

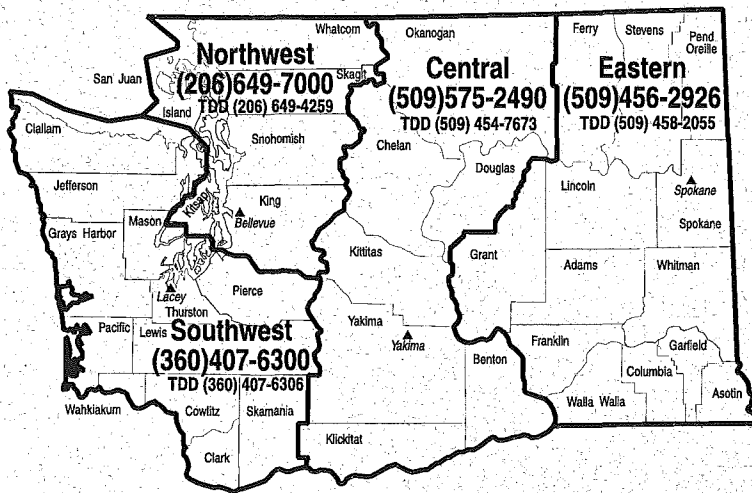
# Model Toxics Control Act

## *1996 Annual Report*

# Washington State Department of Ecology Mission Statement

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.

# Washington State Department of Ecology Regional Offices



### Cover photo:

Cleanup workers install liner at the Mica Landfill in Spokane County.

*The Department of Ecology is an equal opportunity agency and does not discriminate on the basis of race, creed, color, disability, age, religion, national origin, sex, marital status, disabled veterans status, Vietnam Era veterans status or sexual orientation.*

*If you have special accommodation needs or require this document in alternative format, please contact Carol Perez at (360) 407-7173 (Voice) or (360) 407-6006 (TDD).*

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## Director's Message

Our job is clear at the Department of Ecology — to protect, preserve, and enhance the quality of our state's air, land, and water. Getting contaminants out of the environment is how members of the Toxics Cleanup Program help us do that. Keeping contaminants out of the environment is also a key part of the Toxics Cleanup Program's mission. It and other programs at Ecology and other agencies that receive Model Toxics Control Act dollars work at both getting and keeping contaminants out of the environment.

Each contaminated site in Washington poses a different type and level of risk to people's health and the environment. For example:

- \* Soils that are contaminated by toxic metals, like arsenic, have been discovered in school playgrounds and in backyards as well as at industrial facilities.
- \* Fish and shellfish living on contaminated sediments accumulate toxins in their flesh.
- \* Contamination in ground water can affect drinking water and expose families to harmful chemicals, and leave the ground water unusable for others.

Toxics Cleanup Program staff have developed and are committed to using flexible approaches to carry out the state's cleanup law.

As a result of the program's efforts to get contaminants out of the environment:

- \* half of all known contaminated sites are in the cleanup process; and



- \* a third are now clean enough for redevelopment.

As far as keeping contaminants out of the environment:

- \* 75 percent of the underground storage tanks we've inspected are operating their leak detection systems properly; and
- \* reports of releases from underground storage tanks have been cut in half since the program began.

Our successes are not without ongoing challenges. Over the last year, the Model Toxics Control Act Policy Advisory Committee has been reviewing what the cleanup law directs us to do and how we do it, and evaluating how it is working.

The Policy Advisory Committee, created by the Legislature last year, thoroughly evaluated, discussed, and debated a variety of issues including:

- \* how cleanup remedies are selected;
- \* the effectiveness of independent cleanups;
- \* the effectiveness of public participation at contaminated sites; and
- \* the extent to which site-specific risk assessment should be used.

The committee is now gearing up to offer advice and recommendations to Ecology and the Legislature this December.

Mary Burg, Program Manager of the Toxics Cleanup Program, is my designee to the Policy Advisory Committee. She is confident that the committee's recommendations will further our ability to protect Washington's air, land, and water.

I'm positive that the Toxics Cleanup Program will find even more new ways to get cleanups done faster and better in 1997.

*Mary Riveland*



# Program Manager's Message

In the Toxics Cleanup Program we are aiming to have the worst of the contaminated sites cleaned up, and the majority returned to productive use, by early in the next century.

We spend a majority of our professional staff time and resources getting contaminants out of the environment. We work on the "worst first" -- those sites that pose the highest risk to public health and the environment -- and use flexible or voluntary approaches to get sites that are less of a risk cleaned up faster. In this report you'll see some of the progress we've made over the last year in doing just that.

Keeping contaminants out of the environment is another key part of our mission, so a portion of our time and resources is targeted at preventing new sites from being created. For example, our underground storage tank program helps tank owners and operators improve their business operations to prevent petroleum and other chemical releases to the environment.

Since the Model Toxics Control Act was passed, we've faced challenges in carrying out the cleanup law. We continue to look for ways to meet these challenges. Many of the best ideas for improvement continue to come from our staff in the Toxics Cleanup Program, like the ones we reported on last year and are using successfully this year, including:

- ✱ the one-time, no-fault technical assistance inspection for underground storage tank owners; and
- ✱ the enhanced Initial Investigation pilot program that significantly reduced the number of sites that needed formal Ecology oversight in our Eastern Regional Office.



Some of our challenges are being examined by the Model Toxics Control Act Policy Advisory Committee. As Mary Riveland's delegate to the committee, I have participated in problem-solving sessions on tough issues. We present these issues to you in this year's report. My job is to help develop recommendations to improve our implementation of the Model Toxics Control Act for faster, better, less costly cleanups that still protect the health of our citizens and our environment. When the committee has completed its work, it will be my task to carry out the committee's recommendations within the limits of our resources.

Another notable challenge we're facing is the scheduled 1999 sunset of the underground storage tank program. Within the Toxics Cleanup Program we are beginning to work with a wide variety of parties who have a stake in underground storage tank issues. My vision is to be able to report to a new Governor and Legislature one year from now on:

- ✱ the status of tanks statewide;
- ✱ the safeguards that are in place to prevent releases;
- ✱ our assessment of the ongoing need for a state or local underground storage tank program; and
- ✱ our recommendations — supported by our stakeholders — on how to ensure safe installation and operation of underground storage tanks after 1999.

Next year, we'll be able to share with you any changes to the state's cleanup law resulting from the Policy Advisory Committee's recommendations to Ecology and the Legislature. We'll also report on how far we've come in our examination of the underground storage tank program.

We are always looking for ways to improve the quality of services the Toxics Cleanup Program provides. I welcome any ideas you, our readers, may have for better, more efficient, and cost-effective ways to get contaminants out of the environment and keep them out.

*Mary E. Burg*

# Revenue and Expenses

## Hazardous Substance Tax Funds Activities

Funding for the Model Toxics Control Act (MTCA) activities is provided through two tax-generated accounts: The State Toxics Control Account for state agency programs, and the Local Toxics Control Account for grants to local governments. Some revenue is also generated for the accounts through cost-recovery actions, penalties, and other legislative appropriations.

The primary source of revenue to these accounts is the Hazardous Substance Tax. The tax is imposed on the first in-state possessor of hazardous substances at a rate of 0.7 percent, or 7 cents per 10 dollars, of wholesale value. Although thousands of pesticides and 700 different chemicals are also subject to the tax, more than 85% of the tax revenues come from petroleum products.

## Current Revenue Trends Are:

In Fiscal Year 1996, Hazardous Substance Tax revenue amounted to \$40.7 million — a 5% increase from Fiscal Year 1995.

Current projections are for the fund to maintain a moderate growth rate. This projection is attributable largely to the increase of crude oil prices this year, and the expectation of strength in the market price of crude oil for the rest of the fiscal year. The Toxics Cleanup Program is continually trying to improve efficiency and to extract the maximum environmental benefit from the portion of the Toxics Account funds it receives.

## Recovering Our Costs

As of July 1996, Ecology was pursuing active cost-recovery actions on over 100 sites. Cost-recovery efforts assure that state time and expenses directed toward mandatory cleanup actions are recovered. Recovered funds are placed back into the Toxics Control Account. If legislatively appropriated, cost-recovered funds are made available for future cleanup activities. The amount collected from potentially liable persons in cost recovery, and Independent Remedial Action Program (see page 14 for a description of this program) review fees during Fiscal Year 1996 was \$3.1 million, which is consistent with Fiscal Year 1995.

Cost recovery amounts should remain constant during the next year. Emphasis during the coming year will continue to be on improving the payment rate, which historically stands at about 80 percent. Nonpayment is generally a result of the inability to pay, unwillingness to pay, or indecision between parties about the liability of each party when there are several parties involved. In some cases, payment is ultimately made, but only after the cleanup process is complete.

In an effort to increase the payment rate, Ecology charges interest on overdue invoices, sends overdue notices, and may refer accounts to a collection agency. Ecology has entered into settlement agreements, and in one case in Yakima, Ecology is helping the parties to establish a trust account for all cleanup costs -- including oversight. At this site (the Yakima Railroad Area) there are presently 174 parties who are liable for the cleanup.

## How Money is Spent

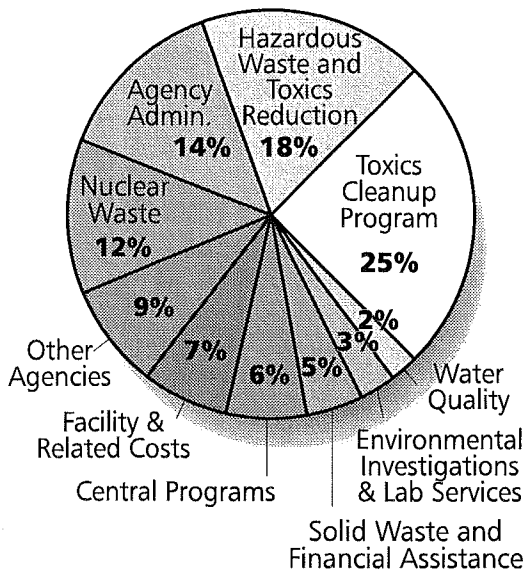
Legislative appropriations are made for both the State and Local Toxics Control Accounts every two years (biennium) based on the expected balances in the accounts and the revenue estimates. The Legislature determines the amount each of the agencies and programs receive.

Currently, funds from the State Toxics Control Account are allocated to the state departments of Ecology, Agriculture, Health, Revenue, State Patrol, and the Office of Marine Safety (See Figure 1: *State Toxics Control Account Expenditures*). Money is spent on activities authorized by the Model Toxics Control Act including site cleanup, health assessments, waste pesticide identification and disposal, and oil spill prevention.

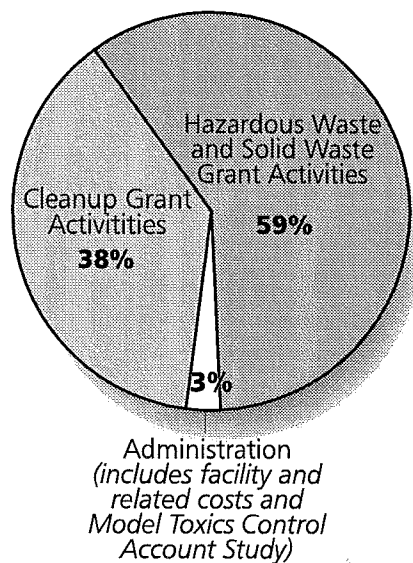
Many of the Toxics Cleanup Program's costs associated with cleanup sites are recoverable from potentially liable persons. Recoverable amounts include "program support costs" as defined in the cleanup regulation. The total recoverable costs including support costs are shown in Table 1: *Model Toxics Control Act 1996 Annual Report Financial Analysis*.

Funds from the Local Toxics Control Account are given to local governments via grants (See Figure 2: *Local Toxics Control Account Expenditures*). Ecology administers the grants program. Local governments may use grants for cleaning up contaminated sites and for plans and programs for managing and reducing solid and hazardous waste. Funds from the local account may also be used to provide drinking water to local jurisdictions with water supplies affected by contaminated sites.

**Figure 1:**  
State Toxics Control Account  
Expenditures



**Figure 2:**  
Local Toxics Control Account  
Expenditures



**Table 1:**  
Model Toxics Control Act 1996 Annual Report Financial Analysis

	Local Toxics	State Toxics
<b>Revenue:</b>		
Taxes	\$21,823,000	\$18,882,000
Hanford Decree		\$3,737,070
Penalties		\$202,885
Cost Recovery		\$2,802,170
Independent Remedial Action Report Fees		\$274,905
Miscellaneous		\$106,858
<b>Total Revenue</b>	<b>\$21,823,000</b>	<b>\$26,005,888</b>

<b>Ecology Expenditures:</b>		
Agency Administration	\$139,445	\$3,365,288
Central Programs		\$1,508,844
Environmental Investigations and Lab Services		\$715,620
Water Quality		\$559,547
Nuclear Waste		\$2,940,567
Hazardous Waste and Toxics Reduction		\$4,366,393
Toxics Cleanup Program	\$5,080,344	\$6,090,430
Solid Waste and Financial Assistance	\$7,787,690	\$1,101,247
Facility & Related Costs	\$161,496	\$1,677,349
<b>Total Ecology</b>	<b>\$13,168,975</b>	<b>\$22,325,285</b>

<b>Other Agency Expenditures:</b>		
Agriculture		\$553,905
Health		\$1,281,719
Marine Safety		\$70,000
Revenue		\$32,130
State Patrol		\$137,147
<b>All Agency Expenditure Total</b>	<b>\$13,168,975</b>	<b>\$24,400,186</b>

**Toxics Cleanup Program Detail —**

<b>Cleanup Activities:</b>		
Interim Action		\$397,983
Pre-Remedial		\$949,438
Remedial Investigations/Feasibility Studies		\$1,762,500
Technical Assistance		\$313,380
Remedial Action	\$4,660,727	\$320,578
Operations & Maintenance		\$109,913
Independent Remedial Actions		\$216,065
Permits		\$124,612
Natural Resource Damage Assessments		\$85,569
Site Hazard Assessments	\$370,245	\$135,657
<b>Activity Total</b>	<b>\$5,030,972</b>	<b>\$4,415,695</b>

<b>Operations &amp; Management</b>		
PIO/Comm Relations		\$275,353
Program Development		\$260,796
Program Support		\$443,370
Training		\$226,069
Regional Support		\$326,311
Model Toxics Control Act Study	\$49,372	\$49,372
<b>Activity Total</b>	<b>\$49,372</b>	<b>\$1,581,271</b>

<b>Match:</b>		
Ecology Match for Fed Asst.		\$51,210
State Toxics Control Act Leaking Underground Storage Tanks		\$42,255
<b>Activity Total</b>	<b>\$0</b>	<b>\$93,465</b>

<b>Summary</b>		
Cleanup Activity	\$5,030,972	\$4,415,695
Operations & Mgm't	\$49,372	\$1,581,271
Match Costs	\$0	\$93,465
<b>Total Toxics Cleanup Program Expenditures</b>	<b>\$5,080,344</b>	<b>\$6,090,431</b>

# Revisiting the State's Cleanup Law: New Challenges

The Model Toxics Control Act was created seven years ago by citizen initiative. Since that time, hundreds of contaminated sites have been identified, investigations have taken place, and cleanups begun and completed. Along the way, viewpoints have been expressed about how the program is conducting business. While some have wanted tighter regulations for cleanups, others have questioned the need for the current level of cleanup standards.

## Policy Advisory Committee

In 1995, a bill was passed in the state legislature requiring a committee to evaluate the effectiveness of the Model Toxics Control Act. This committee, termed the Policy Advisory Committee, includes broad representation of stakeholders and agency representatives. The intent was to create a balanced body to review the Act, provide advice, and develop recommendations to the legislature and the Department of Ecology.

The committee was appropriated \$300,000 — funding for approximately eighteen months. The Policy Advisory Committee and subcommittees meet regularly. All meetings are open for public participation. These subcommittees have been formed to work on the details of key issues surrounding regulations and policies. We expect that in the coming months, regulations, policies, and the Model Toxics Control Act itself, will be revised to reflect these recommendations.

## Priority Questions and Issues

In December 1995, the Policy Advisory Committee issued a preliminary report to the Legislature documenting its progress and identifying priority issues. The committee focused much of its attention on site-specific risk assessments, and the development of interim guidance for sites contaminated with

complex petroleum compounds (Total Petroleum Hydrocarbons or TPH).

Four subcommittees were established to research the following issues and develop proposals for consideration by the committee:

- ✿ Risk Assessment
- ✿ Remedy Selection (includes the interim TPH issue)
- ✿ Independent Cleanups
- ✿ Implementation (of the cleanup law)

A final report will be submitted to the Legislature on December 15, 1996, formalizing the Policy Advisory Committee's conclusions and recommendations.

## Risk Assessment:

The Risk Assessment Subcommittee is examining the use of site-specific risk assessment. Discussions include the implications of expanding this type of assessment and the situations in which this alternative could be used. Issues include:

- ✿ defining an appropriate level of protectiveness;
- ✿ examining exposure pathways; and
- ✿ ecologically based cleanup standards that are protective of the environment.

## Remedy Selection:

The Remedy Selection Subcommittee is exploring issues regarding how remedies are selected at contaminated sites. Issues include:

- ✿ better definition of the remedy selection process and what is meant by "cleanup action levels;"
- ✿ development of an interim TPH Policy that will provide guidance for cleanup of petroleum-contaminated sites; and
- ✿ development of guidance which outlines how costs should be considered in the remedy selection process.

## Independent Cleanups:

The Independent Cleanup Subcommittee reviewed the need to expand technical assistance to people conducting cleanups without Ecology oversight. The Policy Advisory Committee tentatively approved the subcommittee's recommendation that Ecology provide non-binding, written, site-specific technical assistance on request. This recommendation would include an authorization for Ecology to recover the costs from the persons receiving the assistance. This tentative recommendation may change depending on the outcome of the entire and final recommendation package that will be submitted this fall.

The Subcommittee is also looking at how to:

- ✿ involve the public at independent cleanup sites;
- ✿ assess the quality of independent cleanups; and
- ✿ streamline the Independent Remedial Action Program, which offers an Ecology review of independent cleanup reports for a fee.

## Implementation:

There are several areas of focus for the Implementation Subcommittee. This subcommittee is examining how cleanups are accomplished. Key issues include:

- ✿ measures for minimizing and resolving disputes that arise during site cleanups;
- ✿ possibility of providing cleanup incentives;
- ✿ liability issues related to contaminated ground water;
- ✿ methods of enhancing community involvement and public participation; and
- ✿ consideration of the broad issue of area-wide contamination.

This last issue has been presented to the committee through the context of orchard lands contamination.



## Throughout the Process...

Ecology and the Policy Advisory Committee have invited other interested parties to participate in and propose additional questions and issues for review. Information on committee meetings and activities is provided to interested parties through mailings and can be found on the Internet with other Toxics Cleanup Program information (See the "Turning Data Into Information" section of this report).

## Policy Advisory Committee Members

The Model Toxics Control Act Policy Advisory Committee represents diverse interests and a wide range of experience with the state cleanup law. The following 22 members are listed by organization and sector.

Dan Ballbach, Landau and Associates, Consulting Firm, Presiding Officer

Terry Austin, Yakima County, Counties

Len Barson, Friends of the Earth, Environmental/Citizen Organization

Rod Brown, Washington Environmental Council, Environmental/Citizen Organization

Mary E. Burg, Department of Ecology, Government

The Honorable Gary Chandler, House of Representatives, Legislature, District 13

The Honorable Karen Fraser, Senate, Legislature, District 22

Kevin Godbout, Weyerhaeuser, Large Business

Rick Griffith, Stoel Reeves, Small Business

Eric Johnson, Washington Public Ports Association, Ports

Taryn McCain, Boeing, Large Business

Scott McKinnie, Farwest Fertilizer, Agriculture

Sharon Metcalf, City of Seattle, Cities

Jeff Parsons, People for Puget Sound, Environmental/Citizen Organization

Jody Purcel, SAFECO, Finance

The Honorable Nancy Rust, House of Representatives, Legislature, District 32

Mike Sciacca, Washington Oil Marketers Association, Small Business

Gerald Smedes, Smedes & Associates, Private Consultant

The Honorable Dan Swecker, Senate, Legislature, District 20

Laurie Valeriano, Toxics Coalition, Environmental/Citizen Organization

Jim W. White, Department of Health, Government

Julie Wilson, Geo Engineers, Science Advisory Board

## Science Advisory Board

Ecology calls on the Science Advisory Board to address technical issues related to the state's cleanup law. The Board was created in July 1995 and provides independent scientific advice and recommendations on current issues related to cleanup. Members are appointed to the Board by the director of the Department of Ecology.

This past year, the Science Advisory Board has been coordinating its activities with the Policy Advisory Committee and exploring:

- ✱ using the U.S. Environmental Protection Agency's model to determine lead contamination levels that protect children;
- ✱ establishing ecologically based soil cleanup levels; and
- ✱ determining soil cleanup levels that are protective of ground water.

## Board Members

(and their area of expertise) are:

Hank Landau, Landau and Associates, Chair (hydrogeology and engineering)

Bruce Duncan, US Environmental Protection Agency (ecological risk assessment)

Richelle Allen-King, Washington State University (hydrogeology and contaminant transport)

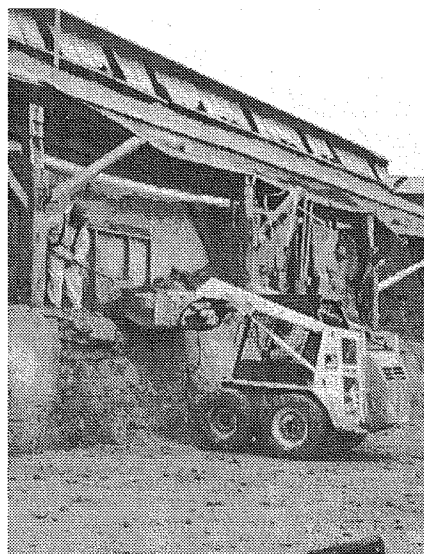
Marjorie Norman, Foster Wheeler (human health risk assessment; petroleum contamination)

Julie Wilson, Geo Engineers (human health risk assessment)

## Pilot Sites

The Policy Advisory Committee selected the L-Bar site in Stevens County, and the U-Haul site (also known as the Yakima Valley Spray site) in Yakima as pilot sites to evaluate the potential regulatory roadblocks to using certain alternative methods of site cleanup to accomplish faster, less-expensive, and equally protective cleanups. Key issues coming up at these sites include how to assess ecological impacts; how much emphasis should be placed on reuse options when selecting cleanup remedies; and how to develop cleanup standards for an urban aquifer.

Removing contaminated debris during emergency interim actions at the L-Bar site in Stevens County.



# Getting Contaminants Out of the Environment

One of the primary missions of the Toxics Cleanup Program is to "get contaminants out of the environment." Of more than 6,500 known sites, almost half are in some stage of the cleanup process, a third are complete, and 20 percent are waiting for source control or cleanup to occur (See Figure 3).

"Getting contaminants out of the environment," or site cleanup, takes many forms. In fact, once contamination has entered the environment it is very difficult to completely remove or clean it up. "Site cleanup" is often used in a general sense to refer to the management of contamination. Cleanup might mean containing the contamination by using physical means such as capping to prevent contamination from spreading. It might mean reducing the amount of contamination present to concentrations that are considered acceptable. Sometimes, cleanup simply means placing a restriction on the property to assure that people are not exposed to contamination left in place.

Program resources are prioritized on the basis of risk to human health and the environment. Cleanup of high-priority sites generally are conducted under formal Ecology oversight. The cost of oversight is recovered from those conducting the cleanup.

The Toxics Cleanup Program is developing flexible remedial options aimed at expediting risk reduction and reducing the amount of resources needed to get cleanup work done. For example, local health districts in ten counties are now conducting site hazard assessments. As a result of this partnership, local health districts last year completed 80 assessments.

Following is a description of the formal cleanup process. Numbers beneath process steps reflect totals at the time this spring when our databases began conversion to the Information Integration Project (See the "Turning Data Into Information" section of this report for a description of this project).

## How The Toxics Cleanup Program Goes About the Process Of Cleanup



### Site Discovery (6568 sites)

When a site is found with contamination resulting from past practices it must be reported to Ecology's Toxics Cleanup Program. The persons who will be conducting cleanup may choose to work independent of Ecology's oversight and report the results to the department. Special reporting requirements apply to leaking underground storage tanks.



### Initial Investigation (3596 completed)

Ecology investigates a reported site and determines whether:

- \* no further action is needed, or
- \* to place the site on Ecology's site information system database and slate it for future evaluation in a site hazard assessment and possible action, or
- \* to refer it to a more appropriate local, state, or federal authority for action.



### Site Hazard Assessment (55 in progress, 813 complete)

The purpose of this limited study is to:

- \* determine what hazardous substances, if any, are present at the site, and get an idea of the concentrations and the extent of the contaminated area;
- \* identify physical characteristics of the site and how hazardous substances might move through the environment; and
- \* evaluate the potential for threat to human health and the environment.

A site hazard assessment may result in a determination of no further action. If the results of the study show that further action is required at a site, Ecology places the site on the Hazardous Sites List. The site is ranked relative to other sites that have undergone the same evaluation. The Toxics Cleanup Program uses this ranking process to assist in prioritizing staff resources and enforcement efforts. The Hazardous Sites List currently contains 670 sites.



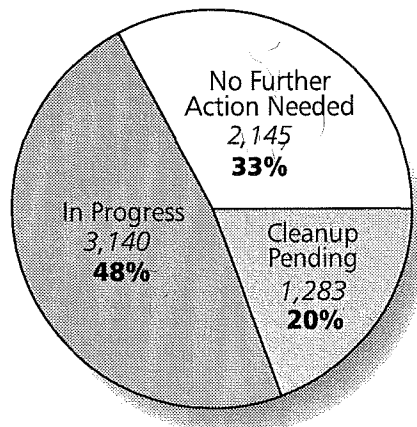
### Interim/Emergency Cleanups (36 in progress, 115 complete)

An interim action partially addresses the cleanup of a site and is performed to:

- \* speed risk reduction;
- \* stabilize or correct a problem that may become much worse or much more costly to fix if action is delayed; and
- \* complete a phase of the cleanup process.

Public notice and opportunity to comment is required.

**Figure 3:** Getting contaminants out of the environment, 7/88 to 3/96 (Total Sites: 6,568)

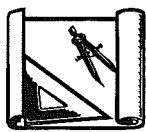




**Remedial Investigation/ Feasibility Study**  
(93 in progress, 159 complete)

Eliminating major human health and environmental impacts at a contaminated site is a sizable engineering project. Careful study and planning are needed to make decisions that are sound environmentally and economically. The remedial investigation provides specific, detailed information about the contamination at a site. This detailed information is used during the feasibility study, when Ecology and the persons conducting the cleanup develop and evaluate options for site cleanup.

*Public notice and opportunity to comment is required.*



**Cleanup Action Plan**  
(20 in progress, 103 complete)

From the Feasibility Study, Ecology and the persons conducting the cleanup select the option they think will best accomplish the cleanup objectives. This option is proposed to the public as a "Draft Cleanup Action Plan." In addition to the proposed method of cleanup, the plan specifies standards for evaluating the effectiveness of the cleanup. The cleanup plan is finalized after public comments are considered.

*Public notice and opportunity to comment is required.*



**Cleanup Construction**  
(26 in progress, 89 complete)

"Construction" is used to describe a variety of cleanup activities. These range from simple soil removals to complicated projects involving several activities designed to address different media, contaminants, or areas of a site.

The Model Toxics Control Act requires a preference for cleanup methods in the following order:

1. Reuse or recycling
2. Destruction or detoxification
3. Removal and treatment/destruction of contaminants
4. Immobilization
5. Disposal in a properly constructed landfill
6. Isolation or containment in place
7. Deed/Access controls and monitoring

*Public notice is required.*



**Operation and Maintenance/ Monitoring**  
(52 in progress, 15 complete)

Some cleanup methods require an ongoing program of operation and maintenance. For example, cleanup of contaminated ground water may require a "pump and treat" system that will operate for many years.

Monitoring is needed to know when a cleanup action has achieved the cleanup objectives, or to measure progress toward those objectives.



**Removal from the Hazardous Sites List**  
(32 sites)

A site is removed from the list when a cleanup action has proven effective and cleanup objectives have been met.

*Public notice and opportunity to comment is required.*

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## Part of the Process: Natural Resource Damage Assessments

*Natural resource damage is the destruction of biologic communities and the ecosystems in which they reside, as the result of toxic releases. Ecology is one of several Natural Resource Damage trustee agencies. The Toxics Cleanup Program used \$85,000 of State Toxics Control Account dollars to fund the agency's trustee activities.*

*In areas where natural resource damage has occurred, the trustees work together to assess the economic value of that resource. They then attempt to recover money from the responsible parties to pay for restoration of the resource. This usually is accomplished through legal settlements. Some notable successes to date:*

■ *In Elliott Bay: A sediment cleanup is underway resulting from a \$25 million Natural Resource Damage Assessment settlement with the City of Seattle and Metro/King County. Eventually, habitat restoration will be accomplished as well.*

■ *In Commencement Bay: A \$20 million Natural Resource Damage Assessment settlement has been negotiated with several Potentially Liable Persons. (There is potential for an additional \$20 million in the future.) Most of the settlement funds will be used for habitat restoration of low-quality sediment sites into functioning, high-quality estuarine habitat.*

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# Brownfields — Restoring Contaminated Properties

**B**rownfields are abandoned urban lands or properties that are contaminated from past industrial or commercial practices where redevelopment is complicated by the contamination. Both purchasers and lenders are wary of the liability for cleanup and potential cleanup costs. This can provide an unfortunate incentive for businesses to buy property out in rural areas to develop rather than clean up and develop a contaminated site.

Restoring property to productive use is one of the goals of environmental cleanup. Ecology has put into place various ways of doing business that can help reassure potential buyers. The Independent Remedial Action Program, described on Page 14 is one example. Other examples include:

## Statute and Rule Changes:

Several amendments to the Model Toxics Control Act and the regulations have occurred in the last few years to facilitate cleanup. These include:

- ✱ clarifying the liability of lenders at contaminated sites;
- ✱ exempting some cleanup work from state and local permit requirements;
- ✱ providing for contribution actions to allocate liability among responsible persons;
- ✱ changing the state's hazardous waste law to facilitate cleanup;
- ✱ allowing broader use of agreed orders; and
- ✱ expanding the areas eligible to use less stringent industrial soil cleanup standards.

## Prospective Purchaser Agreements:

These agreements are a unique type of consent decree tailored for persons who want to purchase, clean up, and redevelop contaminated properties. Cleanup requirements are specified in the agreement, resolving liability and allowing cleanup costs to be estimated prior to purchase.

## Prepayment Contracts:

These contracts allow liable persons to request Ecology's oversight of remedial actions they conduct on a site. It allows cleanup and development of sites

which otherwise might not be cleaned up as soon. When entering into a contract, the liable person agrees to pay a portion of Ecology's oversight costs in advance.

## Other Agencies:

Ecology coordinates with other agencies such as the Department of Community, Trade and Economic Development; Office of the Insurance Commissioner; Department of Health; Department of Natural Resources; United States Environmental Protection Agency (EPA); and others in efforts to expedite the cleanup of Brownfields sites.

**Table 2:**  
Brownfields Grants Awarded Since 1993

<b>Completed Projects:</b>			
<b>Site</b>	<b>Original Use:</b>	<b>New Use:</b>	<b>Grant Amount:</b>
<i>Port of Tacoma</i>	Sitcum Waterway Moorage	Marine Terminal	\$3,537,863
<i>Murray-Pacific Log Yard #2</i>	Log Sort Yard	Intermodal Terminal	\$245,335
<i>Snohomish County</i>	McCollum Park Landfill	Park n'Ride	\$2,937,291
<i>City of Hoquiam NC Machinery</i>	Fueling Station	Farmer's Market	\$70,811
<i>Morris Leonard Site</i>	Industrial	Commercial & Public	\$533,833
<b>Pending Projects:</b>			
<b>Site</b>	<b>Original Use:</b>	<b>New Use:</b>	<b>Grant Amount:</b>
<i>City of Tacoma Thea Foss Waterway</i>	Industrial	Commercial & Public	\$1,323,300
<i>King County South Dearborn</i>	Service depot	Commercial & Public	\$563,052
<i>Lake Hills</i>	Sewage treatment	Public	\$1,334,826
<i>Pierce Transit Tacoma Dome Station</i>	Various businesses	Park n'Ride	\$844,400
<i>Port of Seattle SW Harbor</i>	Landfill/industrial	Marine Terminal	\$2,947,399
<i>Port of Pasco</i>	Fuel transfer site	Commercial	\$943,200

## Brownfields Grants

Ecology's Solid Waste and Financial Assistance Program awards grant monies to help restore contaminated properties to productive use. The grants are from the Local Toxics Control Account and have been awarded to public agencies that are doing remedial actions at former industrial and commercial sites. New uses of the sites so far include transportation, commercial, and public use. Ecology is also investigating new ways to promote cleanups at privately owned contaminated industrial properties. Although public funds cannot be awarded to private property owners, there may be incentives which can be given to local governments to help expedite private cleanups. *Table 2: Brownfields Grants Awarded Since 1993* shows a list of projects that have been completed and a list of projects still underway.

*Below:*

*Work is underway at the Newcastle Demolition Landfill Site to line the landfill and construct a golf course.*

## Brownfield Site Highlight: *Newcastle Demolition Landfill Site*

The Newcastle Demolition Landfill began operation under a local permit in 1970. Starting at the turn of the century, the landfill site and surrounding area were mined for coal. Landfilling began in the old mine pits left vacant after mining ceased.

Prior to local regulation of the landfill, 55-gallon drums, some containing hazardous waste, and other materials had been dumped in one of the coal mines in the landfill area. They were subsequently crushed, compacted, and covered. In 1992, at the request of the Coal Creek Development Corporation, Ecology performed a Site Hazard Assessment of the landfill. While no major release of contaminants was found to be occurring at the time, the historic use of the site for hazardous waste disposal led to Ecology adding the landfill to the state's Hazardous Sites List.

The landfill was closed to demolition waste in January 1990. Clean soil, primarily from the I-90 Mercer Island tunnel, was used to cover the waste until January 1993. The landfill was formally closed under a May 1991 closure plan, and environmental monitoring will continue until the year 2014.

A prospective purchaser consent decree was executed with Newcastle Golf in October 1995. Newcastle agreed to take remedial cleanup measures and install liners under the fairway green to reduce infiltration into the landfill and reduce leaching by about one-third. This year they are constructing a golf course in accordance with local requirements for development and operation. No buildings, surface water impoundments, or wells will be located on the 70 acres underlain by the landfill. The golf course is expected to provide a substantial public benefit by creating jobs, providing tax revenue to the new City of Newcastle, and by converting a closed landfill to a landscaped and maintained facility open for public use.





# Cleaning Up Contaminated Sediments

Cleaning up contaminated sediment sites is one Toxics Cleanup Program activity that has received more emphasis this year.

Another part of Ecology, the Sediment Management Unit within Central Programs, is also involved in sediment site cleanup. This group (using State Toxics Control Account dollars) is responsible for developing sediment standards, regulating disposal of dredged materials, and providing guidance and technical assistance regarding sediment source control and cleanup. Ecology published the first official list of contaminated sediment sites in Puget Sound in May 1996.

In Washington, sediment sites are most often cleaned up under the state Model Toxics Control Act process or federal Superfund process.

## How do sediment cleanup sites differ from other sites?

Sediment sites differ physically from other sites because they are located within the aquatic environment. They also differ in the nature of the medium — they have contaminated soils which are saturated with water. These features impose constraints in how sediment sites are accessed and remediated. Sediment cleanups are focused on preventing harm to aquatic life, such as fisheries and wetlands. Chemical concentrations of contaminants are less important than a demonstration that actual harm to the environment is occurring at the cleanup site. Toxicity tests with marine organisms are often conducted to evaluate whether environmental damage has occurred.

The available cleanup options for sediment sites are somewhat limited. Source control, identifying source(s) of contamination, and stopping further discharges, is a first step toward cleanup at every sediment site. Cleanup options include:

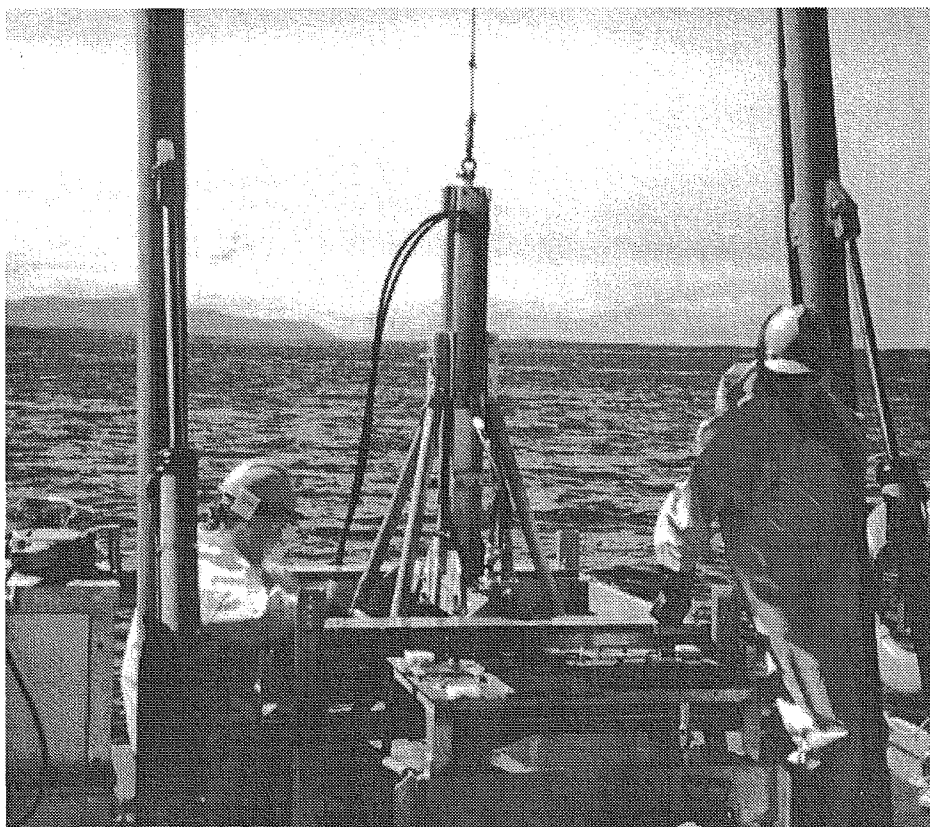
- ✱ **Natural Recovery** — over time, clean sediment may be transported in by rivers, streams, or currents creating a natural cover over the contaminated sediments;
- ✱ **Capping** — the cleanup action consists of adding clean sediments and constructing a cover or 'cap' over the contaminated sediments; or
- ✱ **Dredging and Disposal** — contaminated sediments are dredged (removed) from the bottom. Dredged materials may be disposed of in deep water, in a nearshore confined disposal site, or in an upland landfill.

## Example of a Sediment Cleanup Site: *Whatcom Waterway, Bellingham*

*The Whatcom Waterway site in Bellingham Bay is one example of a sediment site in the early stages of cleanup. Mercury, from historical discharges of the Georgia-Pacific chlor-alkali plant, is the main contaminant of concern. Wood waste and other contaminants as well as other potential sources of contamination are under investigation.*

*The Model Toxics Control Act and the Sediment Management Standards are being used to pursue cleanup at this site. Ecology and Georgia-Pacific Corporation created a legal working agreement (an Agreed Order) that was signed in January 1996 to investigate the site and develop and evaluate cleanup options. Ecology and Georgia-Pacific have worked together cooperatively and effectively to move forward with cleanup at this site.*

*Taking sediment samples in Bellingham's Whatcom Waterway.*



# Involving Others in the Cleanup Process

Identifying and addressing unique concerns is an integral part of site cleanup. The best cleanup decision for a site will consider the interests of the community, other agencies and organizations, and other governments. Because of the involvement of others, Ecology and those conducting cleanups are able to hear community and other concerns and make decisions that are sound for the environment, and sound for the citizens living near a contaminated site.

Here's an example of how one inter-governmental process worked to arrive at appropriate site cleanup decisions:

## Port Hadlock, Indian Island, Washington

A small, shoreline landfill on this Navy base has partially eroded into the marine environment. Nearby shellfish beaches are contaminated. The beaches aren't accessible to the general public; however, Native Americans have harvested shellfish there for thousands of years. Five Tribes have interests in the area.

While local citizens contributed to cleanup oversight and discussions, the Tribes have played the major role in the decision process.

Representatives of the Tribes were involved with the Navy and Ecology from the beginning of the site investigation. They helped:

- ✱ design the study of impacts to shellfish areas;
- ✱ develop risk evaluations that consider Native American cultural patterns; for instance, members of Western Washington Tribes eat more shellfish than other populations, which could put them at a greater health risk; and
- ✱ choose and design the cleanup action for the landfill.

## Public Participation Grants

*Public Participation Grants are available to private citizens and non-profit organizations. These grants are an effective way for individuals to provide education about waste reduction and hazardous waste sites in their communities. The grants provide Ecology with an opportunity to get this education out to significantly more people, to a much broader audience, and at a much lower cost. The Model Toxics Control Act established this program, and designated one percent of the revenues to the State and Local Toxics Control Accounts to fund it. In Fiscal Year 1996, this amounted to \$469,900 for 21 new, one-year projects. (See the Grants Status Report, page 29, for a list of grants that were awarded.)*

*One grant recipient was Puget Soundkeeper Alliance. This organization trained volunteers and set about working with Puget Sound users to create a safer and more healthful water environment. They worked with marinas around the Sound, and requested use of their facilities to hold workshops for workers and boat owners on proper disposal methods. They organized educational meetings for boatyard owners and operators on testing of stormwater outfalls and how to stay in compliance with current permits. They met with several port staff to discuss toxic reduction information.*

*This group and others are able to reach and meet people in a way that Ecology staff would not be able to. These individuals live in these communities, know intimately what potential problems might be, and have a vested interest in continuing to ensure the health of the community they live in. Grant recipients and their volunteer staff can provide education that is more relevant, and therefore more meaningful, to their communities. Public Participation Grants are one of the best tools Ecology has for informing people in this state how to care for and participate in protecting their local environment.*

When construction began, remains of an ancient Native American village were discovered. Artifacts found were over two thousand years old, and previous archaeological excavations found human remains at the site. The Tribes were concerned about unnecessary disturbance of the area.

The Navy, the Tribes, Ecology, and Washington Department of Fish and Wildlife worked together to modify the design of the shoreline system. The innovative new design will stop erosion,

protect the marine environment, and minimize impacts to the archaeological area. The Navy and Tribes worked together to develop a plan for handling any artifacts or human remains encountered during construction.

Now the Tribes are helping design a post-construction monitoring plan. The monitoring will provide a measure of the effectiveness of the cleanup action and a tool for determining when the beaches are again safe for shellfish harvest.

# Encouraging Cleanups Independent of Ecology Oversight

We estimate that eight out of ten cleanups are completed independent of Ecology oversight. Most sites that undergo an independent cleanup are a result of a leaking underground storage tank. The law requires that leaks from an underground storage tank be reported to Ecology upon discovery of the leak. Since 1990, 4,655 leaks have been reported to Ecology. Of these tank sites, Ecology has received 1,746 final cleanup reports.

Ecology encourages independent cleanups. This allows hundreds of smaller or less-complex sites to be cleaned up quickly without having to go through the formal process.

A property owner or potentially liable person (PLP) can choose to do an independent cleanup of a release when the site is not under an order or decree, and when the site is not subject to cleanup negotiations. Property owners who decide to do an independent cleanup must fully report the results of the cleanup actions within 90 days of completion.

In 1993, Ecology began the voluntary Independent Remedial Action Program (IRAP) to provide technical assistance, offer a timely review of independent cleanup reports, and give a written determination of the result of the review. This benefits property owners, lenders, and real estate interests by expediting the sale, transfer, or development plans for properties.

Staff review IRAP reports and provide written determination indicating whether the cleanup meets MTCA standards. A review fee is charged based on the cost of the cleanup, and reports are reviewed on a first-come, first-served basis. Over half of the clients are charged only the minimum \$1000 review fee.

If the cleanup is considered satisfactory, the property owner is provided with a written determination of no further action. If the report is incomplete or the site requires further cleanup, the client is notified of the specific remedial actions needed at the site.

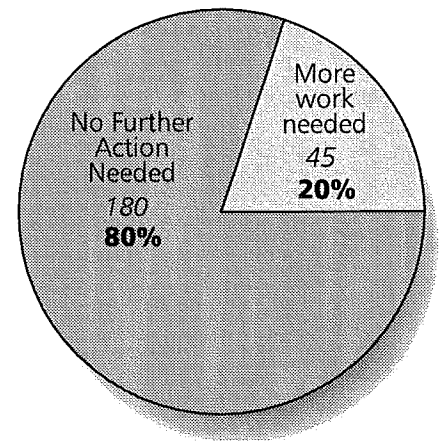
## Getting Results:

Of the 225 IRAP reports reviewed since 1993:

- ✱ Eighty percent have resulted in a determination of no further action. *Figure 4: Independent Remedial Action Program, Reports Reviewed from 7/1/93 to 3/31/96* shows the number of IRAP reports reviewed and the results of the completed reviews.

- ✱ Over \$35 million has been spent on cleaning up the environment at 324 IRAP sites.

**Figure 4:**  
Independent Remedial Action Program: Reports Reviewed from 7/1/93 to 3/31/96

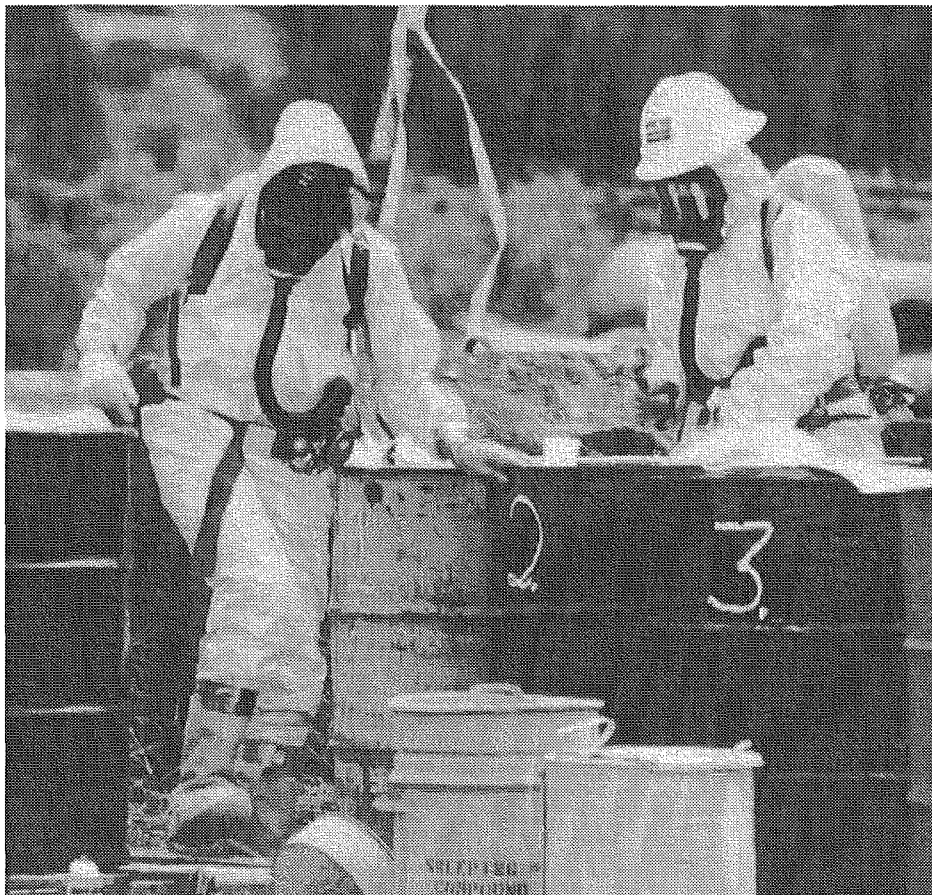


# Other Ways of Getting Contaminants Out of the Environment

## Department of Ecology and Office of Marine Safety: *Oil and Hazardous Substance Spill Preparedness*

Both the Department of Ecology and the state Office of Marine Safety work to prevent oil and hazardous substance spills — to ensure that vessels that transport oil and facilities that store or use oil are prepared to respond in the event of a spill — and to clean up spills when they occur. The following is a description of each agency's State Toxics Control Account funded activities.

*Ecology spill responders train to identify hazardous substances in the field.*



## Department of Ecology: Central Programs

Ecology is charged with developing statewide policies and plans for oil spill preparedness, reviewing and approving facility oil spill contingency (response) plans, conducting drills and inspections, managing emergency response and cleanup, managing resource damage assessment and enforcement activities, and educating the public regarding oil spill response and prevention.

Central Programs spent close to \$1.5 million during Fiscal Year 1996 to help pay for staff and cleanup contractor costs to conduct these activities. Here are some examples of what was accomplished over the last year:

- ✱ Responded to 828 reported spills of oil or hazardous substances and conducted successful cleanups and resource damage assessments as needed.

- ✱ Implemented procedures for Ecology spill responders on how to identify hazardous substances in the field — reducing the need for expensive contractor costs — saving about \$90,000 over the last year.

- ✱ Performed a lead role in representing the state during federal oil and hazardous substances contingency planning.

- ✱ Participated in 68 emergency response drill exercises with other agencies and industry.

## Office of Marine Safety

Washington's Office of Marine Safety was created by the 1991 Legislature in the wake of the Exxon Valdez oil spill in Prince William Sound. Funds received from the State Toxics Control Account are targeted for vessel oil spill contingency (response) plans. In Fiscal Year 1996, the Office of Marine Safety spent \$70,000 to:

- ✱ evaluate 26 vessel oil spill contingency plans for completeness and approval;

- ✱ inform industry of the necessary requirements and negotiate safety provisions as appropriate;

- ✱ approve four primary spill response contractors and maintain current contractor information;

- ✱ evaluate and participate in required oil spill response exercises;

- ✱ participate in contingency planning related workgroups of the State/British Columbia Task Force and the Northwest Area Committee; and

- ✱ coordinate with the Department of Ecology, Oregon Department of Environmental Quality, and the U.S. Coast Guard regarding contingency planning issues.

## Other Ways... (cont.)

### Department of Ecology: Solid Waste and Financial Assistance Program: *Helping Local Governments*

Ecology's program of Remedial Action Grants provides funding from the Local Toxics Control Account for local governments facing cleanups. In Fiscal Year 1996, the account funded \$11,759,084 in new grants. When combined with local match dollars, this funding supported 16 projects worth \$27,253,806. Depending on the type of project and the local economic situation, the local match required can range from zero to 60 percent of the project costs eligible for grant funding. An additional \$438,895 in grant amendments went to existing cleanup projects. (See the *Grants Status Report, page 29, for a list of grants that were awarded.*)

The cleanup projects helped local governments:

- \* design or carry out cleanups at 12 landfill sites, including remedial investigations, feasibility studies, and interim remedial measures;
- \* provide clean drinking water to one community where a hazardous waste site had contaminated the drinking water supply; and
- \* investigate possible hazardous waste sites in four counties.

### Department of Health: *Consulting at Cleanup Sites*

Over the last fiscal year, the state Department of Health visited 26 contaminated sites to assess public health implications. The Department of Health completed reports at 20 of the sites and prepared health consultations that outlined the:

- \* contaminants of concern to public health;
- \* exposure pathways (how a person could be exposed to the contaminants);
- \* information gaps; and
- \* recommendations for further study.

Fourteen sites with potential ground water contamination were evaluated. Of these sites, 6 were found to have released contaminants into drinking water wells. Both the Departments of Health and Ecology worked to eliminate or reduce the contaminant levels at 5 of the sites so far.

During this period the Department of Health continued extensive technical assistance and education/information activities related to the *Everett Smelter Site*. These activities included developing a health consultation, conducting health (bio) monitoring, and advising Ecology on human health-based cleanup levels for arsenic.

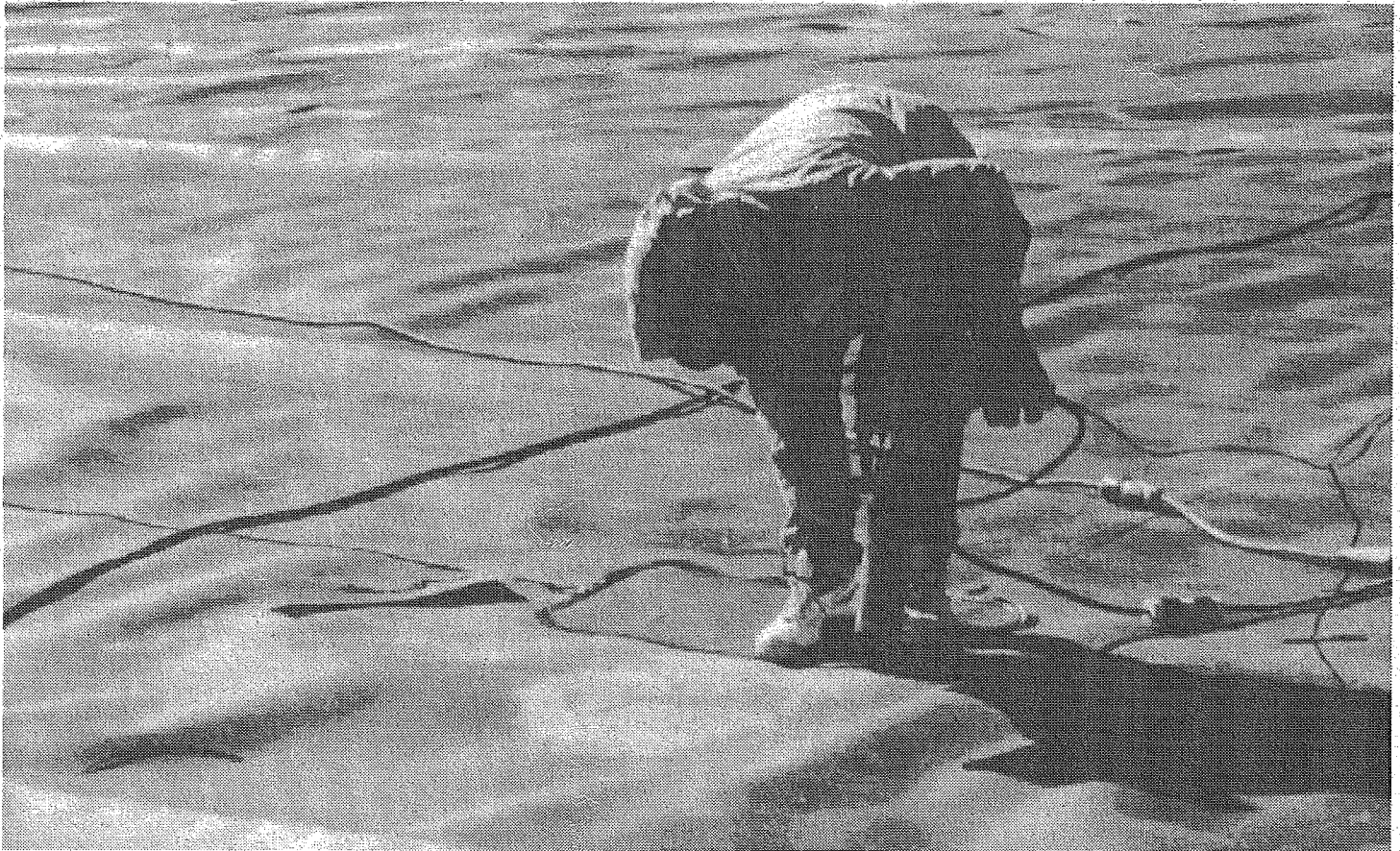
*(The Everett Smelter Site is a contaminated site in Northeast Everett where a former Asarco Smelter operated. The site is contaminated primarily with lead and arsenic. Ecology's Northwest Regional Office is managing the cleanup of this site and is working to draft a cleanup action plan.)*

### Washington State Patrol *Training to Protect*

During Fiscal Year 1996, the Washington State Patrol Fire Training Academy in North Bend delivered more than 50,000 hours of practical and classroom instruction related to hazardous materials. The Washington State Patrol received close to \$138,000 from the State Toxics Control Account to fund this live fire-training. The training is vital to the officers and firefighters, volunteers, paid staff, industrial fire brigade members, and military personnel who participate in the training.

Expenditures from the State Toxics Control Account are allocated for fuel, materials, equipment, instructors, and support services that allow this training to occur. The fire service community and citizens of Washington State benefit from the investment of these dollars when the trainees return to local communities to practice what they've learned.





Model Toxics Control Act  
*Hazardous Sites List*  
*As of August 20, 1996*

publication #96-601B  
♻️ printed on recycled paper

# Hazardous Sites List

This insert to the Model Toxics Control Act 1996 Annual Report is a copy of the most recent Hazardous Sites List. The Hazardous Sites List is updated twice a year (February and August) and includes all sites statewide which have been assessed and ranked using the Washington Ranking Method. As of August 1996, a total of 670 sites are on the list.

Sites are ranked relative to each other on a scale of one to five. A ranking of one represents the highest level of concern to human health and the environment, relative to all other sites, and five the lowest. Hazard ranking helps Ecology make priority decisions on where to target cleanup funds. Actual health and environmental impacts, public concern, a need for an immediate response, and available cleanup staff and funding also affect which sites get first priority for cleanup.

A summary list of the 31 newly ranked sites, the 14 sites which after assessment have been determined to require no further action, the four sites removed from the list since February 1996, and the 32 sites removed from the list since 1990, can be found on page 27 of the *Model Toxics Control Act 1996 Annual Report* (publication #96-601A). To receive additional copies of the complete Hazardous Sites List, or to be placed on the mailing list for updates, call 1-800-826-7716. The Hazardous Sites List is also accessible via the Internet on Ecology's homepage at <http://www.wa.gov/ecology/cleanup.html>.

## Glossary

**Awaiting Further Remedial Action:** Only a Site Hazard Assessment has been done on the site.

**Remedial Action in Progress:** Ecology has oversight. This can include sites undergoing: 1) *Remedial Investigation/Feasibility Study*; 2) *Interim Action* (any remedial action that partially addresses the cleanup of a site); 3) *Cleanup Action* (active construction).

**Construction Complete:** This category includes sites where all major cleanup construction has been completed, but various levels of operation/maintenance/monitoring may continue to be performed at the site.

**Independent Remedial Action:** This category includes all sites with independent remedial actions underway currently, or completed but work not verified by the department. Once the department is ready to proceed with action at a site, this category will be moved to an appropriate category.

**Hazardous Sites List:** A list of ranked sites that require further remedial action.

**Interim Action:** Any remedial action that partially addresses the cleanup of a site.

**National Priorities List (NPL):** Environmental Protection Agency (EPA) list of hazardous waste sites identified for possible long-term response. These sites are either managed by the State under MTCA requirements, managed by EPA under CERCLA requirements, managed by both (co-lead), or under a Federal Facilities Tri-party Agreement.

**Remedial Action:** Any action to identify, eliminate, or minimize any threat posed by hazardous substances to human health or the environment, including any investigative and monitoring activities of any release or threatened release of a hazardous substance and any health assessments or health effects studies.

**Site Hazard Assessment (SHA):** An assessment to gather information about a site to confirm whether a release has occurred and to enable Ecology to evaluate the relative potential hazard posed by the release. If further action is needed, an RI/FS is undertaken.

**State Remedial Investigation/Feasibility Study (RI/FS):** A study to define the extent of the problems at a site and evaluate alternative cleanup actions. A comment period on the final report is required. Ecology selects the preferred alternative after reviewing these comments.

**Washington Ranking Method (WARM):** Method used to rank sites placed on the Hazardous Sites List. A report describing this method is available from the department.

*Ecology is an equal opportunity agency. If you have special accommodation needs, contact Carol Perez at (360) 407-7173 (voice) or (360) 407-6006 (TDD).*

## Central Region

Contact Persons: *Tony Valero* (509) 454-7833 or *Michael Spencer* (360) 407-7195

County	Site Name	Nearest City	Rank	Status	
<b>Benton</b>	Ben Franklin Transit Co.	Richland	3	Independent RA	
	CENEX, Kennewick	Kennewick	2	Independent RA	
	J.R. Simplot Company	Prosser	4	Independent RA	
	New City Cleaners	Richland	1	Awaiting RA	
	Oggies-Mini Mart	Prosser	3	Independent RA	
	Pacific Recycling	Kennewick	2	Awaiting RA	
	Pump, Pak & Eatery	Kennewick	3	Awaiting RA	
	Sagetree Electric, Inc.	Kennewick	3	Awaiting RA	
	Wellsian Way Well Field	Richland	2	Awaiting RA	
	<b>Chelan</b>	Cascade Helicopter	Cashmere	2	RA in Progress
Cashmere Landfill		Cashmere	1	Awaiting RA	
Dryden Landfill		Dryden	4	Awaiting RA	
Glacier Park		Leavenworth	1	RA in Progress	
Glacier Park [Boyd-Cascade]				RA in Progress	
Glacier Park [Budget Fuel]				RA in Progress	
Holden Mine Tailing/Wenatchee		Holden	1	Independent RA	
Manson Landfill		Manson	2	Awaiting RA	
Unocal Bulk Plant #0082		Chelan		Awaiting RA	
Unocal Bulk Plant #0853		Wenatchee	1	Awaiting RA	
Unocal Service Station #4942		Wenatchee	2	Awaiting RA	
WSU Tree Fruit Research Unit		Wenatchee	3	Independent RA	
Wenatchee Elementary - Proposed		Wenatchee	5	Awaiting RA	
Wenatchee Middle School - Proposed		Wenatchee	5	Awaiting RA	
<b>Douglas</b>		Beebe Orchard Dump	Chelan Falls	5	Awaiting RA
		Inland Air Service	E. Wenatchee	4	Awaiting RA
		Silicon Metaltech (Lab Site)	Rock Island	5	Independent RA
	Silicon Metaltech (Lagoon)	Rock Island	4	Independent RA	
	WSU Smith Tract	E. Wenatchee	1	Awaiting RA	
	<b>Kittitas</b>	115 Mini Mart	Kittitas	3	Awaiting RA
❖ Alpine Veneer Plant		Ronald	5	Awaiting RA	
Big B Mini-Mart		Ellensburg	4	Awaiting RA	
Bingo Fuel Stop		Thorp	2	RA in Progress	
❖ Cle Elum Petroleum Contam.		Cle Elum	3	Awaiting RA	
❖ DeVere Bulk Plant		Cle Elum	5	Awaiting RA	
Flying J Truck Stop		Ellensburg	4	Awaiting RA	
❖ Hill's Quick Tune		Cle Elum	5	Awaiting RA	
Mid-State Aviation		Ellensburg	3	RA in Progress	
NW Pipeline St. - Ellensburg		Ellensburg	3	Awaiting RA	
Storey Gas Station		Cle Elum	1	Awaiting RA	
Unocal Bulk Plant 0095		Cle Elum	4	Awaiting RA	
<b>Klickitat</b>		NW Pipeline St. - Hood River	Bingen	5	Awaiting RA
		NW Pipeline St. - White Salmon	Bingen	5	Awaiting RA
		Town Pump Station	White Salmon	1	RA in Progress
<b>Okanogan</b>	Alder Mill	Twisp	2	Awaiting RA	
	Arden's Country Store	Malott	3	Construction Complete	
	Brett Pit	Grand Coulee	2	Awaiting RA	
	Coca Cola Dist. Co.	Omak	2	Independent RA	
	Eisen's Chevron	Oroville	2	Construction Complete	
	Gebber's Farm	Brewster	1	Awaiting RA	
	Jackpot Food Mart 01-081	Oroville	3	Independent RA	
	Lloyd's Logging - Equip Yd.	Twisp	5	Awaiting RA	
	Lloyd's Logging - Exc. Soil	Twisp	5	Independent RA	
	Loomis Chevron	Loomis	5	Awaiting RA	
	Minnie Mine	Carlton	2	RA in Progress	
	Molson Dump	Molson	5	Awaiting RA	
	Oroville Dump	Oroville	5	Independent RA	
	Pariseau Farm	Brewster	2	Awaiting RA	
	Tonasket Post & Rail	Tonasket	5	Awaiting RA	
	Unocal 0855	Omak	2	Independent RA	
	USDOI-BLM Kaaba Texas Mine	Nighthawk	1	RA in Progress	
	<b>Yakima</b>	Alder's Chevron	Yakima	2	Independent RA
		Bay Chemical	Yakima	2	RA in Progress
Bee-Jay Scales		Sunnyside	1	Awaiting RA	
Buena LUST		Buena	2	Awaiting RA	
Carlos Motors		Yakima	1	Independent RA	
Cascade Natural Gas		Sunnyside	1	RA in Progress	
Chambers Residence		Yakima	4	Awaiting RA	
Circle L.		Sunnyside	1	Awaiting RA	
Cliff's Battery Service		Sunnyside	4	Awaiting RA	

❖ New site added to the ranked list, August 1996

◆ New site added to the National Priorities List (NPL)

0▼ Superfund site; State has lead

0▲ Superfund site; Federal (EPA) has lead

0\* Superfund site under a Federal Facilities Agreement

0□ Superfund site; EPA and State co-lead

County	Site Name	Nearest City	Rank	Status	
Yakima (cont.)	Comet Trailer	Selah	1	Awaiting RA	
	Consolidated Freightways	Yakima	4	Independent RA	
	Evergreen Products	Parker	3	Awaiting RA	
	Irwin Research & Development	Yakima	2	Awaiting RA	
	Jackpot Station	Union Gap	2	Awaiting RA	
	Johnny's Texaco	Sunnyside	4	RA in Progress	
	Kellogg's Komer	Sunnyside	1	Construction Complete	
	Kelly Oil	Yakima	3	Awaiting RA	
	Kershaw Orchard	Gleed/Yakima	5	Awaiting RA	
	La Rosita	Sunnyside	2	Awaiting RA	
	Maid O'Clover	Yakima	2	Independent RA	
	Maid O'Clover - Sunnyside	Sunnyside	3	Awaiting RA	
	Manhole 34	Sunnyside	1	RA in Progress	
	NW Pipeline St.-Grandview	Gandview	3	Awaiting RA	
	NW Pipeline St. - Sunnyside	Sunnyside	3	Awaiting RA	
	NW Pipeline St. - Yakima	Yakima	3	Awaiting RA	
	Northwest Truck Repair	Union Gap	3	Awaiting RA	
	Old Selah Dump	Selah	5	Awaiting RA	
	Outlook School	Outlook	3	Independent RA	
	Pederson Farm	Moxee	3	Independent RA	
	Pit Stop - Naches	Naches	4	Awaiting RA	
	Rainier Plastics Company	Yakima	3	Awaiting RA	
	Richardson Airways, Inc.	Yakima	2	RA in Progress	
	Roza Irrigation Ditch	Sunnyside	3	Awaiting RA	
	Section 18 Dump	Wapato	3	Awaiting RA	
	Shields Bag & Printing Co.	Yakima	5	Awaiting RA	
	Snipes Mountain Landfill	Sunnyside	4	RA in Progress	
	Sunnyside Municipal Well	Sunnyside	3	Awaiting RA	
	Superior Asphalt	Yakima	1	RA in Progress	
	Terrace Hts Landfill(pesticide)	Yakima	5	Awaiting RA	
	Texaco Bulk Plant/R.E. Powell	Grandview	2	Awaiting RA	
	Tiger Oil (16th St. & Nob Hill)	Yakima	2	Awaiting RA	
	Tiger Oil (North First Street)	Yakima	3	Awaiting RA	
	Tiger Oil (24th & Nob Hill)	Yakima	1	RA in Progress	
	♦ Tony's Auto Repair	Yakima	3	Awaiting RA	
	Toppenish School District	Toppenish	2	Awaiting RA	
	Unocal Bulk Plant 0766	Sunnyside	1	Independent RA	
	Valley Dry Cleaners	Sunnyside	2	Awaiting RA	
	VanCleave Body Shop	Yakima	1	Awaiting RA	
	WA DOT - Rimrock	Naches	3	Independent RA	
	WA DOT - Union Gap	Union Gap	3	Independent RA	
	Yakima Railroad: (the following fifteen sites make up the Yakima Railroad site)				
		Agri-Tech/Yakima Steel Fab	Yakima	2	RA in Progress
		Banks Property (formerly J.C. Penney Auto Service)	Yakima	3	Awaiting RA
		Briar Development Company	Yakima	2	Construction Complete
		CMX Corporation	Yakima	3	Awaiting RA
		Cameron - Yakima Inc.	Yakima	1	RA in Progress
		Crest Linen (former)	Yakima	1	Construction Complete
		Frank Wear Cleaners	Yakima	1	RA in Progress
		Hahn Motor Company	Yakima	5	RA in Progress
		Nu-Way Cleaners	Yakima	1	RA in Progress
		Paxton Sales Corporation	Yakima	1	RA in Progress
		Railroad Roundhouse	Yakima	1	Awaiting RA
		Southgate Laundry	Yakima	3	Awaiting RA
		Westco Martinizing	Yakima	3	RA in Progress
	Woods Industries (Crop King)	Yakima	1	RA in Progress	
	Yakima Valley Spray Co.	Yakima	1	RA in Progress	
♦	Yakima Speedway	Yakima	5	Awaiting RA	
	Zwight Logging	Yakima	3	Awaiting RA	

## Eastern Region

Contact Persons: Patti Carter (509) 456-6167 or Michael Spencer (360) 407-7195

County	Site Name	Nearest City	Rank	Status
Adams	Adams Co. Maint. Shop (Othello)	Othello	3	Independent RA
	Burlington Northern (Othello)	Othello	1	RA in Progress
	CMC Real Estate (Othello)	Othello	5	Independent RA
	Puregro (Othello)	Othello	5	Awaiting RA
	Puregro (Ritzville)	Ritzville	5	Awaiting RA
	Soil and Crop	Othello	2	RA in Progress
	T-16 Ranch	Lind	5	Independent RA
	WWT Batum Facility	Batum	5	Awaiting RA

♦ New site added to the ranked list, August 1996

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0▼ Superfund site; State has lead

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County	Site Name	Nearest City	Rank	Status	
<b>Asotin</b>	Asotin County Landfill	Clarkston	5	Awaiting RA	
	<b>Ferry</b>	Hecla Knob Hill Mine	Republic	5	Awaiting RA
		BNRR Pasco Railyard	Pasco	5	Awaiting RA
		Glen's Metals	Pasco	5	Awaiting RA
		Pasco Landfill	Pasco	0▼	RA in Progress
		Port of Pasco	Pasco	1	R in Progress
		Puregro (Pasco)	Pasco	1	Awaiting RA
	<b>Grant</b>	Smith Canyon Haz Waste Site	Pasco	5	Independent RA
		Cenex Bulk Plant	Moses Lake	2	Awaiting RA
		City of Moses Lake Maint. Facil	Moses Lake	2	Independent RA
Duncan Crane Service, Inc.		Moses Lake	3	Independent RA	
Full Circle - Ephrata		Ephrata	5	Awaiting RA	
Full Circle - Quincy		Quincy	5	Independent RA	
Grant Co Ephrata Landfill 1		Ephrata	5	Awaiting RA	
Grant Dangerous Waste Site		Royal City	5	Awaiting RA	
International Titanium		Moses Lake	4	Awaiting RA	
Larson Substation - Grant Co PUD		Moses Lake	4	Awaiting RA	
Northwest Pipeline - Moses Lake		Moses Lake	3	Awaiting RA	
Port of Moses Lake Pumphouse 1		Moses Lake	2	Independent RA	
Puregro (Moses Lake)		Moses Lake	5	Awaiting RA	
Puregro (Quincy)		Quincy	5	Awaiting RA	
Puregro (Warden)		Warden	5	Awaiting RA	
Vista Corner Texaco		Moses Lake	3	Independent RA	
<b>Lincoln</b>		Puregro (Wilbur)	Wilbur	5	Awaiting RA
		<b>Pend Oreille</b>	Cusick School District	Cusick	3
	A-1 Auto Wrecking		Spokane	3	Independent RA
	<b>Spokane</b>	Alaska Steel and Supply	Spokane	4	Awaiting RA
		Aluminum Recycling Corp.	Spokane	2	Awaiting RA
		American Tar Company	Spokane	3	Awaiting RA
		Argonne Road	Spokane	3	RA in Progress
		BJ Carney & Company	Spokane	3	Awaiting RA
		BNR-Parkwater Station	Spokane	3	Awaiting RA
		Burlington Northern - Hillyd.	Spokane	4	Independent RA
Chemcentral		Spokane	2	Independent RA	
Chevron Spokane Bulk Plant		Spokane	5	Independent RA	
City Operations Complex Prop.		Spokane	3	Awaiting RA	
Cummins Northwest		Spokane	5	Independent RA	
Four Lakes Tire Fire		Four Lakes	5	Awaiting RA	
Geiger -SIA- Fuel Farm		Spokane	3	Independent RA	
General Electric - Old Site		Spokane	0▼	RA in Progress	
Greenacres Landfill		Spokane	0▼	RA in Progress	
Inland Empire Plating		Spokane	1	Independent RA	
Inland Pit		Spokane	0▼	RA in Progress	
Jeld-Wen, Inc.		Spokane	3	Independent RA	
Koch Materials - Thor St.		Spokane	3	Independent RA	
Koch Materials - Trent Ave.		Spokane	3	Independent RA	
Marshall Landfill		Marshall	4	Awaiting RA	
Mica Landfill		Mica	0▼	Construction Complete	
NW Pipeline - Mead		Mead	3	Independent RA	
NW Pipeline - Medical Lake		Medical Lake	3	Independent RA	
North Market Street		Spokane	0▼	RA in Progress	
North Market Street [BN]				Construction Complete	
Sheraton-Spokane Hotel Property		Spokane	5	Independent RA	
Sicilia Trucking		Spokane	3	Independent RA	
♦ Spokane Custom Wood Treating	Spokane	3	Awaiting RA		
Spokane Fire Dept. - Training Fac.	Spokane	3	Awaiting RA		
Spokane Junk Yard	Spokane	0▲	Awaiting RA		
Spokane Transit Authority Bus Barn	Spokane	5	Independent RA		
URM Stores, Inc.	Spokane	5	Independent RA		
USAAC Geiger Field [GF001]	Spokane	2	Awaiting RA		
USAAC Geiger Field [GF003]	Spokane	5	Awaiting RA		
USAAC Geiger Field [GF004]	Spokane	3	Awaiting RA		
USAAC Geiger Field [GF005]	Spokane	4	Independent RA		
USAAC Geiger Field [GF006]	Spokane	3	Awaiting RA		
USDOE-BPA Bell Substations	Spokane	3	Independent RA		
United Parcel Service	Spokane	3	Independent RA		
♦ UPRR Tekoa Line - Segment 1	Latah	5	Awaiting RA		
Vestal Jobber Manufacturing	Spokane	3	Awaiting RA		
Washington Air Nat'l Guard	Spokane	3	Independent RA		
<b>Stevens</b>	Colville Post and Pole	Colville	3	Independent RA	
	L-Bar Products	Chewelah	4	RA in Progress	
	Le Roi Smelter	Northport	1	Awaiting RA	
	Whitten Oil Exxon	Colville	3	RA in Progress	

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County	Site Name	Nearest City	Rank	Status
Walla Walla	Corps of Engineers Motor Pool	Walla Walla	2	Independent RA
	Martin Field	College Place	1	Awaiting RA
	Pantorium Cleaners	Walla Walla	3	Independent RA
	Walla Walla Farmers Coop	Walla Walla	1	Construction Complete
	Washington State Penitentiary	Walla Walla	3	Awaiting RA
	Whitman College	Walla Walla	5	Awaiting RA
Whitman	Endicott School District	Endicott	4	Independent RA
	Garfield School District	Garfield	3	Construction Complete
	Palouse Producers	Palouse	1	Construction Complete
	WA State Univ Landfill	Pullman	4	Awaiting RA
	WSU Power Plant Oil Bulking	Pullman	2	Awaiting RA
	WSU Scrap Metal Yard	Pullman	2	Awaiting RA

## Northwest Region

Contact Persons: Norm Peck (206) 649-7047 or Michael Spencer (360) 407-7195

County	Site Name	Nearest City	Rank	Status
Island	Cornet Bay Marina	Oak Harbor	5	RA in Progress
	Unocal/Coupeville Bulk Plant	Coupeville	1	Independent RA
King	ARCO - Tank Farm	Seattle	2	RA in Progress
	Ace Galvanizing, Inc.	Seattle	4	Awaiting RA
	Advance Electroplating	Seattle	5	RA in Progress
	Alaska Pacific Fisheries	Seattle	1	Awaiting RA
	Auburn Abandoned Fire Station	Auburn	3	Independent RA
	❖ Auburn Salvage & Recycling	Auburn	3	Awaiting RA
	BNR Maint. & Fueling Facility	Skykomish	1	RA in Progress
	BP Station #11352	Bothell	3	RA in Progress
	Balmer Yard/BNR	Seattle	5	Independent RA
	Boeing Co. - North Field	Seattle	5	Independent RA
	Boeing Co. - Plant 2	Seattle	1	Independent RA
	Borden Chemical Company	Kent	1	Independent RA
	C and F Auto Wrecking	Duval	1	Awaiting RA
	Cedar Hills Landfill	Maple Valley	5	Independent RA
	Cenex Valley Supply Coop	Auburn	3	RA in Progress
	Central Painting	Seattle	2	Awaiting RA
	Champion Intl-Ballard Mill Sed	Seattle	1	RA in Progress
	Chemcentral Solvents Co.	Kent	1	Independent RA
	Chevron Bulk Plant #61002620	Grotto	3	Independent RA
	Christensen Petroleum	Enumclaw	1	Independent RA
	Circle K Station #1461	Seattle	3	RA in Progress
	Earle M. Jorgensen Co.	Seattle	5	Independent RA
	Eastern Supply Co.	Seattle	2	RA in Progress
	Four Corners Auto Wrecking	Kent	2	Awaiting RA
	GACO Western, Inc.	Tukwila	3	RA in Progress
	General Elec. Apparatus Srv Ct.	Kent	3	Independent RA
	General Elec. Aviation	Seattle	2	RA in Progress
	Great Western Chemical	Seattle	1	RA in Progress
	Harbor Island	Seattle	0▲	RA in Progress
	Hydraulic Repair & Design, Inc.	Kent	3	Independent RA
	Interbay BNR	Seattle	1	Independent RA
	JH Baxter & Company, Inc.	Renton	1	RA in Progress
	James Oil Company	Enumclaw	1	Awaiting RA
	Kenmore Industrial Park	Kenmore	1	Awaiting RA
	Kent Highlands Landfill	Kent	0▼	Construction Complete
	LIDCO	Kent	1	RA in Progress
	Laidlaw	Seattle	4	Awaiting RA
	Lake Hills STP (former)	Seattle	1	Independent RA
	Lake Union Dry Dock Co.	Seattle	2	Awaiting RA
	Lake Union Steam Plant	Seattle	5	Independent RA
	Lake Washington School District	Kirkland	5	Construction Complete
	Landsburg Mine-Rogers Seam	Ravensdale	1	RA in Progress
	Lindal Property	Kent	4	Awaiting RA
	Longview Fibre Company	Seattle	5	Independent RA
	Malarkey Asphalt Company	Seattle	1	Independent RA
	Maralco	Kent	2	RA in Progress
	Marine Vacuum Service, Inc.	Seattle	3	Awaiting RA
Markey Property, Parcel 4	Seattle	3	Independent RA	
Metro Dearborn Site	Seattle	3	RA in Progress	
Metro Lake Union Facility	Seattle	1	RA in Progress	
Metro South Base	Seattle	1	Independent RA	
Midway Landfill	Kent	0▼	RA in Progress	
Mobil/BP Bulk Facility	Renton	5	Independent RA	

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County	Site Name	Nearest City	Rank	Status	
King (cont.)	Monterey Apartments Site	Seattle	3	Construction Complete	
	Newcastle/Coal Creek Landfill	Issaquah	5	Awaiting RA	
	Northwest Cooperage Co., Inc.	Seattle	4	Awaiting RA	
	Northwest Market Street Site	Seattle	5	Independent RA	
	❖ Northwest Pipeline/Issaquah	Issaquah	3	Awaiting RA	
	❖ Northwest Pipeline/North Bend	North Bend	3	Awaiting RA	
	❖ Northwest Pipeline/Redmond	Redmond	3	Awaiting RA	
	Northwest Powder Coats	Kent	3	Awaiting RA	
	Old Lawson Road	Black Diamond	2	Awaiting RA	
	PACCAR	Renton	0▼	RA in Progress	
	Palmer Coking Coal Company	Black Diamond	3	Awaiting RA	
	Pioneer Enamel Manufacture	Seattle	5	Awaiting RA	
	Quendall Terminals	Renton	1	RA in Progress	
	Reichold Chemical/Lone Star	Seattle	1	Awaiting RA	
	SW Harbor Project [Lockheed Yd 2] (formerly Lockheed Shipbldg Co. Yard 2)	Seattle	1	RA in Progress	
	S. 252nd St./Pacific Hwy S.	Kent	4	Awaiting RA	
	S & S Enterprises	Maple Valley	4	Awaiting RA	
	❖ Samis Land Co. Site	Seattle	5	Awaiting RA	
	Shell-Old Terminal 18/Port of Sea	Seattle	5	RA in Progress	
	Shell - Tank Farm	Seattle	4	RA in Progress	
	Slag Disposal/Beckwith Property	Kent	3	RA in Progress	
	Soushek Property	Kent	2	Awaiting RA	
	Sternoff Metals	Seattle	5	Independent RA	
	❖ Sternoff Metals Corporation	Renton	1	Awaiting RA	
	Sunset Park/Tub Lake Dump	SeaTac	3	Independent RA	
	Texaco Marketing & Refining - HI	Seattle	2	RA in Progress	
	Tiki Car Wash	Bellevue	3	RA in Progress	
	❖ Tye Lumber & Manufacturing	Auburn	4	Awaiting RA	
	UNIMAR/Northlake Shipyard	Seattle	4	Independent RA	
	Union Station Site	Seattle	3	Awaiting RA	
	Universal Manufacturing Corp.	Woodinville	3	Awaiting RA	
	Unocal-Seattle Marketing Term.	Seattle	4	RA in Progress	
	Unocal-Seattle Marketing Term. [Elliott]			RA in Progress	
	Unocal-Seattle Marketing Term. [Lower]			RA in Progress	
	Unocal-Seattle Marketing Term. [Off-Site]			RA in Progress	
	Unocal-Seattle Marketing Term. [Sed]			RA in Progress	
	Unocal-Seattle Marketing Term. [Upland]			RA in Progress	
	❖ West Coast Equipment 2	Seattle	3	Independent RA	
	Western Batteries, Inc.	Seattle	3	Independent RA	
	Wyckoff Co.	Seattle	0▲	Awaiting RA	
	Zandt Brass Foundry	Seattle	4	Awaiting RA	
	Kitsap	Bainbridge Island Landfill	Bainbridge	1	RA in Progress
		Bethel - Former Texaco	Port Orchard	3	RA in Progress
		Bremerton National Airport	Port Orchard	5	Awaiting RA
		Chevron Tank Farm/Port WA Nar.	Bremerton	2	Independent RA
		Country Junction Store	Port Orchard	4	RA in Progress
		Day Road Industrial Park	Bainbridge Island	5	Independent RA
		Evergreen Park	Bremerton	5	Independent RA
		Hansville General Store	Hansville	3	RA in Progress
		Hansville Landfill	Hansville	1	RA in Progress
Lambert's Radiator Shop		Bremerton	1	Awaiting RA	
Lofthus Bulk Plant		Bremerton	1	Awaiting RA	
Navy City Metals, Inc.		Bremerton/Gorst	3	Awaiting RA	
Norseland Site		Port Orchard	2	RA in Progress	
Old Bremerton Gasworks		Bremerton	1	Awaiting RA	
Olympic View Sanitary Landfill		Port Orchard	2	Independent RA	
Sesko Property		Bremerton	1	Awaiting RA	
Stone Property		Bainbridge Island	4	Awaiting RA	
Strandley/Manning Site		Port Orchard	3	RA in Progress	
Wolf Property		Port Orchard	5	Awaiting RA	
Skagit		Chevron/Mt. Vernon Bulk Plant	Mt. Vernon	5	Independent RA
	Nasty Jack's Antiques	La Conner	2	Awaiting RA	
	Skagit Manufacturing	Sedro Woolley	3	Independent RA	
	Truck City Truck Stop	Mt. Vernon	3	RA in Progress	
	Unocal/Mt. Vernon Bulk Plant	Mt. Vernon	1	Independent RA	
Snohomish	Whitmarsh Siding	Anacortes	2	Awaiting RA	
	❖ Alseth Auto Parts	Everett	4	Awaiting RA	
	❖ Bear Creek Motors	Woodinville	4	Awaiting RA	
	Bill Pearson Timber	Sultan	3	Awaiting RA	
	Birkholz Property	Everett	5	Awaiting RA	
Chevron/Hill Tank Farm	Woodway	4	Awaiting RA		
Christianson Company	Arlington	5	Awaiting RA		

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County	Site Name	Nearest City	Rank	Status	
Snohomish (cont.)	◆ Cordz Auto	Everett	5	Awaiting RA	
	East Waterway	Everett	2	Awaiting RA	
	Everett Landfill/Tire Fire	Everett	1	RA in Progress	
	Everett Smelter/Slag Site	Everett	1	RA in Progress	
	Fishermen's Boat Shop, Inc.	Everett	3	Independent RA	
	JH Baxter & Company	Arlington	4	Awaiting RA	
	Ken's Radiator Service	Lynnwood	2	Independent RA	
	Les Wear Backhoe/MacBryer Prop.	Lake Stevens	5	Awaiting RA	
	Lynnwood Plating	Lynnwood	4	Awaiting RA	
	McCollum Park	Everett	1	Independent RA	
	◆ Miller/Amer. Dist./Mobil	Everett	2	RA in Progress	
	◆ Mobil Oil-Everett Bulk Plant	Everett	3	Independent RA	
	Monroe Auto Salvage	Monroe	1	Awaiting RA	
	Nic - L - Silver	Edmonds	5	Awaiting RA	
	Nord Door Company	Everett	5	Independent RA	
	Northwest Pipeline/N. Seattle	Snohomish	5	Awaiting RA	
	Northwest Pipeline/Snohomish	Monroe	5	Awaiting RA	
	◆ Offset Web Site	Marysville	3	Awaiting RA	
	Pallister Paint	Everett	5	Awaiting RA	
	Parson's Diesel	Snohomish	5	Awaiting RA	
	Pop's Automotive/Roloff Prop.	Everett	3	Construction Complete	
	Pump Crete	Lynnwood	5	Awaiting RA	
	Rubatino's Truck Care	Everett	5	Independent RA	
	◆ Shultz Distributing	Monroe	5	Independent RA	
	◆ Sisco Landfill	Arlington	2	Independent RA	
	Snohomish Co. PUD	Lynnwood	2	Independent RA	
	Stan's Radiator	Everett	4	Awaiting RA	
	US - Defense Fuel Supply Point	Mukilteo	1	RA in Progress	
	Unocal Bulk Plant	Arlington	2	Independent RA	
	Unocal Edmonds Bulk Fuel Term.	Edmonds	1	RA in Progress	
	Urban Accessories	Sultan	5	Awaiting RA	
	Verax Chemical Company	Snohomish	3	Awaiting RA	
	Wallace River Park Well	Startup	4	Construction Complete	
	Washington Natural Gas	Everett	5	Independent RA	
	Wellington Hills Association	Woodinville	2	Independent RA	
	Weyerhaeuser-Everett	Everett	1	Independent RA	
	Yttri/Wozow Property	Snohomish	5	Awaiting RA	
	Whatcom	Boulevard Park	Bellingham	1	Awaiting RA
		Cornwall Avenue Landfill	Bellingham	2	Awaiting RA
		Frank Brooks Manufacturing	Bellingham	5	Awaiting RA
		Georgia Pacific Airport Landfill	Bellingham	4	Independent RA
		Harris Avenue Shipyard	Bellingham	2	Awaiting RA
		Holly Street Landfill	Bellingham	2	Awaiting RA
		Maritime Heritage Center Park	Bellingham	3	Awaiting RA
		Murray Chris-Craft Cruisers	Bellingham	2	Independent RA
		Oeser Cedar/Little Squalicum CRK	Bellingham	1	Awaiting RA
		R.G. Haley Intl Corp.	Bellingham	3	Awaiting RA
Roeder Avenue Landfill		Bellingham	5	Awaiting RA	
Sunshine Cleaners (former)		Bellingham	2	Independent RA	
Trans Mountain Oil Pipe Line		Bellingham	1	RA in Progress	
Whatcom Co. Public Works GI Yd		Bellingham	3	Independent RA	
Whatcom Waterway		Bellingham	1	Awaiting RA	
Wilder Landfill		Ferndale	1	Awaiting RA	

## Southwest Region

Contact Persons: Dick Heggen (360) 407-6267 or Michael Spencer (360) 407-7195

County	Site Name	Nearest City	Rank	Status
Clallam	Chevron Bulk Plant #61001372	Port Angeles	1	Awaiting RA
	PenPly (ITT Rayonier)	Port Angeles	5	Construction Complete
	Pt of Port Angeles Marine Terminal	Port Angeles	1	RA in Progress
	Truck Town	Port Angeles	3	Awaiting RA
Clark	Unocal Bulk Plant #0601	Port Angeles	1	Independent RA
	2001 NE Roosevelt Av Prop.	Vancouver	2	Awaiting RA
	BN Maintenance Yard	Vancouver	1	Awaiting RA
	Boomsnub/BOC Gases	Vancouver	0▼	RA in Progress
	Carborundum Company	Vancouver	1	Awaiting RA
	Chevron Bulk Plant	Camas	2	Awaiting RA
	Chevron Bulk Plant #61001854	Vancouver	1	Awaiting RA
	Circle C Landfill	Ridgefield	1	Construction Complete
	Colf Landscaping	Vancouver	4	Awaiting RA
	Custom Care Cleaners	Vancouver	5	Awaiting RA

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County	Site Name	Nearest City	Rank	Status	
Clark (cont.)	Fargher Lake Grocery	Yacolt	3	Construction Complete	
	GATX Terminals Corporation	Vancouver	1	Awaiting RA	
	Gen. Chemical Corp-Vancouver	Vancouver	5	Awaiting RA	
	♦ IPC (former) Solid Waste	Amboy	5	Awaiting RA	
	Jim's BP	Battle Ground	2	RA in Progress	
	Koch Tractor	Ridgefield	4	Awaiting RA	
	Larch Mountain (DNR)	Yacolt	2	Independent RA	
	Leichner Brothers Landfill	Vancouver	3	RA in Progress	
	Orbit Industries	Washougal	4	Awaiting RA	
	♦ Pacific Wood Treating Company	Ridgefield	1	Awaiting RA	
	R.J. Frank Property	Ridgefield	1	Independent RA	
	Robertson's Paint Shop	Vancouver	5	Awaiting RA	
	Tidewater Barge Lines	Vancouver	2	Independent RA	
	Time Oil/Handy Andy #8	Vancouver	1	RA in Progress	
	Vancouver Water Station #1	Vancouver	0▲	RA in Progress	
	Walnut Grove Ind. Park	Vancouver	1	Awaiting RA	
	Cowlitz	Chevron USA, Longview	Longview	1	Awaiting RA
		Cliff Köppe Metals	Kelso	2	Awaiting RA
		Gardner Forest Products	Longview	4	Independent RA
		Groat Brothers Trucking	Woodland	1	Awaiting RA
		Olympic Pipeline Company	Castle Rock	1	Awaiting RA
Ostrander Rock Disposal		Longview	4	Awaiting RA	
Unocal Bulk Plant #0321		Kelso	1	Awaiting RA	
Unocal Bulk Plant #0885		Woodland	3	Awaiting RA	
West Coast/Mobil Oil Co.		Longview	1	RA in Progress	
Grays Harbor		Berg's Marine Cnst. & Repair	Hoquiam	2	Awaiting RA
		Hungry Whale Grocery	Westport	2	RA in Progress
		ITT Rayonier (Sawmill)	Hoquiam	2	Independent RA
	Little Hoquiam Boatshop #2	Hoquiam	4	Awaiting RA	
	Most Western Laundry	Hoquiam	1	Awaiting RA	
	Roderick Timber Co.	Junction City	1	Awaiting RA	
	Saginaw Mill	Aberdeen	1	Awaiting RA	
	Snook Residence	Oakville	1	Awaiting RA	
	Virgil Foster	Montesano	1	Awaiting RA	
	Jefferson	Chevron Bulk Plant	Port Townsend	1	Independent RA
Olympic Testing Lab		Quilcene	2	Awaiting RA	
Port Townsend Texaco		Port Townsend	2	Awaiting RA	
Lewis	Centralia Landfill	Centralia	0▼	RA in Progress	
	Cowlitz BP	Toledo	2	RA in Progress	
	Grange Supply, Chehalis/CENEX	Chehalis	1	RA in Progress	
	Packwood Lumber Company	Packwood	4	Awaiting RA	
	Trailer Village	Centralia	2	Awaiting RA	
	Utility Transformer Service	Pe Ell	4	Awaiting RA	
Mason	Olympic Wood Products	Shelton	5	Awaiting RA	
	Pt of Shelton (All Star Aero)	Shelton	4	RA in Progress	
	Spike's Hydraulic	Shelton	3	Awaiting RA	
Pierce	Airo Services	Tacoma	4	Awaiting RA	
	Aladdin Plating Co., Inc.	Tacoma	2	Awaiting RA	
	Alpine Plating Co.	Tacoma	2	Awaiting RA	
	B & L Woodwaste Landfill	Tacoma	1	Construction Complete	
	Bowen Auto Wrecking	Bonney Lake	2	Awaiting RA	
	Buffalo Don Murphy-Waller Road	Tacoma	1	Awaiting RA	
	Calhoun's Service Station	Tacoma	2	Awaiting RA	
	Cascade Pole - McFarland/Sitcum	Tacoma	4	RA in Progress	
	Cascade Pole - Tacoma	Tacoma	1	RA in Progress	
	Cascade Timber #1	Tacoma	1	Construction Complete	
	Chevron Bulk Plant	Tacoma	3	RA in Progress	
	Comm: Bay-Nearshore/Tideflats	Tacoma	0▲	RA in Progress	
	Cascade Timber #3 - POT		0▼	Construction Complete	
	Cascade Timber #3 - US Oil		0▼	RA in Progress	
	PRI Northwest		0▼	RA in Progress	
	Sound Battery		0▼	RA in Progress	
	Superior Oil		0▼	RA in Progress	
	Tacoma Coal Gasification		0▼	RA in Progress	
	Tacoma Redevelopment Property		0▼	RA in Progress	
	Taylor Way Properties, Inc.		0▼	Construction Complete	
	USG Plant Site		0▼	RA in Progress	
	♦ Conan Fuel Service	Gig Harbor	4	Awaiting RA	
	Coski Industrial Dump	Tacoma	5	Awaiting RA	
	D Street Petroleum	Tacoma	4	Construction Complete	
	Dorman Tire Yard (fire)	Roy	2	Awaiting RA	
	♦ Edgewood Shopping Center: Dry Cleaner Site	Milton	2	Independent RA	
	ERS Trucking	Tacoma	2	Awaiting RA	

♦ New site added to the ranked list, August 1996

♦ New site added to the National Priorities List (NPL)

0▼ Superfund site; State has lead

0▲ Superfund site; Federal (EPA) has lead

0※ Superfund site under a Federal Facilities Agreement

0□ Superfund site; EPA and State co-lead

County	Site Name	Nearest City	Rank	Status	
<b>Pierce (cont.)</b>	Elf Atochem - 2901 Taylor Way	Tacoma	1	Construction Complete	
	Frederickson Industrial Park	Puyallup	1	RA in Progress	
	General Metals	Tacoma	1	Construction Complete	
	Hidden Valley Landfill (Thun Field)	Puyallup	0▼	RA in Progress	
	Landscaping by Pat Boring	Tacoma	4	Awaiting RA	
	Lewis Auto Wrecking	Puyallup	4	Awaiting RA	
	Lincoln Avenue Ditch	Tacoma	3	Awaiting RA	
	Louisiana-Pacific	Tacoma	1	Construction Complete	
	Manke Lumber Co. Sumner Plant	Sumner	5	Awaiting RA	
	Murray Pacific #1	Tacoma	1	RA in Progress	
	Music Machine, The	Tacoma	2	RA in Progress	
	Nalley's Fine Foods	Tacoma	2	Independent RA	
	National Oil Dump	Tacoma	4	Awaiting RA	
	Occidental Chemical, Marine View	Tacoma	3	Awaiting RA	
	Parkland Cleaners	Parkland	3	Independent RA	
	Petroleum Reclaiming Service	Tacoma	2	Awaiting RA	
	❖ Ponders Auto Parts	Tacoma	3	Awaiting RA	
	Puget Power-Electron Power	Orting	2	Independent RA	
	Puget Power Maintenance	Puyallup	2	Awaiting RA	
	Rhone Poulenc/Basic Chemical	Tacoma	3	Awaiting RA	
	Robert Rosch Property	Roy	1	Independent RA	
	Seaport Chemical Company	Puyallup	3	Awaiting RA	
	Seattle Transfer	Tacoma	5	Awaiting RA	
	Suburban Realty, Inc.	Tacoma	1	Awaiting RA	
	Summit Exxon	Tacoma	1	Independent RA	
	Sumner National Auto Parts	Sumner	1	Awaiting RA	
	TAM Engineering Corporation	Tacoma	1	Awaiting RA	
	Tacoma Metals, Inc.	Tacoma	2	Awaiting RA	
	Unocal Service Station (Conan)	Gig Harbor	1	RA in Progress	
	Valley Refinishing	Sumner	1	Awaiting RA	
	WA St. Nat'l Guard/Camp Murray	Tacoma	1	Independent RA	
	WSU Buckley Dairy	Buckley	1	Awaiting RA	
	Wasser Winters	Tacoma	1	Construction Complete	
	Weyerhaeuser Dupont #1	Dupont	2	RA in Progress	
	Xytec Plastics	Tacoma	2	Awaiting RA	
	<b>Skamania</b>	Skamania Rd. Dist. 1	Prindle	5	RA in Progress
		Unocal Bulk Plant #0761	Stevenson	1	Awaiting RA
	<b>Thurston</b>	Black Lake Grocery	Olympia	2	RA in Progress
		❖ Burlington Northern Railroad	Olympia	5	Independent RA
		Cascade Pole, Inc. - McFarland	Olympia	1	RA in Progress
		Cedar Creek Corrections (DNR)	Littlerock	2	Independent RA
		Fourth Street Mobil	Olympia	3	RA in Progress
		Hytec, Littlerock	Littlerock	4	Awaiting RA
		Lacey Compound (DNR)	Lacey	4	Independent RA
		Lacey Laundromat	Lacey	1	Awaiting RA
Lacey Valve Grinding		Lacey	3	Awaiting RA	
Minitrie Tire Fire		Rochester	1	Awaiting RA	
Monarch Bullet		Rochester	1	Independent RA	
Old Olympia Municipal Dump		Olympia	4	Awaiting RA	
Pattison Lake EDB		Lacey	2	Construction Complete	
❖ Puget Power - Eld Inlet Substn.		Olympia	3	Independent RA	
Puget Sound Power & Light		Olympia	5	Independent RA	
Rhodes Chemical Company		Rochester	3	Awaiting RA	
Rhodes Chemical Company-Barn		Rochester	3	Awaiting RA	
Texaco Bulk Plant		Tumwater	3	Independent RA	
Unocal (Hulco)		Olympia	4	Awaiting RA	
Weyerhaeuser Co. - Box Plant		Olympia	4	Awaiting RA	
Wolph's Second Hand Store		Olympia	2	Awaiting RA	
Wood Fabricators		Yelm	4	Awaiting RA	

❖ New site added to the ranked list, August 1996  
 ◆ New site added to the National Priorities List (NPL)

0▼ Superfund site; State has lead  
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0\* Superfund site under a Federal Facilities Agreement  
 0□ Superfund site; EPA and State co-lead



## Industrial Section

Contact Person: *Paul Skyllingstad* (360) 407-6949

County	Site Name	Nearest City	Rank	Status
<b>Clallam</b>	Daishowa America Company Ltd.	Port Angeles	5	Independent RA
	ITT Rayonier PA Finish Rm Site	Port Angeles	2	RA in Progress
<b>Clark</b>	ALCOA Vancouver	Vancouver	0▼	Construction Complete
	ALCOA Vancouver [NPL]			Construction Complete
	ALCOA Vancouver [PCB]			Independent RA
	ALCOA Vancouver [Rod Mill]			Construction Complete
	ALCOA Vancouver [TCE]			RA in Progress
<b>Cowlitz</b>	Columbia Marine Lines	Vancouver	4	Construction Complete
	Longview Fibre	Longview	5	Awaiting RA
	Reynolds Metals - Longview	Richmond	5	Awaiting RA
	Weyerhaeuser Co.	Longview	1	RA in Progress
	Weyerhaeuser Co. [Hg Chor-Alk]			RA in Progress
<b>Klickitat</b>	Columbia Aluminum Corporation	Goldendale	3	Awaiting RA
<b>Pierce</b>	Kaiser Aluminum Tacoma Works	Tacoma	4	Construction Complete
<b>Skagit</b>	Texaco February Oil Spill	Anacortes	2	Construction Complete
<b>Snohomish</b>	These sites are operable units of Weyerhaeuser Everett (which is managed by the Northwest Region.):			
	Weyerhaeuser-Everett [Beazer]	Everett	1	RA in Progress
	Weyerhaeuser-Everett [East Site]			RA in Progress
	Weyerhaeuser-Everett [West Site]			Construction Complete
<b>Spokane</b>	Kaiser Aluminum Mead Works	Spokane	0▼	RA in Progress
<b>Whatcom</b>	Georgia Pac-Bio Trtmt Lgn	Bellingham	2	Awaiting RA
	Georgia Pacific Corporation	Bellingham	5	RA in Progress

## Nuclear Waste Program

Contact Person: *Jack Donnelly* (509) 736-3013

County	Site Name	Nearest City	Rank	Status
<b>Benton</b>	HANFORD - 100-AREA (DOE) (includes 25 operable units)	Richland	0*	RA in Progress
	HANFORD - 1100-AREA (DOE) (includes 4 operable units)	Richland	0*	Construction Complete
	HANFORD - 200-AREA (DOE) (includes 43 operable units)	Richland	0*	Awaiting RA
	HANFORD - 300-AREA (DOE) (includes 6 operable units)	Richland	0*	RA in Progress

## Site Cleanup Unit

Contact Persons: *Martha Maggi* (360) 407-7232 or *Michael Spencer* (360) 407-7195

Sites managed by the Site Cleanup Unit are large and complex sites. To make them more manageable, these sites are often divided into smaller units referred to as "operable units." If a site has "operable units," they are listed below (along with their status) under the corresponding site name.

County	Site Name	Nearest City	Rank	Status
<b>Clark</b>	Frontier Hardchrome	Vancouver	0▲	RA in Progress
	US BPA Ross	Vancouver	0▲	RA in Progress
	US BPA Ross [OUA]			RA in Progress
	US BPA ROSS [OUB]			RA in Progress
	Vancouver Water Sta #4	Vancouver	0▲	RA in Progress
<b>Grant</b>	Moses Lake WF	Moses Lake	0▲	RA in Progress
	Moses Lake WF [Skyline]			RA in Progress
<b>Island</b>	USN Whidbey	Oak Harbor	0▲	RA in Progress
	USN Whidbey [HWES]			RA in Progress
	USN Whidbey [OU1]			RA in Progress
	USN Whidbey [OU2]			RA in Progress
	USN Whidbey [OU3]			RA in Progress
	USN Whidbey [OU5]			RA in Progress
	USN Whidbey [Lake Hancock]		1	RA in Progress
<b>Jefferson</b>	USN Port Hadlock	Port Hadlock	0*	RA in Progress
	USN Port Hadlock [Areas 10 & 21]			RA in Progress
	USN Port Hadlock [Area 11]			Construction Complete
	USN Port Hadlock [Area 12]			Construction Complete
<b>King</b>	Gas Works Park (WA Nat'l Gas)	Seattle	1	RA in Progress
	Queen City Farms	Issaquah	0▲	RA in Progress
	Queen City Farms A			RA in Progress
	Queen City Farms A [4Tek]			RA in Progress
	Queen City Farms A [Buried Drum]			RA in Progress
	Queen City Farms A [IRM]			RA in Progress
	Queen City Farms B			RA in Progress
Western Processing	Kent	0▲	RA in Progress	

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◆ New site added to the National Priorities List (NPL)

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County	Site Name	Nearest City	Rank	Status	
<b>Kitsap</b>	Eagle Harbor	Bainbridge	0▲	RA in Progress	
	Eagle Harbor [E]			RA in Progress	
	Eagle Harbor [W]			RA in Progress	
	Eagle Harbor [Wyckoff]			RA in Progress	
	Eagle Harbor [Wyckoff (GW)]			RA in Progress	
	USACE Manchester Annex	Port Orchard	0*	RA in Progress	
	USN Jackson Park	Bremerton	0*	RA in Progress	
	USN Jackson Park [Shoreline]			RA in Progress	
	USN Jackson Park [Upland]			RA in Progress	
	USN Keyport	Keyport	0*	RA in Progress	
	USN Keyport [OU1]			RA in Progress	
	USN Keyport [OU2]			RA in Progress	
	USN PSNS	Bremerton	0*	RA in Progress	
	USN PSNS [OUA]			RA in Progress	
	USN PSNS [OUB]			RA in Progress	
	USN PSNS [OUB (IA106)]			Construction Complete	
	USN PSNS [OUB (IA588)]			RA in Progress	
	USN PSNS [OUC]			RA in Progress	
	USN PSNS [Tanks]			RA in Progress	
	USN Subase	Silverdale	0*	RA in Progress	
	USN Subase [OU1/Ord. Disp]			Construction Complete	
	USN Subase [OU2]			RA in Progress	
	USN Subase [OU3]			Construction Complete	
	USN Subase [OU6]			RA in Progress	
	USN Subase [OU7]			RA in Progress	
	USN Subase [OU8]			RA in Progress	
	USN Supply Center	Bremerton	0*	RA in Progress	
	<b>Lewis Okanogan Pierce</b>	American Crossarm & Conduit	Chehalis	0▲	RA in Progress
		Silver Mountain Mine	Loomis	0▲	RA in Progress
		ASARCO	Tacoma	0▲	RA in Progress
		ASARCO [Demolition]			RA in Progress
		ASARCO [Groundwater]			RA in Progress
		ASARCO [Offshore]			RA in Progress
ASARCO [Smelter]				RA in Progress	
Lakewood/Ponders Corner		Lakewood	0▲	Construction Complete	
Ruston/North Tacoma		Tacoma	0▲	RA in Progress	
South Tacoma Field		Tacoma	0▲	RA in Progress	
Tacoma Landfill		Tacoma	0□	Construction Complete	
Tacoma Tar Pits		Tacoma	0▲	Construction Complete	
USA Ft. Lewis LF5		Tacoma	0▲	Construction Complete	
USA Ft. Lewis LF 4/SCRPP		Tacoma	0▲	RA in Progress	
USA Ft. Lewis Log Center		Tacoma	0▲	RA in Progress	
USAF MAFB Am Lk Gdn		Tacoma	0*	Construction Complete	
USAF MAFB MTCA LF-01		Tacoma	3	Construction Complete	
USAF MAFB MTCA LF-02		Tacoma	3	Construction Complete	
USAF MAFB MTCA SS-34		Tacoma	3	RA in Progress	
USAF MAFB MTCA WP-44		Tacoma	3	Construction Complete	
USAF MAFB MTCA WP-61		Tacoma	5	Construction Complete	
USAF MAFB MTCA WP-64		Tacoma	5	Construction Complete	
USAF MAFB Washrack		Tacoma	0*	Construction Complete	
Well 12A		Tacoma	0▲	Construction Complete	
<b>Skagit Snohomish Spokane</b>		EDB 2 Skagit County	Mt. Vernon	1	Construction Complete
		Tulalip Landfill	Manysville	0▲	Awaiting RA
		Colbert Landfill	Spokane	0□	RA in Progress
	Northside Landfill	Spokane	0▲	Construction Complete	
	USAF (FAFB) Fairchild AFB	Spokane	0*	RA in Progress	
	USAF FAFB [Craig Rd Lf]			Construction Complete	
	USAF FAFB [Pr1]			RA in Progress	
	USAF FAFB [Pr1 (FT-1)]			RA in Progress	
	USAF FAFB [Pr1 (LTM)]			RA in Progress	
	USAF FAFB [Pr1 (PS-2)]			RA in Progress	
	USAF FAFB [Pr1 (WW-1)]			RA in Progress	
	USAF FAFB [Pr2]			RA in Progress	
	USAF FAFB [Pr3]			RA in Progress	
	<b>Thurston</b>	EDB 1 Thurston County	Olympia	2	Construction Complete
		Restover Truck Stop	Tumwater	3	RA in Progress
	<b>Whatcom</b>	EDB 3 Whatcom County	Lynden	3	Construction Complete
		NW Transformer-Harkness	Everson	0▲	RA in Progress
<b>Yakima</b>	NW Transformer-Mission Pole	Everson	0▲	Construction Complete	
	FMC Yakima	Yakima	0▲	Construction Complete	
	USA Yakima Training Center	Yakima	2	Awaiting RA	

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# Measuring Our Success in Cleaning up Sites

One of the issues the Toxics Cleanup Program is facing is how to best measure what we do. Since the program began, data has been collected to track our progress in a number of areas. We know how many sites we have, how many are in the process of being cleaned up, and how many are already cleaned up. But as the program has matured, we've found this type of information doesn't answer all the questions we now have or address all the areas in which people have interests.

In last year's Annual Report, we began trying to examine the overall improvement to the environment that our cleanup activities were actually having. One of the methods we came up with for measuring these impacts was to use environmental indicators. Environmental indicators can be described as the measurements of what a site cleanup has achieved: how much contamination has been removed from the environment and how much land and water has been restored.

## The Task

Site by site, we compiled all of the information we had to date. This proved to be a difficult and time-consuming task. Site Managers were asked to analyze their sites and provide detailed summaries since work began on the site. It was difficult to extract the information and sometimes a best estimate had to be provided. Some controversy resulted about using this method as a global measurement of what had been accomplished because of some of the data uncertainties.

All information since the program began was compiled for two of the five cleanup sections. We were surprised and excited by the findings which we reported last year: 10 million pounds of metal contaminants had been removed from soil and enough ground water cleaned up to provide drinking water for 250,000 people a day for an entire year!

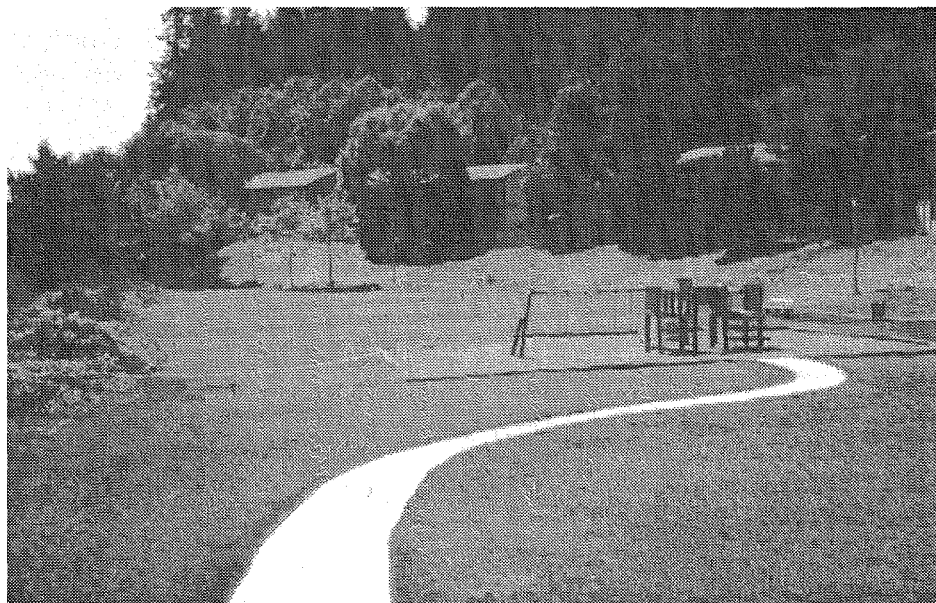
## Fine Tuning the Method

This year we're faced with improving the gauge we've developed to measure the effects on the environment. Washington is one of the first states to begin actively using environmental indicators. We're finding there's a lot of definition that needs to go into the data which is compiled, and it's critical to be consistent in our interpretation of the data. Although we are still in the development phase of how best to accurately measure what we do, there's a recognition that we need to improve on what we've started. It's important to be able to measure the effectiveness of our program in terms of direct environmental and human health, and to report to the citizens of this state that the quality of life is being improved because risks are being reduced.

*After cleanup:  
The area was restored and  
now includes a playground.*



*Above: Removing a concrete fuel tank that contaminated soil at the Jackson Park Housing Complex in Kitsap County.*



# Measuring Our Success in Cleaning up Sites (cont.)

## What is "Risk"?

Some contaminants are more toxic than others. There are several issues involved in measuring the risk or toxicity of a contaminant. Concentration, the length of exposure, and the "pathway" of exposure are a few of the issues. "Pathway", is how an individual may contact the contaminant, such as touching, eating, drinking, or inhaling a compound at a site. A tiny amount of one contaminant can be more toxic than a large amount of another. Some contaminants can affect a person's health immediately, while others may take years.

## What is a "Site"?

A site is an area which has been found to have, or is suspected of having, contamination that could have an effect on the environment and/or human health. There are several ways a site can become contaminated. These include:

- ✱ waste-handling practices that used to be acceptable;
- ✱ accidental spills or releases; and
- ✱ illegal dumping.

## After Cleanup

Some sites are more complex than others in terms of physical characteristics, type, and amount of contamination. If a site is completely cleaned up and meets state cleanup levels, the site is considered clean and available for unrestricted use, such as a future residential area. Sometimes a site cannot, or need not be completely cleaned up. This may happen because of limitations such as present technology, a site's physical conditions, or the risks associated with site use. These sites may have some treatment performed and/or be managed by having legal restrictions placed on future uses of the site. In these cases,

such legal restrictions may require restricted use of the land; for example, a closed landfill may become an open space for plants and wildlife or other use appropriate to the selected remedy.

## This Year

We've decided to use the environmental indicators listed below. Some of the questions that went into defining the measurements are included in the text following this list. Accompanying totals are for all of the sites in the program in 1995.

- ✱ Area of land and water returned to use after a cleanup has taken place.
- ✱ Amount of contaminants that have been treated, removed, recycled, or isolated from the environment.
- ✱ Volume of land and water that was cleaned up or managed.
- ✱ Number of people that were directly and indirectly affected before a cleanup.

## Return of Land and Water Areas

Measuring our restored land and water areas has infinite possibilities. Merely reporting that an acre has been cleaned up doesn't tell the whole story. Does that mean we cleaned up the top foot of soils, or were we required to dig down 10 feet to capture all the contamination? Were a dozen sites cleaned up, or one hundred? To simplify this measurement we decided to project all cleaned up areas to the surface, measure the flat surface area, then convert these areas to acres. This method includes all areas above ground and below. For 1995, we found:

Area returned to appropriate use:  
Includes both restricted and unrestricted uses.

Soils . . . . . 189 acres  
Ground water . . . . . 80 acres

---

## Assessing Risk

*Assessing risk both to human health and to the environment when cleaning up contaminated sites is a primary challenge — to both the Department of Ecology and the Department of Health. The Department of Health plays an integral role at cleanup sites by helping to assess the human health impacts as a result of the contamination. During Fiscal Year 1996, the Department of Health received more than \$1.3 million from the State Toxics Control Account to carry out public health activities, including assessing risk.*

*One challenge that the Department of Health faces is conveying how health agencies deal with environmental risk assessment data differently than environmental agencies. For example, clarifying to the public the difference between a traditional quantitative risk assessment and a health assessment. The quantitative risk assessment generally conveys a "maximum lifetime risk of getting cancer" based on the exposure in question, while the health assessment puts in perspective the potential and current health risks to impacted communities and individuals.*

*The Department of Health is meeting this challenge through education efforts, and will continue to explore how to get health education out to those communities affected by contamination.*

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## Contaminants Treated or Contained in 1995

Illustrating the significance of how much contamination has been reduced can be difficult. It is possible that removing one pound of one contaminant can be much more significant than removing hundreds of pounds of another contaminant simply because of the difference in toxicity of the contaminants. Below is a summary of contaminants treated or contained. This data is from a collection of eighteen groups of contaminants that were tracked. The groups have been consolidated into the following:

Actual Contaminants Treated or Contained	
Organic compounds . . . . .	4,800 lbs.
Metals . . . . .	324,800 lbs.
Petroleum Products . . . . .	1,385,900 lbs.
Polynuclear Aromatic Hydrocarbons . . . . .	578,700 lbs.
<i>(commonly used in wood treating)</i>	
Asbestos . . . . .	11,500 lbs.
Other/Mixed Contaminants . . . . .	2,331,000,000 lbs.
<i>(may contain soils but primarily landfill refuse)</i>	
<hr/> Total . . . . .	2,333,305,700 lbs.
<i>(Enough to fill more than 4,600 railroad box cars!)</i>	

## Volume of Land and Water Treated in 1995

The following numbers show the volume of contaminated land and water that was treated as part of site cleanup. What isn't illustrated is the extent to which the land or water was contaminated, the treatment costs associated with the cleanups, or the ease of a particular cleanup or contaminant removal action.

Treated Soil . . . . .	29,988,200 cubic feet
Treated Sediment . . . . .	5,900 cubic feet
Treated Ground Water . . . . .	44,854,902,600 gallons
Treated Drinking Water . . . . .	1,316,367,000 gallons

For perspective, a standard-size minivan has a volume of 125 cubic feet. It would take approximately 239,905 minivans, filled to the roof, to hold the soil that was treated last year alone!

## Number of People Directly and Indirectly Affected Before a Cleanup in 1995

This year we also wanted to measure how many people are actually benefiting from the cleanups and remediations that the Department is conducting. The challenge we face is consistent interpretation of who is included. People that are directly affected are those that experience direct impacts from contaminants on their lives in some way. For example, they were affected due to:

- ✱ contaminated drinking water supplies;
- ✱ contaminated soils around their homes or businesses; or
- ✱ inability to sell or acquire a home in an area associated with a hazardous waste site.

Last year alone, an estimated 1,600 individuals were directly affected before a cleanup took place.

The number of people who were indirectly affected reached approximately 20,600 last year. There is interpretation that goes into this number because it may be argued that many of these people were actually "directly" affected. We may also not know of everyone who is indirectly affected, and some may not believe they are affected in any way. For example, "indirectly" affected may include those who:

- ✱ have contaminated ground water migrating toward their drinking water wells;
- ✱ have contaminated soil around neighboring homes; or

✱ may have difficulty selling or acquiring a home because they are near or associated with a hazardous waste site.

## Pollution Prevention

The Toxics Cleanup Program is also tracking pollution prevention measures. Pollution prevention is a major priority for the department as a whole. Within the Toxics Cleanup Program, the underground storage tank program focuses on education and technical assistance for the prevention of releases from tanks. This part of the program most clearly concentrates on preventing pollution, while the remainder of the program focuses on the cleanups of pollution. Although a portion of our cleanups do prevent the spread of pollution, a method for clearly defining how to measure and gauge the effectiveness of it is still being developed.

## Future Needs

The Toxics Cleanup Program is continuing to explore how to best measure program effectiveness. During the next year, we will further examine the data we collect and how it can be used to improve decision making for the program. It will also be scrutinized for continued appropriateness in answering the range of interests that have developed since the program began. This may cause a shift in the direction of how we measure effectiveness. The intention is to have the ability to easily and accurately measure the program's effectiveness, and to provide useful information to all interested citizens in an easily understood format. If you have any comments, questions, or suggestions, we'd like to hear from you. Call or write to Ecology's Toxics Cleanup Program (address and phone number on the back cover of this report).



# Keeping Contaminants Out of the Environment

Getting contaminants out of the environment and keeping them out are the key goals of the Model Toxics Control Act. By taking on pollution prevention activities, we can prevent new sites from being created. The various agencies that receive money from the State and Local Toxics Control Accounts have various ways of keeping contaminants out of the environment. This section summarizes the key pollution prevention activities that are being done.

## Department of Ecology

### Toxics Cleanup Program: Helping to Prevent Underground Storage Tank Releases

Eighty-eight percent of the contaminated sites in Washington involve petroleum. Most of these are a result of leaking underground storage tanks. That's why preventing releases from underground storage tanks is one of Ecology's Toxics Cleanup Program's main objectives.

We regulate nearly 15,000 active underground storage tanks. These tanks are on about 5,400 commercial and government properties, primarily at gas stations. Our underground storage tank program is working to ensure that tank owners and operators install, manage, and monitor their tanks to prevent releases. In addition, all tank owners and operators need to meet state and federal requirements such as financial responsibility, leak detection, and corrosion protection, and then upgrade or close their tanks by December 1998.

Funding for our underground storage tank program activities comes from two main sources: an annual permit fee of \$75 per tank; and federal grant money from the Environmental Protection Agency.

The underground storage tank program marshals its resources to provide tank owners and operators with information that can help improve their

operations, prevent leaks and future liability for cleanup. The "Tank Bulletin" newsletter, periodic "Focus" sheets, and telephone assistance are a few low-key methods we use to provide information. The most effective method, though, is person to person — Ecology staff going to sites and talking with tank owners and operators.

This year, the underground storage tank program began offering one-time, no-fault, technical assistance inspections throughout the state. (Our Central Regional Office successfully piloted this program last year.) Tank owners and operators can ask for an inspection, get advice from our inspectors on how to

improve their operations, and possibly receive a lower insurance rate. Depending on the result of the inspection, some tank insurers give a reduction of up to 10 percent.

Since we have offered the technical assistance inspections statewide, Ecology staff have performed 350 inspections. When problems are found, our inspectors work with the tank owner or operator to develop a reasonable schedule to come into compliance.

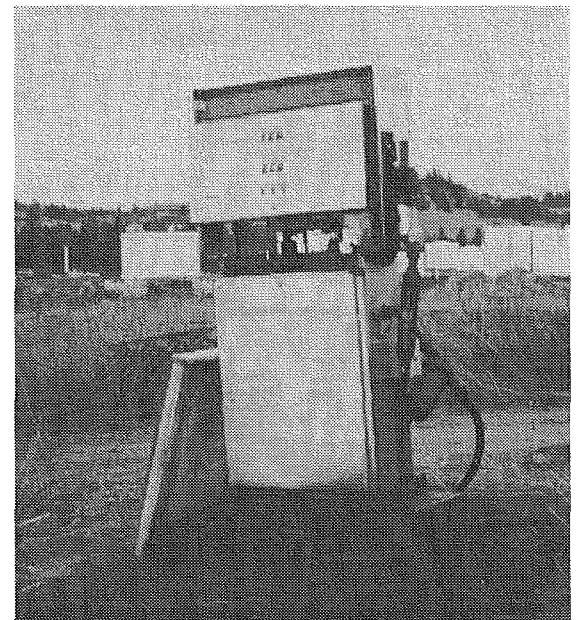
Site visits provide tank owners information about the December 1998 federal deadline for upgrading tanks. Most tank owners are proceeding with upgrading tanks. We believe the state

## Helping Business Owners

*Ecology Underground Storage Tank inspectors conduct hundreds of technical assistance visits and inspections every year to commercial and private owners of underground fuel storage tanks. These visits focus on preventing releases by bringing tank owners and operators into compliance with state requirements like leak detection, corrosion protection, and overfill protection.*

*One of our Underground Storage Tank inspectors, Jim Greeves of Ecology's Eastern Regional Office, describes his approach to these visits:*

*"Business owners and operators want to focus on their business, not their underground storage tanks. What I do is work with them on an individual basis. We can then focus on assuring that their underground storage tank system and inventory control methods are working. This helps them minimize the time and expense they put into their tanks, and places them in good standing with state requirements — while of course protecting against spills — so they can get on with running their business."*



*Underground storage tanks need to be upgraded or closed by December 1998.*

of Washington is ahead of most of the nation with the rate of tank upgrades. Some tank owners may instead choose to close their tanks rather than go to the expense of upgrading. When they do, we assist them through the process of either removing the tank(s) from the ground, or properly closing the tank in place to prevent a future release.

The payoff of our underground storage tank program activities is two-fold. Washington citizens get a safer, cleaner environment, and tank owners and operators get long-term protection of land values by preventing releases to the environment.

Here are some results of the Underground Storage Tank Program's prevention work:

- ☀ The rate of reported releases has been cut in half since 1990.
- ☀ About 75% of the inspected tanks are in compliance with leak detection requirements.
- ☀ All licensed tank owners have documented their ability to pay the costs of cleaning up releases should one occur.

## **Hazardous Waste and Toxics Reduction Program:**

### **Promoting Pollution Prevention and Safe Waste Management:**

Ecology's Hazardous Waste and Toxics Reduction Program spends most of its resources promoting pollution prevention and fostering safe waste management. They do this primarily through technical assistance and education to hazardous waste generators. The program received \$4.4 million from the State Toxics Control Account in Fiscal Year 1996 to carry out the following activities.

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## **Assistance Pays Off**

*When Ecology's Hazardous Waste and Toxics Reduction program staff first visited the Johnson Matthey Electronics Company in Spokane, the company was ready to spend a half-million dollars on a new continuous wastewater treatment process. Program staff showed that instead of buying the system, they simply needed to use water more efficiently in their semi-conductor operations. They did so, significantly reducing their costs - - actually saving a half-million dollars instead of spending it on a new system. In addition, they have significantly reduced their use of hazardous substances.*

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### **Pollution Prevention Technical**

**Assistance:** Helping hazardous waste generators learn about technical and regulatory issues and how to increase their pollution prevention techniques is a key activity of the program.

In Fiscal Year 1996, staff conducted over 700 voluntary on-site facility visits to discuss pollution prevention and/or regulatory compliance issues. Over 100 visits were to new hazardous waste generators, more than 35 visits were to vocational/technical schools, and over 120 visits specifically targeted pollution prevention.

These visits are aimed at helping businesses and others learn how to improve their operations to prevent pollution. Often the improvements suggested help businesses save money as well as reduce the amount of waste they generate.

Hazardous Waste Program staff also responded to more than 12,000 phone calls; conducted about 50 statewide regulatory compliance workshops (attended by nearly 1,400 people); and conducted about 30 pollution prevention workshops (attended by nearly 2,000 people).

### **Pollution Prevention Planning:**

Businesses generating more than 2,640 pounds of hazardous waste annually must complete pollution prevention plans and submit annual progress reports to the Hazardous Waste and Toxics Reduction Program. During the last year, program staff visited nearly 200 businesses to help them prepare their plans and to emphasize the pollution prevention techniques they use.

### **Dangerous Waste Inspections:**

To foster safe waste management and compliance with waste regulations, program inspectors conduct on-site inspections of:

- ☀ businesses that are considered large-quantity generators of hazardous waste;
- ☀ facilities that are permitted to treat, store, and dispose of hazardous waste;
- ☀ facilities that may have problems complying with dangerous waste regulations; and
- ☀ facilities about which Ecology has received complaints.

In the last year, program staff inspected about 470 facilities.

### **Hazardous Waste Permits:**

Businesses that want to treat, store, and/or dispose of dangerous wastes, and facilities wanting to recycle certain dangerous wastes must be permitted. Hazardous Waste and Toxics Reduction Program staff review permits and coordinate the process with other state requirements like the State Environmental Policy Act to provide one-stop permit shopping for businesses. Staff also review closure plans from facilities no longer treating, storing, or disposing of hazardous waste. Over the last year, the program issued 4 permit modifications and completed review of 9 facility closures.

# Keeping Contaminants Out of the Environment (cont.)

## **Solid Waste and Financial Assistance Program:**

**Preventing Releases of Hazardous Substances:** In 1996, Washington had about 300 permitted solid waste facilities. This number includes landfills, incinerators, "moderate risk waste" facilities, recycling facilities, and composting facilities. ("Moderate risk waste" is hazardous waste from households or from businesses that generate only small quantities.)

Many of these facilities have the potential to become contaminated and release hazardous substances to the environment. The State Toxics Control Account helps to prevent such releases by supporting the work of the Solid Waste and Financial Assistance program. The program received \$1.1 million from this account in Fiscal Year 1996.

This program assures that facilities are built, maintained, operated, and closed in an environmentally sound manner, according to state and federal regulations.

While the primary responsibility for solid waste activities rests with local governments and jurisdictional health departments, these agencies often cannot afford to maintain sanitary engineers, hydrogeologists, and other solid waste specialists on staff. Ecology provides professional engineering and hydrogeologic services to these agencies, including reviewing permits for design and operational adequacy to meet environmental regulations.

Ecology also provides technical assistance for solid waste inspections at the request of the local health department. Program staff accompany health department personnel on inspection tours, check on-going construction activities, suggest techniques for ground water monitoring, and do statistical analysis of the data. Staff also work directly with health departments in handling major

permits such as large, complex, private landfills. Ecology staff review, update, and interpret solid waste regulations to accommodate changes.

Staff are currently evaluating the definition of solid waste to determine if it should be changed, and how that change would affect the interpretation of regulations. Materials considered waste at one time now have more value and pose little or no environmental threat. Staff are also studying recyclable materials to determine whether deregulating certain recyclables would promote more recycling while minimizing hazards from toxics.

In addition, staff assist counties in writing, revising, and implementing solid- and moderate-risk waste plans. Ecology staff also participate in local solid waste advisory committees as they develop local plans and put them into practice.

## **Coordinated Prevention Grants Help Local Governments Prevent Pollution:**

Preventing future pollution poses an expensive problem for cities, towns, and counties, and their taxpayers. Grants from the Local Toxics Control Account ease this burden, and, in some areas, provide the foundation for local waste management programs. These grants support the ongoing partnership between Ecology and local governments to deal responsibly with waste.

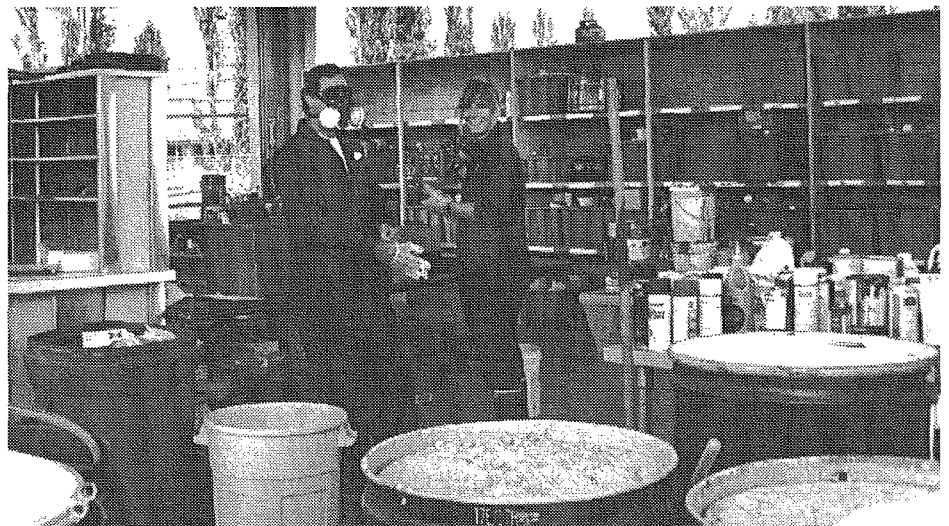
In Fiscal Year 1996, the Local Toxics Control Account funded \$15,163,974 in new Coordinated Prevention Grants. (See the *Grants Status Report*, page 29, for a list of grants that were awarded.)

Combined with local match dollars, this grant funding helped leverage \$25,592,159 or 59 percent of the total costs of pollution prevention projects. Local match rates range from 25 to 40 percent of project costs eligible for grant funding, depending on the local economic situation and the ability of the jurisdictions to coordinate their grant requests.

The Coordinated Prevention Grant projects helped local governments:

- ✱ inspect facilities and pursue illegal dumpers;
- ✱ collect and dispose of household hazardous waste;
- ✱ work with businesses to find ways to reduce and recycle their moderate risk waste;
- ✱ teach people how to prevent waste and recycle;
- ✱ provide curbside and drop box collection for recyclables;
- ✱ provide yard waste composting; and
- ✱ drill ground water monitoring wells at active landfills.

*Grant-funded collection facilities provide a way to get toxics out of the garbage and into safe disposal.*



The grant program also provides funds to local governments faced with cleaning up a contaminated site. See the chapter on "Cleanup" for a description of how these grants are used.

### **Water Quality Program:**

Since the Model Toxics Control Act passed, Ecology's Water Quality Program has received State Toxics Control Account funds to pay for activities that help protect Washington's water from contaminants. The program received more than \$500,000 to fund the following activities during Fiscal Year 1996.

### **The Aquatic Pesticide Program**

**Finds Long-Term Solutions:** This program is aimed at reducing the risk to public health and aquatic life from pesticides that are used to manage aquatic weeds, invasive plants, and pests. Drawing on studies that assess human health and environmental risks associated with the use of aquatic pesticides, the program helps others arrive at long-term solutions for aquatic pest control.

Technical assistance and public education are key to the program's success. Staff provide assistance and how-to information to pesticide applicators, lake associations, and others to ensure the wise use of aquatic pesticides. The program is also working closely with other agencies to streamline the permit process for requests to use aquatic pesticides for the control of noxious aquatic plants like *Spartina* and Purple Loosestrife.

The Aquatic Pesticides Program also helps chemical manufacturers and pesticide applicators and their clients with information regarding permit conditions, and provides educational materials on specific pesticides and aquatic pest control methods.

### **The Lower Columbia River Bi-State Water Quality Program:**

A joint effort of Washington and Oregon, the Bi-State Water Quality Program was created in 1990 to:

- \* identify water quality problems in the Lower Columbia River;
- \* determine if the problems impaired the use of the river;
- \* develop solutions; and
- \* make recommendations to protect the river's future.

Funding for Bi-State Program activities came from the State Toxics Control Account, the Oregon State Department of Environmental Quality (ODEQ), the Public Ports of Washington and Oregon, federal grants, and contributions from the Northwest Pulp and Paper Association.

The Bi-State Program ended in June, 1996. Over the last six years, the Bi-State Program completed a variety of water quality work on the Columbia River, from Bonneville Dam to the Pacific Ocean including:

- \* a survey for contaminants in water, sediments, and fish tissue;
- \* a study to monitor water quality conditions;
- \* an assessment of human health risks from eating Lower Columbia River fish;
- \* a health assessment of bald eagles, minks, river otters, and fish; and
- \* a study that tracked changes in the distribution and composition of riparian habitat.

A summary of the Bi-State Program findings is available in a document entitled *The Health of the River, 1990-1996: Integrated Technical Report*. Overall, the results show that pollutants are impacting the Lower Columbia River. More than half of the 101 chemical pollutants detected in the water were at levels of concern to fish and wildlife populations and impairing other beneficial uses of the river such as recreation. The results of the study also show that fish from the Lower Columbia are safe to eat. However the

report recommends limiting consumption for children, pregnant women and nursing mothers.

The report indicates that although the contaminants are at levels of concern — they are still at levels where actions can be taken to reduce their quantity and effects.

Ecology and ODEQ are working to complete one final study that identifies pollutants and their sources. The report should be available in Fall 1996. Copies of all technical reports can be obtained from Ecology's Publications Distribution Office (see back cover of this report).

The work of the Bi-State Program is being continued by the Lower Columbia River Estuary Program.

### **The Lower Columbia River Carries On Protection Work:**

In July 1995, the Lower Columbia River was accepted into the National Estuary Program. The National Estuary Program was created by Congress in 1987 to improve and protect the water quality of nationally significant estuaries. For the next three years, the states of Washington and Oregon and the Environmental Protection Agency will work with local citizens to develop a Comprehensive Conservation and Management Plan for the lower 146 miles of the river.

A management committee representing a full range of constituent groups has been formed to carry out the work of the program. So far, the committee has developed a first-year workplan and begun work on identifying priority problems in the estuary. Other steps the committee will take in developing the management plan include:

- \* characterizing the health of the estuary;
- \* identifying probable sources of pollution; and
- \* describing environmental goals and objectives for the estuary.

# Keeping Contaminants Out of the Environment (cont.)

The committee will build on what was learned from the work done by the Lower Columbia River Water Quality Program. The Comprehensive Conservation and Management Plan will include a separate action plan for each of the priority problems identified, a financing plan, an implementation plan, and a plan for monitoring the overall success of implementation efforts.

## Department of Health Preventing Exposure to Toxic Substances:

Environmental health activities at the state Department of Health are founded on the premise of protecting people by preventing exposure to toxic substances — thus preventing adverse health effects.

To reach its goal of prevention, the Department uses a portion of its \$1.3 million from the State Toxics Control

Account to conduct a variety of programs and activities that include assessment and policy development on issues such as:

- \* ambient and indoor air quality;
- \* fish and shellfish contaminants;
- \* human health sediment criteria;
- \* drinking water protection;
- \* hazardous waste effects and cleanup standards; and
- \* drug lab contractor and worker certification.

For example, over the last fiscal year more than 1100 ground water wells were tested statewide for presence of synthetic organic chemicals. These chemicals are regulated under the federal Safe Drinking Water Act. The information collected from this effort is instrumental in evaluating which locations meet the standards for safe drinking water supplies and which do not.

## Department of Agriculture Reducing Pesticide Waste:

Every year through its Waste Pesticide Identification and Disposal Program, the Department of Agriculture helps reduce waste that could end up contaminating soil and ground water. Banned and unusable pesticides are collected at events held across the state to be properly disposed. The program was created seven years ago, when the Model Toxics Control Act passed, to prevent accumulation of unusable pesticides, and collect what is already stored in rural areas, on farms, and at other locations. The Department received nearly \$554,000 to conduct activities during Fiscal Year 1996.

Most of the pesticides are collected at regional events where participants can bring their unusable products to a collection site. Prior to the event, Department of Agriculture field staff can help participants identify unlabeled containers, inventory their supply, and prepare their materials for transport. Staff also provide participants with a bill-of-lading which allows them to transport the materials to the collection site.

The Department arranges a special site event when a participant has numerous containers of unknown substances.

Materials collected are taken to a permitted disposal facility. Most of the pesticides are destroyed through a high-temperature process called "thermal destruction." Pesticides that contain metals, like arsenic, lead, and mercury cannot be destroyed by heat, so they are disposed at hazardous waste landfills.

Since the program began, 270 tons of unusable pesticides have been collected from more 1,800 participants, and were properly disposed. Four regional and 11 special collections were held during the last fiscal year, with 80,569 pounds collected from 291 participants at a total contractor cost of \$327,773. *Table 3: Pounds of Pesticides Collected, Fiscal Year 1995-1996* shows a summary of the pesticide collection events held during Fiscal Year 1995-1996.

**Table 3:**  
Pounds of Pesticides Collected, Fiscal Year 1995-1996

Regional Collection Event	When	Pounds Collected	Disposal Cost
<i>Sequim Regional</i>	8 / 95	3,708	\$20,369.02
<i>Monroe Regional</i>	9 / 95	15,207	\$81,394.67
<i>Orondo Regional</i>	10 / 95	23,168	\$118,762.52
<i>Yakima Regional</i>	4 / 96	28,376	\$70,020.72
Regional total FY 1996	4 events	70,459	\$290,546.93
Special Site Events	When	Pounds Collected	Disposal Cost
<i>Terrace Heights 1</i>	9 / 95	1,066	\$6,326.93
<i>Olympia 2</i>	9 / 95	1,831	\$7,299.85
<i>Mount Vernon 1</i>	12 / 95	20	\$225.79
<i>Mount Vernon 2</i>	12 / 95	165	\$5,762.79
<i>Mount Vernon 3</i>	12 / 95	860	\$1,266.41
<i>Mount Vernon 4</i>	12 / 95	53	\$490.56
<i>Mount Vernon 5</i>	12 / 95	4,443	\$9,746.61
<i>Burlington 1</i>	12 / 95	1,000	\$4,198.89
<i>Snohomish 2</i>	12 / 95	5	\$144.78
<i>Orondo 1</i>	5 / 96	467	\$1,516.75
<i>Poulsbo 1</i>	5 / 96	200	\$246.75
Special site total FY 1996	11 events	10,110	\$37,226.11

# Turning Data Into Information

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

Data are the pieces. Information is how the pieces are put together. The Toxics Cleanup Program has made a decision to increase the attention given to the program's information. Here are examples of how we're achieving our goal.

## Information Integration Project:

The Department of Ecology is in the process of creating an agency-wide database. This effort, called the Information Integration Project, is a major undertaking by Ecology to share data and information across programs and with the public. We are optimistic that for the first time, we will have the ability to show the big picture. For example, the new system will allow users to identify all Ecology activities related to a specific business rather than requesting information from each of the individual program data systems. The Toxics Cleanup Program's Site Information System database was selected as the first one to be integrated into the project and has been converted to the new system.

## Data Management:

The Toxics Cleanup Program has several computer systems to manage data. These include the Site Information System, the Underground Storage Tank/Leaking Underground Storage Tank database, and several smaller systems to do specific tasks. These systems are essential for taking raw data and turning it into information.

## Information Resources:

The Toxics Cleanup Program has several lists available to the public which are generated from these databases. These lists can be a useful reference when purchasing property or when conducting an environmental audit of a piece of property. By reviewing this information, one can determine if the property has known contamination or if it is located near known contamination. Keep in mind, these lists include only sites that have been reported to the Department of Ecology.

### Confirmed & Suspected Contaminated Sites List:

This list is generated from the Toxics Cleanup Program's Site Information System database. It consists of sites that have had an initial investigation and may require further work. Hazardous Sites List sites, Superfund sites, and independent cleanup sites are included in this list as well. Information in this list includes the site name, site address, confirmed & suspected contaminants, and affected media. There are approximately 1500 sites on this list.

### Leaking Underground Storage Tank List:

This list is generated from the Toxics Cleanup Program's Underground Storage Tank/Leaking Underground Storage Tank database. A site is entered into the database once Ecology is notified of a reported release. This can be by telephone or through receipt of a cleanup report. Information in the list includes the site identification number, site name, date of release, site address, release status, and affected media. There are approximately 5000 sites on this list.

### Site Register:

The Site Register is a bi-monthly publication. It is not a comprehensive list of sites, but rather an update on activities at hazardous waste sites. Public meetings, public comment periods,

and the availability of cleanup reports are just some of the items posted in the Site Register. Once a year a special edition of the Site Register lists all current guidance and educational documents/publications that are available.

### Lists/Information Available on the Internet:

The Toxics Cleanup Program has lists/information available on the Internet. Our homepage address is: <http://www.wa.gov/ecology/cleanup.html>.

Information on the Internet includes:

- ✱ fact sheets on contaminated sites undergoing cleanup;
- ✱ a citizen involvement page (this includes current open public comment periods and upcoming public meetings and events);
- ✱ the Hazardous Sites List;
- ✱ the Leaking Underground Storage Tank List;
- ✱ the Tank Bulletin (an update of issues/information on underground storage tanks);
- ✱ the Underground Storage Tank List (this is a list of regulated underground storage tanks); and
- ✱ information on the Policy Advisory Committee.

### Accessing Site Files:

Each site under formal Ecology oversight has a file which is open to the public. If you need additional information on a particular site, you can always make an appointment to review Ecology's site files. To review a file or record pertaining to a site, please contact the regional office in which the site resides. (A map of the regional offices with phone numbers is on the inside front cover of this report.)

To receive a copy of any of the publications or lists mentioned in this section, call 1-800-826-7716, or FAX your request to (360) 407-7154.



# Turning Data Into Information (cont.)

## Hazardous Sites List:

This list is required under the Model Toxics Control Act and includes sites that have confirmed contamination. These sites have undergone a preliminary study called a Site Hazard Assessment. During a site hazard assessment, Ecology collects environmental data about a site to determine the type and extent of contamination. If further action is needed, Ecology ranks the site using the Washington Ranking Method and places it on the Hazardous Sites List. Sites are ranked relative to each other on a scale of 1 - 5. A ranking of

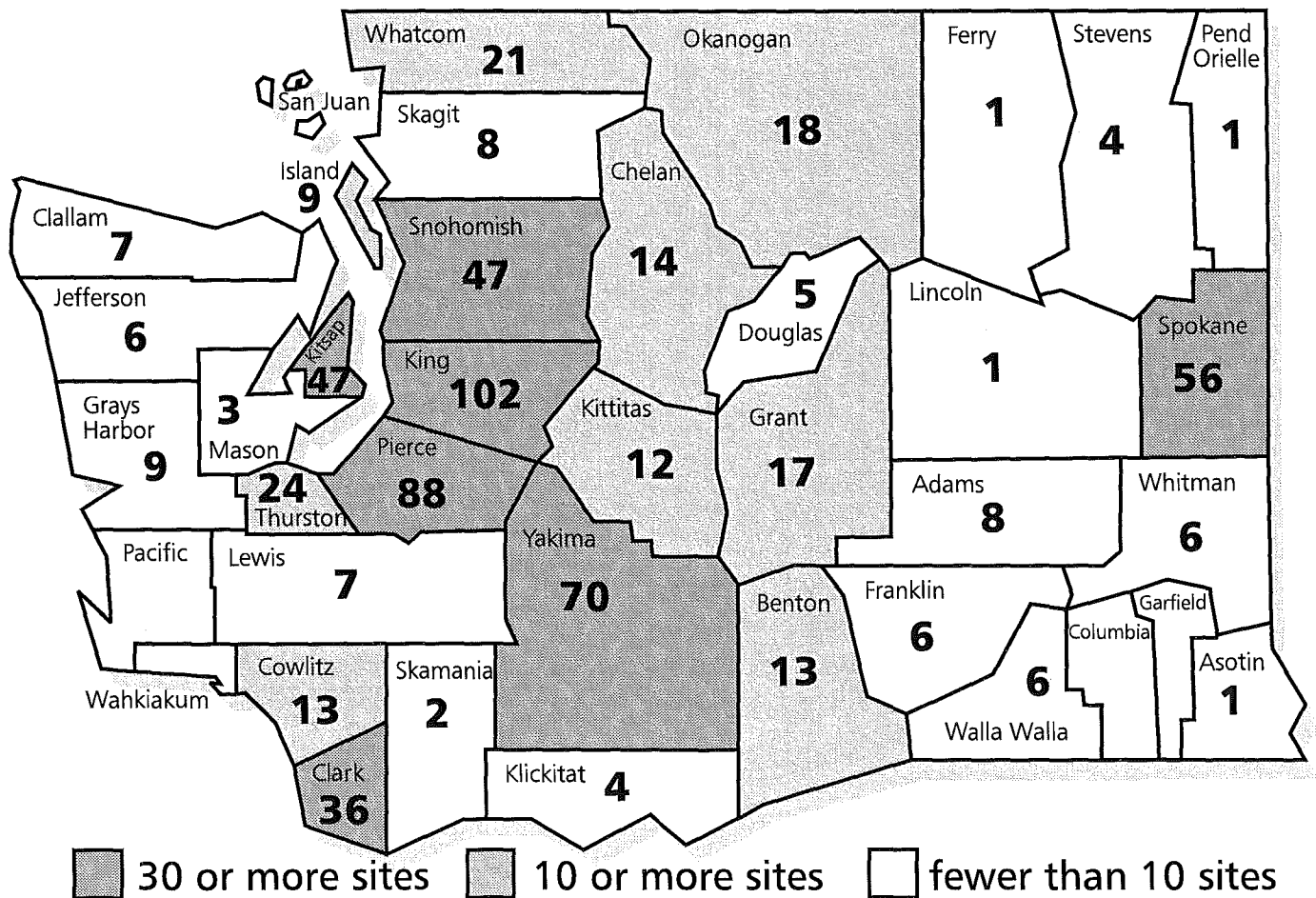
one (1) represents the highest level of concern to human health and the environment, relative to all other sites; and five (5), the lowest. Hazard ranking helps Ecology make priority decisions on where to target cleanup funds. Actual health and environmental impacts, public concern, a need for immediate response, and available cleanup staff and funding also affect which sites get first priority for cleanup.

The Hazardous Sites List is published twice a year: February and August. As of August 1996 there were a total of 670 sites on the list. A summary list of

the 31 newly ranked sites, the 14 sites which after assessment have been determined to require no further action, the four sites removed from the list since February 1996, and the 32 sites removed from the list since 1990, begins on the following page.

For a complete copy of the August 1996 Hazardous Sites List which shows the rank of each site and the status, please refer to the pullout insert (*publication # 96-601B*) found in the middle of this report.

**Figure 5:**  
Distribution of Hazardous Sites List Sites as of August 20, 1996



# Summary of the August 20, 1996 Hazardous Sites List

## Additions to the Hazardous Sites List

County	Site Name	Nearest City	Rank	Status
<b>Clark</b>	IPC (former) Solid Waste.....	Amboy .....	5 .....	Awaiting RA
	Pacific Wood Treating Company.....	Ridgefield .....	1 .....	Awaiting RA
<b>King</b>	Auburn Salvage & Recycling .....	Auburn.....	3 .....	Awaiting RA
	Northwest Pipeline/Issaquah.....	Issaquah .....	3 .....	Awaiting RA
	Northwest Pipeline/North Bend.....	North Bend.....	3 .....	Awaiting RA
	Northwest Pipeline/Redmond .....	Redmond .....	3 .....	Awaiting RA
	Sammis Land Co. Site.....	Seattle.....	5 .....	Awaiting RA
	Sternoff Metals Corporation.....	Renton .....	1 .....	Awaiting RA
	Tyee Lumber & Manufacturing .....	Auburn.....	4 .....	Awaiting RA
	West Coast Equipment II .....	Seattle.....	3 .....	Independent RA
<b>Kittitas</b>	Alpine Veneer Plant.....	Ronald.....	5 .....	Awaiting RA
	Cle Elum Petroleum Contam.....	Cle Elum.....	3 .....	Awaiting RA
	DeVere Bulk Plant.....	Cle Elum.....	5 .....	Awaiting RA
	Hill's Quick Tune .....	Cle Elum.....	5 .....	Awaiting RA
<b>Pierce</b>	Conan Fuel Service .....	Gig Harbor .....	4 .....	Awaiting RA
	Edgewood Shopping Center: Dry Cleaner Site.....	Milton .....	2 .....	Independent RA
	Ponders Auto Parts.....	Tacoma .....	3 .....	Awaiting RA
<b>Snohomish</b>	Alseth Auto Parts .....	Everett.....	4 .....	Awaiting RA
	Bear Creek Motors .....	Woodinville .....	4 .....	Awaiting RA
	Cordz Auto .....	Everett.....	5 .....	Awaiting RA
	Miller/Amer. Dist./Mobil .....	Everett.....	2 .....	RA in Progress
	Mobil Oil-Everett Bulk Plant.....	Everett.....	3 .....	Independent RA
	Offset Web Site.....	Marysville .....	3 .....	Awaiting RA
	Shultz Distributing .....	Monroe .....	5 .....	Independent RA
<b>Snohomish</b>	Sisco Landfill.....	Arlington.....	2 .....	Independent RA
	Spokane Custom Wood Treating .....	Spokane .....	3 .....	Awaiting RA
<b>Spokane</b>	UPRR Tekoa Line - Segment 1 .....	Latah .....	5 .....	Awaiting RA
	Burlington Northern Railroad.....	Olympia.....	5 .....	Independent RA
<b>Thurston</b>	Puget Power - Eld Inlet Substn.....	Olympia.....	3 .....	Independent RA
	Tony's Auto Repair.....	Yakima .....	3 .....	Awaiting RA
<b>Yakima</b>	Yakima Speedway.....	Yakima .....	5 .....	Awaiting RA

## No Further Action Sites

County	Site Name	Nearest City
<b>Clark</b>	Bill Wallway .....	Battle Ground
<b>King</b>	Bellevue Plating Co., Inc. ....	Bellevue
	Coal Creek Mine - Old Workings.....	Issaquah
	Guardsman Chemical .....	Seattle
	NW College - Assemblies of God .....	Kirkland
<b>Kittitas</b>	DNR - Cle Elum .....	Cle Elum
<b>Klickitat</b>	Doubravski Logging .....	Goldendale
<b>Pierce</b>	Andor Griffin .....	Puyallup
	Industrial Lubricants.....	Tacoma
	Parker Refrigerated Services.....	Tacoma
	Tacoma Narrows Lumber .....	Steilacoom
<b>Snohomish</b>	Midway Auto Parts.....	Clearview
<b>Spokane</b>	Empire Machinery.....	Spokane
	Gonzaga University .....	Spokane

# Summary of the August 20, 1996 Hazardous Sites List (cont.)

## Sites Removed from the Hazardous Sites List

County	Site Name	Nearest City
<b>Clark</b>	Vancouver Wellfield #3	Vancouver
<b>Pierce</b>	Xytec Plastics [Chlorox/Lakewood]	Tacoma
<b>Spokane</b>	Sparks & Buttercup Subdivision	Spokane
<b>Thurston</b>	Hytec Tumwater	Tumwater

## Sites Removed from the Hazardous Sites List 1990-1996

County	Site Name	Address	City	Zip Code
<b>Adams</b>	Harold's Deli	1298 S. First Ave.	Othello	99344
<b>Clark</b>	L & C Deli	13908 NE 20th Ave.	Vancouver	98686
	Port of Vancouver	3103 NW Lower River Rd	Vancouver	98660
	Vancouver Wellfield #3	4200 Main St.	Vancouver	98665
<b>Cowlitz</b>	Mt. Solo Landfill	4646 Mount Solo Rd	Longview	98632
	Reed Landfill	2839 Allen Streed Road	Kelso	98626
<b>Island</b>	USN Whidbey [OU4]	Ault Field, NAS Whidbey	Oak Harbor	98632
<b>Jefferson</b>	USN Port Hadlock [Area 11]	Indian Island	Port Hadlock	98339
<b>King</b>	Asko Processing	434 N. 35th	Seattle	98103
	Champion Intl-Ballard Mill [Upland Portion]	4025 13th Ave. W.	Seattle	98119
	Precision Engineering	1231 S. Director	Seattle	98108
	VIOX	551 S. River St.	Seattle	98108
<b>Kitsap</b>	USN Subase [OU4]	Clear Creek Rd, Bldg 110	Silverdale	98315
	USN Subase [OU5]	Clear Creek Rd, Bldg 110	Silverdale	98315
<b>Pacific</b>	Weyerhaeuser Truck Shop	Off Hwy 101 & Third St.	Raymond	98577
<b>Pierce</b>	Elf Atochem	3009 Taylor Way	Tacoma	98421
	McNeil Island	P.O. Box 900	Steilacoom	98388
	Thorne Road Slag Site	1721 Thorne Road	Tacoma	98421
	Washington Tree Service	9716 26th Ave. S.	Tacoma	98444
	West Coast Saws	2725 S. Ash St.	Tacoma	98409
	Xytec Plastics [Chlorox/Lakewood]	9350 47th Ave. SW	Tacoma	98499
<b>Skamania</b>	USACE Hamilton Island	Bonneville Lock & Dam	N. Bonneville	98639
<b>Spokane</b>	Inland Metals, Inc.	E. 528 Trent	Spokane	99202
	Sparks & Buttercup Subdivision	12th Ave. & Eastern St.	Spokane	99212
	US FAA Mica Peak	Mica Peak	Spokane	99000
	WA State DOT	N. 2714 Mayfair	Spokane	99207
<b>Thurston</b>	American Fiberglass	8904 Kimmie Rd	Tumwater	98502
	Hytec Tumwater	711 Airdustrial Way SW	Tumwater	98501
<b>Whitman</b>	Oakesdale City Well	Intersect. Maple & Steptoe	Oakesdale	99158
<b>Yakima</b>	Boise Cascade-Naches	N. 7th & H St.	Naches	98937
	USDA Pesticide Lab	3706 W. Nob Hill Rd	Yakima	98902
	Yakima Plating	1804 S. 3rd Ave.	Yakima	98902

# Grants Status Report

Recipient	Grant Number	Date Signed	Total Project Cost	State Toxics Control Account	Local Toxics Control Account
<b>Public Participation Grants</b>					
Associated Industries of the Inland Northwest	G9600278	4/15/96	\$20,000	\$20,000	
Associated Industries of the Inland Northwest	G9600279	4/15/96	\$25,000	\$25,000	
Brackett's Landing Foundation	G9600309	5/21/96	\$20,000		\$20,000
Citizens for a Healthy Bay	G9600268	3/26/96	\$25,000	\$25,000	
Columbia River United	G9600289	4/24/96	\$20,000	\$20,000	
Community Services Work Group	G9600232	3/28/96	\$4,500	\$4,500	
Economic Development Association of Skagit Co	G9600231	3/6/96	\$35,000	\$35,000	
Envirostars Partnership	G9600254	3/26/96	\$40,000	\$40,000	
Hanford Education Action League	G9600275	4/4/96	\$20,000	\$20,000	
Heart of America Northwest	G9600311	5/15/96	\$20,000		\$20,000
Inland Empire Public Lands Council	G9600243	3/18/96	\$38,500	\$38,500	
M-B-Y Creeks Watershed Association	G9600233	3/26/96	\$5,000	\$5,000	
Mountaineers The	G9600253	4/4/96	\$15,000	\$15,000	
NE Everett Community Association	G9500304	7/6/95	\$25,000		\$25,000
Nisqually Delta Association	G9600063	10/19/95	\$25,000	\$25,000	
Northwest Ecobuilding Guild	G9600234	3/1/96	\$30,000	\$30,000	
Puget Soundkeeper Alliance	G9600310	5/21/96	\$16,035		\$16,035
Skykomish Environmental Coalition	G9600287	5/5/96	\$12,537	\$12,537	
Sound Decisions	G9600228	3/1/96	\$24,628	\$24,628	
WA State Pest Control Association	G9600215	2/27/96	\$11,200	\$11,200	
Washington Toxics Coalition	G9600214	2/26/96	\$37,500	\$37,500	
<b>Total</b>			<b>\$469,900</b>	<b>\$388,865</b>	<b>\$81,035</b>
<b>Remedial Action Grants</b>					
Centralia City of	G9600252	3/18/96	\$1,161,700		\$464,680
Everett City of	G9600307	6/15/96	\$3,375,853		\$1,350,341
Hoquiam City of	G9500313	7/10/96	\$94,420		\$70,811
King Co Metro	G9600111	11/29/96	\$3,337,065		\$1,334,826
Kitsap Co	G9600296	6/15/96	\$678,060		\$339,030
Kittitas Co	G9600157	1/8/96	\$371,360		\$278,520
Okanogan Co Heath District	G9600270	4/4/96	\$50,000		\$50,000
Pasco Port of	G9600041	9/14/95	\$576,500		\$432,375
Richland City of	G9600226	3/28/96	\$574,000		\$287,000
Seattle City of	G9600069	9/25/95	\$1,081,425		\$432,570
Seattle Port of	G9600274	4/15/96	\$7,148,677		\$2,947,399
Seattle-King Co Public Health Dept	G9600058	10/12/95	\$160,000		\$160,000
Snohomish Co	G9600256	4/24/96	\$7,129,348		\$2,937,291
Tacoma City of	G9500300	9/25/95	\$1,334,582		\$533,833
Tacoma-Pierce Co Health Dept	G9600264	4/8/96	\$100,000		\$100,000
Tumwater City of	G9600329	6/15/96	\$80,816		\$40,408
<b>Total</b>			<b>\$27,253,806</b>		<b>\$11,759,084</b>
<b>Coordinated Prevention Grants (CPG)</b>					
Adams Co	G9600135	1/8/96	\$188,762		\$122,695
Adams Co Health Dept	G9600142	2/1/96	\$10,000		\$6,500
Asotin Co	G9600190	2/1/96	\$212,000		\$137,800
Auburn City of	G9600134	1/18/96	\$31,000		\$18,600
Bellevue City of	G9600143	2/14/96	\$339,458		\$130,377
Benton Co	G9600203	2/20/96	\$578,806		\$347,284
Benton-Franklin Dist Health Dept	G9600201	3/28/96	\$115,500		\$77,000
Bremerton-Kitsap Co Health Dist	G9600202	2/20/96	\$291,373		\$174,824
Chelan Co	G9600168	2/6/96	\$442,861		\$168,073
Chelan-Douglas Health Dist	G9600248	4/10/96	\$107,693		\$70,000
Clallam Co	G9600178	2/7/96	\$263,045		\$157,827
Clallam Co Road Dept	G9600212	3/28/96	\$27,000		\$16,200

# Grants Status Report (cont.)

Recipient	Grant Number	Date Signed	Total Project Cost	State Toxics Control Account	Local Toxics Control Account
<b>Coordinated Prevention Grants (CPG) - continued</b>					
Clark Co Public Works Dept.	G9600172	3/12/96	\$448,572		\$269,143
Cowlitz Co	G9600159	1/8/96	\$230,000		\$149,500
Cowlitz Co Health Dept.	G9600170	2/20/96	\$118,462		\$77,000
Douglas Co	G9600257	3/28/96	\$193,086		\$115,009
Duvall City of	G9600198	2/14/96	\$26,630		\$15,978
Edmonds City of	G9600223	4/4/96	\$40,172		\$24,103
Everett City of	G9600239	4/24/96	\$135,500		\$81,300
Ferry Co	G9600255	3/28/96	\$229,728		\$119,796
Franklin Co	G9600213	2/20/96	\$288,403		\$163,802
Garfield Co	G9600265	5/5/96	\$161,060		\$104,689
Grant Co	G9600177	2/1/96	\$218,575		\$163,931
Grant Co Health Dept	G9600169	2/14/96	\$76,751		\$57,563
Grays Harbor Co	G9600175	1/30/96	\$324,183		\$243,137
Island Co	G9600183	1/30/96	\$303,910		\$182,346
Island Co Health Dept.	G9600185	2/1/96	\$128,333		\$77,000
Issaquah City of	G9600227	4/15/96	\$20,745		\$12,447
Kelso City of	G9600158	1/30/96	\$28,748		\$18,686
Kent City of	G9600132	3/1/96	\$95,995		\$57,596
King Co Solid Waste Division	G9600276	5/20/96	\$986,641		\$591,985
Kirkland City of	G9600123	5/23/96	\$91,195		\$54,717
Kitsap Co Public Works Dept.	G9600204	2/26/96	\$677,986		\$406,792
Kittitas Co	G9600225	2/26/96	\$234,103		\$175,577
Klickitat Co	G9600147	1/8/96	\$199,068		\$149,301
Lake Forest Park City of	G9600121	12/8/95	\$16,740		\$10,044
Lewis Co	G9600182	1/30/96	\$408,000		\$228,000
Lincoln Co Environmental Health	G9600191	3/1/96	\$46,153		\$29,999
Lincoln Co Environmental Health	G9600194	3/1/96	\$136,588		\$88,782
Longview City of	G9600156	1/30/96	\$47,075		\$30,599
Lynnwood City of	G9600236	5/5/96	\$38,370		\$23,022
Mason Co	G9600150	1/8/96	\$115,125		\$86,344
Mason Co Health Dept	G9600148	1/4/96	\$102,667		\$77,000
Mercer Island City of	G9600117	11/7/96	\$27,040		\$16,224
Monroe City of	G9600242	4/25/96	\$27,998		\$16,799
Mountlake Terrace City of	G9600219	3/18/96	\$25,786		\$15,472
Newcastle City of	G9600116	12/13/95	\$18,688		\$11,213
Normandy Park City of	G9600144	2/26/96	\$19,800		\$9,796
Northeast Tricounty Health Dist.	G9600195	2/26/96	\$50,654		\$37,991
Okanogan Co	G9600197	1/23/96	\$100,274		\$68,831
Okanogan Co Health Dept	G9600176	1/24/96	\$102,660		\$76,995
Pacific Co	G9600136	12/20/95	\$666,667		\$500,000
Pacific Co	G9600161	1/26/96	\$221,480		\$152,610
Pend Oreille Co	G9600199	2/7/96	\$131,000		\$98,250
Pierce Co	G9600180	3/6/96	\$1,394,574		\$836,744
Port Angeles City of	G9600222	5/11/96	\$103,363		\$62,018
Redmond City of	G9600241	3/6/96	\$86,290		\$51,774
Renton City of	G9600259	6/15/96	\$82,844		\$49,706
San Juan Co Environmental Health	G9600186	2/20/96	\$34,000		\$22,100
Seattle Solid Waste Utility	G9600224	4/15/96	\$1,171,522		\$702,913
Seattle-King Co Public Health Dept	G9600155	3/1/96	\$2,450,430		\$1,470,258
Seattle-King Co Public Health Dept	G9600207	2/26/96	\$128,333		\$77,000
Sequim City of	G9600221	3/28/96	\$18,000		\$10,800
Shelton City of	G9600149	1/8/96	\$57,333		\$43,000
Skagit Co Public Works Dept.	G9600187	2/20/96	\$378,480		\$227,088
Skagit Co Health Dept.	G9600184	2/6/96	\$136,110		\$81,666

Recipient	Grant Number	Date Signed	Total Project Cost	State Toxics Control Account	Local Toxics Control Account
<b>Coordinated Prevention Grants (CPG) - continued</b>					
Skamania Co Public Works Dept.	G9600171	4/15/96	\$188,000		\$63,000
Snohomish Co Health Dist	G9600218	3/1/96	\$296,666		\$178,000
Snohomish Co	G9600240	3/28/96	\$1,519,898		\$911,939
Spokane Co Health Dist	G9600174	1/30/96	\$128,333		\$77,000
Spokane Regional Solid Waste System	G9600189	2/26/96	\$1,490,810		\$894,486
Stevens Co Public Works	G9600173	6/30/96	\$221,300		\$165,975
SW Washington Health Dist	G9600160	2/6/96	\$128,333		\$77,000
SW Washington Health Dist	G9600196	2/6/96	\$644,775		\$389,766
Tacoma City of	G9600181	5/30/96	\$1,388,433		\$432,138
Tacoma-Pierce Co Health Dept.	G9600179	2/26/96	\$116,670		\$70,000
Tacoma-Pierce Co Health Dept.	G9600193	2/26/96	\$350,000		\$210,000
Thurston Co Water and Waste Mgmt Dept.	G9600211	2/14/96	\$365,000		\$219,000
Thurston Co Public Health	G9600200	3/18/96	\$493,638		\$296,183
Tukwila City of	G9600269	5/30/96	\$32,848		\$19,709
Walla Walla and Columbia Counties	G9600146	1/8/96	\$475,493		\$328,090
Whatcom Co	G9600205	2/26/96	\$937,720		\$426,432
Yakima Co	G9600167	2/1/96	\$502,187		\$376,640
Yakima Co Health Dist	G9600192	1/24/96	\$102,667		\$77,000
Total			<u>\$25,592,159</u>		<u>\$15,163,974</u>
Grand Total of Above Grant Categories			<u>\$53,315,865</u>	<u>\$388,865</u>	<u>\$27,004,093</u>

**Breakdown of CPG Grants by Task:**

Hazardous Waste Planning	\$257,992
Household Hazardous Waste Implementation	\$848,815
Household Hazardous Waste Collection and Disposal	\$4,952,130
Small Quantity Generator Implementation	\$1,302,134
Moderate Risk Waste - Capital	\$150,140
Solid Waste Planning	\$422,621
Solid Waste Enforcement	\$1,634,773
Waste Reduction and Recycling - Activities	\$4,585,478
Waste Reduction and Recycling - Capital	\$210,435
Ground Water Monitoring Wells	\$299,456
Landfill Closure	\$500,000
Total	<u>\$15,163,974</u>



# Survey Questions:

## Dear Annual Report Readers:

We're interested in finding out how we can improve our communications to you about the Model Toxics Control Act. Please take a minute to answer the following questions and mail the survey with your responses to:

*Denise Clifford,*  
Department of Ecology,  
Toxics Cleanup Program,  
P.O. Box 47600, Olympia, WA,  
98504-7600.

Thanks!

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### **Model Toxics Control Act 1996 Annual Report Survey**

Did you find this report readable and understandable?  Yes  No Comments: \_\_\_\_\_

What areas of the report did you find most useful or informative? \_\_\_\_\_

What areas of the report did you find least useful or informative? \_\_\_\_\_

What additional information would you like to see included next year? \_\_\_\_\_

Do you have any other suggestions for how we might improve this report in the future? \_\_\_\_\_

release or threatened release of a hazardous substance from the facility; or

(ii) A person who, without participating in the management of a facility, holds indicia of ownership primarily to protect the person's security interest in the facility.

(7) "Person" means an individual, firm, corporation, association, partnership, consortium, joint venture, commercial entity, state government agency, unit of local government, federal government agency, or Indian tribe.

(8) "Potentially liable person" means any person whom the department finds, based on credible evidence, to be liable under RCW 70.105D.040. The department shall give notice to any such person and allow an opportunity for comment before making the finding, unless an emergency requires otherwise.

(9) "Public notice" means, at a minimum, adequate notice mailed to all persons who have made timely request of the department and to persons residing in the potentially affected vicinity of the proposed action; mailed to appropriate news media; published in the newspaper of largest circulation in the city or county of the proposed action; and opportunity for interested persons to comment.

(10) "Release" means any intentional or unintentional entry of any hazardous substance into the environment, including but not limited to the abandonment or disposal of containers of hazardous substances.

(11) "Remedy" or "remedial action" means any action or expenditure consistent with the purposes of this chapter to identify, eliminate, or minimize any threat or potential threat posed by hazardous substances to human health or the environment including any investigative and monitoring activities with respect to any release or threatened release of a hazardous substance and any health assessments or health effects studies conducted in order to determine the risk or potential risk to human health. [1989 c 2 § 2 (Initiative Measure No. 97, approved November 8, 1988).]

**RCW 70.105D.030 Department's powers and duties.** (1) The department may exercise the following powers in addition to any other powers granted by law:

(a) Investigate, provide for investigating, or require potentially liable persons to investigate any releases or threatened releases of hazardous substances, including but not limited to inspecting, sampling, or testing to determine the nature or extent of any release or threatened release. If there is a reasonable basis to believe that a release or threatened release of a hazardous substance may exist, the department's authorized employees, agents, or contractors may enter upon any property and conduct investigations. The department shall give reasonable notice before entering property unless an emergency prevents such notice. The department may by subpoena require the attendance or testimony of witnesses and the production of documents or other information that the department deems necessary;

(b) Conduct, provide for conducting, or require potentially liable persons to conduct remedial actions (including investigations under (a) of this subsection) to remedy releases or threatened releases of hazardous substances. In carrying out such powers, the department's authorized employees, agents, or contractors may enter upon property. The department shall give reasonable notice before entering

property unless an emergency prevents such notice. In conducting, providing for, or requiring remedial action, the department shall give preference to permanent solutions to the maximum extent practicable and shall provide for or require adequate monitoring to ensure the effectiveness of the remedial action;

(c) Indemnify contractors retained by the department for carrying out investigations and remedial actions, but not for any contractor's reckless or wilful misconduct;

(d) Carry out all state programs authorized under the federal cleanup law and the federal resource, conservation, and recovery act, 42 U.S.C. Sec. 6901 et seq., as amended;

(e) Classify substances as hazardous substances for purposes of RCW 70.105D.020(5) and classify substances and products as hazardous substances for purposes of RCW 82.21.020(1); and

(f) Take any other actions necessary to carry out the provisions of this chapter, including the power to adopt rules under chapter 34.05 RCW.

(2) The department shall immediately implement all provisions of this chapter to the maximum extent practicable, including investigative and remedial actions where appropriate. The department, within nine months after March 1, 1989, shall adopt, and thereafter enforce, rules under chapter 34.05 RCW to:

(a) Provide for public participation, including at least (i) the establishment of regional citizen's advisory committees, (ii) public notice of the development of investigative plans or remedial plans for releases or threatened releases, and (iii) concurrent public notice of all compliance orders, enforcement orders, or notices of violation;

(b) Establish a hazard ranking system for hazardous waste sites;

(c) Establish reasonable deadlines not to exceed ninety days for initiating an investigation of a hazardous waste site after the department receives information that the site may pose a threat to human health or the environment and other reasonable deadlines for remedying releases or threatened releases at the site; and

(d) Publish and periodically update minimum cleanup standards for remedial actions at least as stringent as the cleanup standards under section 121 of the federal cleanup law, 42 U.S.C. Sec. 9621, and at least as stringent as all applicable state and federal laws, including health-based standards under state and federal law.

(3) Before November 1st of each even-numbered year, the department shall develop, with public notice and hearing, and submit to the ways and means and appropriate standing environmental committees of the senate and house of representatives a ranked list of projects and expenditures recommended for appropriation from both the state and local toxics control accounts. The department shall also provide the legislature and the public each year with an accounting of the department's activities supported by appropriations from the state toxics control account, including a list of known hazardous waste sites and their hazard rankings, actions taken and planned at each site, how the department is meeting its top two management priorities under RCW 70.105.150, and all funds expended under this chapter.

(4) The department shall establish a scientific advisory board to render advice to the department with respect to the hazard ranking system, cleanup standards, remedial actions,

## Credits

*Editor:* Denise Clifford

*Report Support Extraordinaire:* Carol Perez

*Annual Report Team:*

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Brad Ewy

Peter Brooks

John Roland

Martha Maggi

Curtis Dahlgren

*Design:* Tom Leonard

A special thanks to all the Toxics Cleanup Program, Ecology, and other state agency staff who contributed to this report.

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page 20: Jim Greeves

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## For more information:

If you would like more information about the issues presented in this report, to be placed on a mailing list, or receive a publication listed in the "Turning Data Into Information" section, please call us at 1-800-826-7716.

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Department of Ecology**

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