In Process	10/01/88	10/31/90
	Kaiser Aluminum & Chem Corp	Tacoma	Initial Investigation	Completed	07/26/88	07/26/88
			Site Inspection	Completed	07/26/88	07/26/88
			Consent Decree (RD/RA)	In Process	01/08/90	06/30/90
	Lakewood/Ponders Corner	Tacoma	Operation and Maintenance	In Process	07/01/88	06/30/94
	Louisiana Pacific	Tacoma	Feasibility Study	Completed	06/01/88	04/01/89
			Remedial Investigation	Completed	10/01/88	12/30/88
			Record of Decision	Completed	03/21/89	06/21/89
			Administrative Order (RD/RA)	In Process	12/01/89	03/01/90
			Remedial Design	Planned	03/01/90	07/01/90
	McChord AFB (Wash Rack Area)	McChord AFB	Remedial Investigation	In Process	09/01/88	12/01/90
	McNeil Island	Steilacoom	Administrative Order (RD/RA)	Planned	03/01/90	03/01/90
	Parkland Cleaners	Parkland	Consent Decree (RI/FS)	Completed	04/30/89	12/15/89
			Consent Decree (RD/RA)	In Process	12/15/89	09/15/90
	Pennwalt Corporation	Tacoma	Site Inspection	Completed	07/01/88	07/31/88
			Remedial Investigation	In Process	11/01/88	03/01/90
			Consent Decree (RI/FS)	In Process	01/15/90	07/15/90
			Expedited Response Action	In Process	01/16/90	03/16/90
			Feasibility Study	Planned	07/30/90	07/30/91
			Remedial Design	Planned	08/01/91	08/30/92
			Remedial Action/Construction	Planned	09/01/92	09/30/95
	Pennwalt-3009 Taylor Way Site	Tacoma	Remedial Investigation	In Process	12/01/87	03/30/90
			Feasibility Study	Completed	07/01/88	07/31/88
		Tacoma	Site Inspection	Completed	09/01/88	09/30/88
	Petarcik	Tacoma	Site Inspection	Completed	07/01/88	06/01/89
			Long Term Monitoring	In Process	03/01/89	01/01/92
	Portac	Tacoma	Remedial Design	Completed	07/20/88	08/31/89
			Remedial Action/Construction	Completed	08/31/88	06/30/89
			Consent Decree (RI/FS)	Completed	09/01/88	09/30/88
			Operation and Maintenance	In Process	07/01/89	07/01/90
	Reichhold Chem Inc	Tacoma	Site Inspection	Completed	11/01/88	11/30/88
	Simpson - Tacoma Kraft Co.	Tacoma	Operation and Maintenance	In Process	10/01/88	01/01/18
	Tacoma Landfill	Tacoma	Consent Decree (RD/RA)	Completed	03/15/89	12/15/89
	Tacoma Spur/24th and A	Tacoma	Operation and Maintenance	In Process	07/01/88	06/30/91
	Tacoma Swamp	Tacoma	Feasibility Study	In Process	11/22/87	06/01/90
			Remedial Investigation	In Process	10/01/88	07/22/91
	Tacoma Tar Pits	Tacoma	Remedial Design	In Process	07/01/88	07/01/90
	Thun Field Landfill	Puyallup	Remedial Investigation	Completed	08/27/87	04/27/89
			Remedial Investigation	In Process	08/27/88	04/27/90
			Feasibility Study	In Process	01/01/90	07/27/90
			Record of Decision	Planned	12/30/90	03/30/91
	US Army-Fort Lewis-Ldfl No5	Fort Lewis	Remedial Investigation	In Process	10/01/88	02/01/90
	USARMY-Ft Lewis Logistics Cntr	Fort Lewis	Remedial Investigation	In Process	01/01/89	03/01/90
			Feasibility Study	In Process	01/01/89	03/01/90
			Record of Decision	Planned	03/01/90	06/30/91
	Wasser Winters	Tacoma	Consent Order (RI/FS)	Completed	09/01/88	10/31/88
	Well 12A	Tacoma	Remedial Design	In Process	02/01/85	07/01/90
			Remedial Action/Construction	Completed	10/30/87	01/15/89
			Operation and Maintenance	In Process	06/25/88	06/25/98
			Consent Decree (RD/RA)	Completed	07/01/88	10/01/88
			Remedial Action/Construction	In Process	11/05/89	07/05/90
Skagit	EDB 2 Skagit County	MT. Vernon	Remedial Action/Construction	In Process	09/30/88	09/30/91
	Impact Industries Sulphur Pile	Mt. Vernon	Initial Investigation	Completed	08/01/88	10/01/88
	Mt Vernon Gasoline Spill	Mt. Vernon	Operation and Maintenance	In Process	08/01/88	02/15/90
	Sedro Woolley Gas Spill/Leak	Sedro Woolley	Operation and Maintenance	Completed	08/01/88	03/15/89
Snohomish	Everett Tire Fire	Everett	Consent Order (RI/FS)	Completed	10/01/89	01/17/90
	US- Defense Fuel Supply Point	Mukilteo	Site Discovery	Completed	10/01/88	11/01/88
			Initial Investigation	Completed	11/01/88	12/01/88
			Preliminary Assessment	Completed	12/01/88	02/28/89
			Administrative Order (RI/FS)	In Process	03/01/89	01/31/90

County	Site Name	Nearest City or Town	Site Activity	Status (as of 1/90)	Start Date	Completion Date
Snohomish (continued)	Wallace River Park Well	Startup	Site Discovery	Completed	01/31/89	02/07/89
			Initial Investigation	Completed	02/03/89	03/05/89
			Expedited Response Action	Completed	02/20/89	04/01/89
			Hazard Ranking Score (HRS)	Planned	04/01/90	05/31/90
	Weyerhacuser Kraft-Everett	Everett	Initial Investigation	Completed	12/05/88	12/05/88
	Weyerhacuser- Lumber Mill E	Everett	Site Discovery	Completed	08/03/89	09/03/89
			Initial Investigation	Completed	09/04/89	11/30/89
Spokane	Alaska Steel and Supply	Spokane	Preliminary Assessment	In Process	08/01/89	06/30/90
	Colbert Landfill	Spokane	Consent Decree (RD/RA)	Completed	01/12/88	02/28/89
			Remedial Design	In Process	03/01/89	08/01/92
			Remedial Action/Construction	Planned	09/01/92	07/01/93
			Long-Term Monitoring	Planned	07/01/93	07/01/13
			Operation and Maintenance	Planned	07/01/93	07/01/13
	General Electric-Old Site	Spokane	Remedial Investigation	In Process	02/15/86	06/30/90
			Feasibility Study	In Process	04/15/88	07/01/91
	Gober Marshall Septage Site	Marshall	Site Inspection	Completed	10/14/87	01/06/89
	Greenacres Landfill	Spokane	Remedial Investigation	Completed	10/02/87	11/13/89
			Feasibility Study	In Process	04/02/89	04/06/90
			Record of Decision	Planned	04/01/90	05/01/90
	Hagen Dry Cleaners	Spokane	Site Inspection	Completed	05/25/88	09/05/88
	Inland Metals,Inc.	Spokane	Preliminary Assessment	In Process	08/01/89	06/30/90
	Kaiser Aluminum & Chem. Corp.	Spokane	Feasibility Study	In Process	01/01/90	03/30/90
			Consent Decree (RD/RA)	Planned	07/01/90	12/30/90
	Kaiser Aluminum - Trentwood	Spokane	Site Inspection	Completed	10/19/88	12/19/88
	Mica Landfill	Spokane	Remedial Investigation	In Process	01/04/88	06/18/90
			Feasibility Study	In Process	06/15/89	06/18/90
			Record of Decision	Planned	02/01/90	09/30/90
	North Market Street	Spokane	Remedial Investigation	In Process	10/15/85	06/30/91
	Northside Landfill	Spokane	Remedial Investigation	Completed	03/16/88	09/30/88
			Feasibility Study	Completed	03/31/88	09/30/88
			Record of Decision	Completed	09/30/88	09/30/89
	Spokane Intnl.Arpt.Business Pk	Spokane	Screening Site Inspection	In Process	08/01/89	06/30/90
	USAF-Fairchild Air Base	Spokane	Remedial Investigation	In Process	01/01/90	09/01/91
Stevens	Dawn Mining Company Mill Ponds	Ford	Preliminary Assessment	Completed	08/19/88	09/01/88
			Screening Site Inspection	In Process	08/01/89	06/30/90
Thurston	C B Bumper Company Inc	Olympia	Operation and Maintenance	In Process	01/01/89	07/30/99
	Cascade Pole Inc - McFarland	Olympia	Consent Decree (RI/FS)	In Process	05/01/89	03/01/90
			Feasibility Study	In Process	01/01/90	11/01/90
			Expedited Response Action	In Process	01/01/90	10/01/90
			Record of Decision	Planned	11/01/90	02/01/91
			Remedial Design	Planned	02/01/91	02/01/92
			Remedial Action/Construction	Planned	02/01/92	02/01/95
	Ceder Creek Corrections (DNR)	Littlerock	Consent Decree (RD/RA)	Planned	03/01/90	12/01/90
	Lacey Compound(DNR)	Lacey	Consent Decree (RD/RA)	Planned	03/01/90	12/01/90
Walla Walla	Boise Cascade - Wallula	Wallula	Operation and Maintenance	In Process	01/01/87	03/31/90
	Walla Walla Farmers Coop	Walla Walla	Remedial Investigation	Completed	01/15/89	03/30/89
			Feasibility Study	In Process	04/01/89	02/28/90
			Remedial Design	In Process	01/01/90	03/31/90
			Remedial Action/Construction	In Process	01/01/90	08/01/92
Whatcom	Acme/LUSTs	Acme	Initial Investigation	Completed	12/01/88	06/01/89
			Hazard Ranking Score (HRS)	In Process	06/15/89	06/01/90
	EDB 3 Whatcom County	Lynden	Remedial Action/Construction	In Process	08/30/88	09/30/91
	Georgia Pac-Bio Trtmt Lgn	Bellingham	Feasibility Study	Completed	01/01/89	12/31/89
			Remedial Investigation	Completed	01/01/89	12/31/89
	Northwest Transformer-Slvg	Everson	Feasibility Study	Completed	02/01/88	08/30/88
			Record of Decision	Completed	10/01/88	09/30/89
	Olivine Ash Landfill	Bellingham	Site Discovery	Completed	07/01/88	10/30/88
	Thermal Reduction Landfill	Bellingham	Site Discovery	Completed	06/01/88	08/01/88
			Initial Investigation	Completed	10/01/88	12/31/88
			Expedited Response Action	Completed	09/06/89	12/15/89
Yakima	Evergreen Products	Parker	Site Inspection	Planned	06/01/91	03/01/92
			Preliminary Assessment	Planned	08/01/91	06/30/92
			Remedial Investigation	Planned	07/01/92	12/01/93
	FMC-Farm Machinery Corp	Yakima	Feasibility Study	In Process	06/01/88	03/31/90
			Record of Decision	In Process	01/01/89	06/30/90
			Remedial Design	In Process	04/04/89	09/30/90
	Frank Wear Cleaners	Yakima	Screening Site Inspection	In Process	08/01/89	06/30/90
	Richardson Airways, Inc.	Yakima	Remedial Investigation	In Process	09/01/89	12/01/90
	Sunnyside Municipal Well	Sunnyside	Remedial Investigation	Planned	04/01/90	12/01/91
	Yakima Valley Spray Co.	Yakima	Site Inspection	Completed	08/01/88	06/01/89
			Remedial Investigation	In Process	07/01/89	12/30/90
	Zwight Logging	Yakima	Screening Site Inspection	In Process	08/01/89	06/30/90

Local Toxics Control Account Grants Status Report

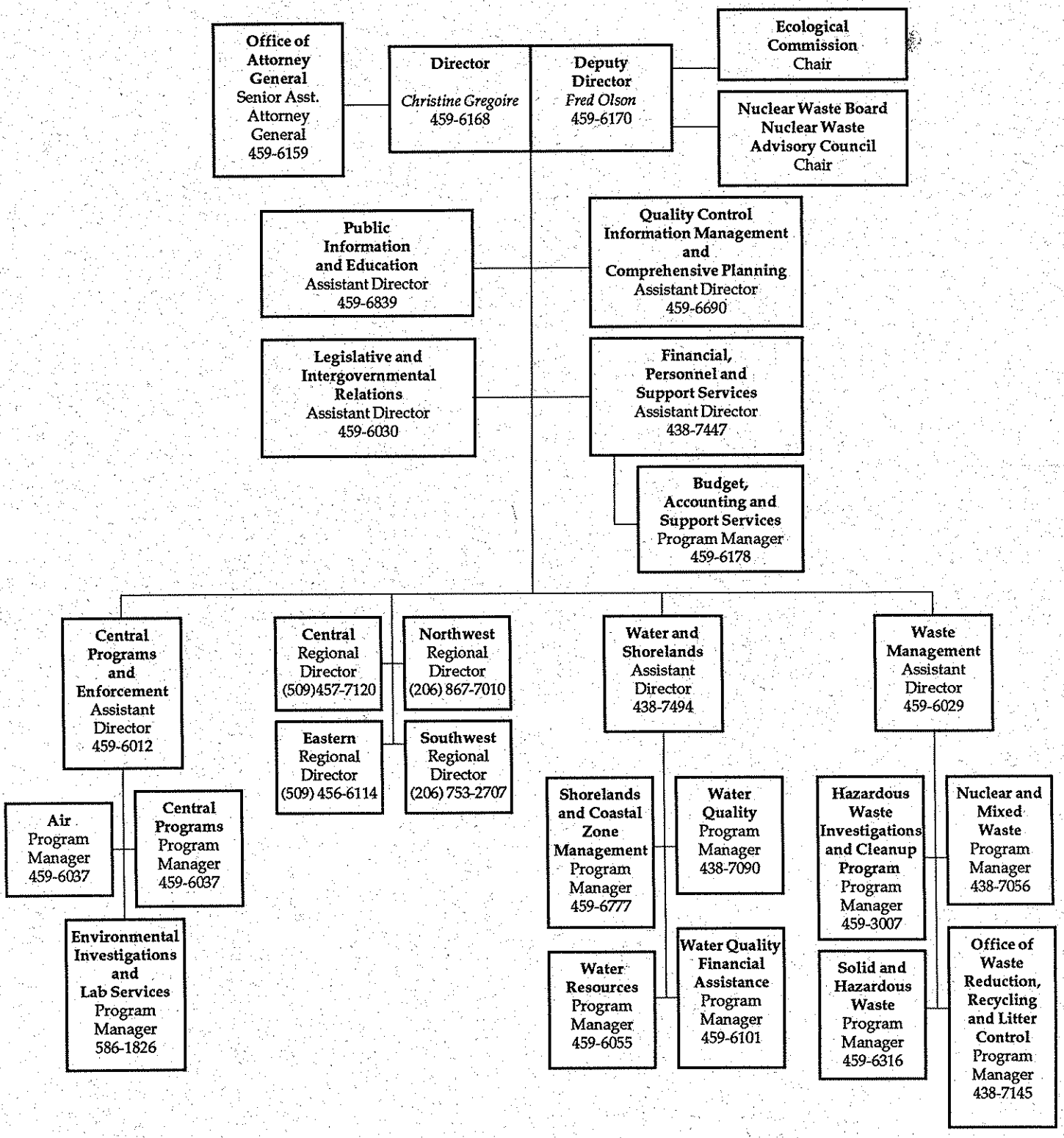
July 1, 1988 - June 30, 1989

Project Category Description	Grantee Name	Project Cost	Ecology Share	Grant Award Date
Citizen Proponent Negotiation	Washington State University	$1,500	$1,500	12/04/88
	Total	**$ 1,500**	**$ 1,500**	
Ground Water Monitoring Wells	Adams County	$100,000	$50,000	01/05/89
	Asotin County	110,000	50,000	11/21/88
	Carnation, City of	45,228	22,614	11/21/88
	Cashmere, City of	21,673	10,836	12/15/88
	Centralia, City of	31,160	15,580	05/02/89
	Chelan County	95,000	45,000	12/14/88
	Clallam County	48,193	24,097	11/21/88
	Clark County	35,640	17,820	05/11/89
	Douglas County	100,000	50,000	03/13/89
	Electric, City of	83,380	41,690	12/29/88
	Garfield County	40,644	20,322	03/03/89
	Grandview, City of	94,600	47,300	02/08/89
	Grant County	75,900	37,950	12/01/88
	Kittitas County	100,000	50,000	12/19/88
	Klickitat County	100,000	50,000	12/07/88
	Lincoln County	41,507	20,753	01/12/89
	Lincoln County N.W.	43,080	21,540	01/12/89
	Monroe, City of	36,200	17,600	12/22/88
	Odessa, City of	56,194	28,097	01/24/89
	Okanogan County	114,831	50,000	12/01/88
	Skagit County	95,896	46,948	12/01/88
	Snohomish County	51,563	25,781	04/13/89
	Stevens County	100,000	50,000	04/24/89
	Thurston County	100,000	50,000	12/14/88
	Whitman County	73,200	36,600	02/05/89
	Yakima County	100,000	50,000	05/05/89
	Total	**$1,893,889**	**$930,528**	
Household HW Collection Days	Benton-Franklin Gov. Conference	$ 42,000	$ 20,000	04/20/89
	Cowlitz-Wahkiakum Counties	42,500	21,250	05/11/89
	Hood Canal Coord. Council	125,000	60,000	12/14/88
	King County-METRO	335,000	45,000	05/31/89
	Spokane, City of	44,500	22,250	05/16/89
	Tacoma, City of	68,830	30,010	09/23/88
	Total	**$657,830**	**$198,510**	

Project Category Description	Grantee Name	Project Cost	Ecology Share	Grant Award Date
Local HW Planning	Bellingham, City of	$ 31,550	$ 31,550	03/10/89
	Clallam County	102,000	76,500	11/18/88
	Jefferson County	69,019	51,764	11/10/88
	*King County	217,000	54,273	05/25/88
	*Kitsap County	101,286	21,668	03/18/88
	Kittitas County	66,425	49,819	10/31/88
	Klickitat County	72,200	54,150	12/01/88
	Lewis County	58,458	43,843	01/09/89
	Mason County	73,746	55,310	04/09/89
	Okanogan County	101,200	75,900	05/11/89
	Pacific County	66,000	49,500	12/29/88
	*Tacoma-Pierce County Health Dept.	239,805	49,995	03/18/88
	San Juan County	21,245	15,934	03/10/89
	*Seattle-METRO	135,000	33,754	03/18/88
	*Seattle, City of	216,000	54,000	05/25/88
	*Seattle-King Co. Public Health	76,600	19,450	06/03/88
	Skagit County Council of Gov't	62,500	46,875	03/09/89
	Snohomish County	353,823	229,999	03/10/89
	Spokane, City of	257,500	257,500	04/13/89
	Stevens County	81,000	60,750	04/13/89
	Thurston County	125,990	125,990	04/13/89
	Yakima County	120,675	108,608	04/12/89
	Total	**$2,649,022**	**$1,567,132**	
Local SW Planning	Asotin County	$ 34,700	$ 17,350	06/27/89
	Clallam County	66,000	33,000	05/26/89
	Douglas/Chelan Co.	88,298	44,149	06/22/89
	Garfield County	16,000	8,000	06/23/89
	Jefferson County	65,098	32,549	06/22/89
	Kittitas County	56,004	28,002	10/28/88
	Klickitat County	65,000	27,850	12/01/88
	Mason County	75,330	37,665	11/16/88
	Okanogan County	98,430	49,215	06/23/89
	Pacific County	179,400	89,700	06/22/89
	Stevens County	112,676	56,338	06/27/89
	Thurston County	146,988	71,494	03/09/89
	Whitman County	50,000	25,000	06/22/89
	Yakima County	65,438	31,719	05/25/89
	Total	**$1,119,362**	**$552,031**	
HW Pilot Projects	Seattle, City of	$227,900	$50,000	05/31/89
	Total	**$227,900**	**$50,000**	
Recycling Facilities	Clark County	$ 25,350	$ 19,012	05/10/89
	Grandview, City of	35,000	26,250	06/27/89
	Hoquiam, City of	27,500	20,625	04/17/89
	Jefferson County	261,406	196,054	02/26/89
	Okanogan County	77,167	57,875	03/27/89
	Olympia, City of	40,000	30,000	02/23/89
	Snohomish, City of	87,040	65,280	05/11/89
	Thurston County	409,692	307,270	03/02/89
	Walla Walla County	20,094	15,071	03/10/89
	Whitman County	244,375	183,281	02/28/89
	Yakima County	79,080	59,310	03/10/89
	Total	**$1,306,704**	**$980,028**	

** Additional funding for these projects was provided through the Water Quality Account.*

Department of Ecology Organization



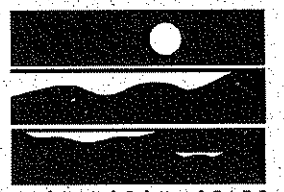
Mission Statement

The Department of Ecology's purpose 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.

A 12-point strategy

To accomplish this mission, the department will:

- Recognize its most valuable asset is its dedicated and committed employees and it will provide necessary support, training and professional development.
- Promote prevention and conservation as the most effective ways to preserve our natural resources and protect the environment.
- Enforce environmental laws and regulations in a fair and firm manner.
- Provide public education programs to promote wise use of our natural resources and encourage environmental protection.
- Offer information, technical and financial assistance to help the public, governments, businesses and industries comply with environmental laws and regulations.
- Promote the recognition that compliance with environmental laws and regulations is compatible with a sound economy.
- Provide meaningful public involvement in the development of rules, regulations and new initiatives.
- Provide leadership in addressing emerging problems and strive to bring public agencies and diverse interest groups together to address environmental issues.
- Use an integrated approach to resolve environmental issues.
- Place special emphasis on educating and working with youth to create a strong environmental ethic.
- Help state agencies set an example in environmental protection.
- Work with the executive and legislative branches to promote sound environmental policy.



Washington State
Department of Ecology
Mail Stop PV-11

Phone: (206) 438-3000

BULK RATE
U.S. POSTAGE PAID
Washington State
Department of Printing