



# Fiscal Year 2004 Report

# Model Toxics Control Account



Ecology Publication No. 04-09-106



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## Washington State Department of Ecology's Mission

The mission of the Department of Ecology is to protect, preserve, and enhance Washington's environment. The Department fulfills its mission by promoting the wise management of the state's natural resources for the benefit of current and future generations.

## Purpose of this Report

The purpose of this report is to provide a review of the last fiscal year's accomplishments by state agencies and programs that rely upon funding from the Toxics Control Accounts. The fiscal year period of review is July 1, 2003, through June 30, 2004. Specifically, this report will show:

- How much revenue was generated;
- Which state agencies received funding;
- What results were obtained by expenditures from the Toxics Control Accounts.





# Message from the Director

It is with great pride that I present the Department of Ecology's Model Toxics Control Account Annual Report for Fiscal Year 2004.

This year's report signals the Department of Ecology's 16th year of progress to clean up hazardous waste sites on behalf of Washington's citizens. A citizen's initiative adopted in 1989 established a clear obligation and responsibility for preserving the environment and protecting human health from toxic waste. The law, known as the Model Toxics Control Act, provides a long-term funding source for cleaning, protecting, and restoring the environment. We have worked hard to fully implement this landmark law, with the goal of preserving each person's right to a healthy environment, for the present generation and for the benefit of future generations.

We continue to expand our efforts and capabilities to support or manage cleanups at hazardous-waste sites. One purpose of this report is to provide highlights on many of the major accomplishments achieved with funding from the Toxics Control Accounts. At the same time, it's important to note that the majority of cleanups these days are initiated by property owners themselves, rather than through enforcement action by Ecology.

The broadest category of advancement can be seen in the state's voluntary cleanup program, where petroleum-contaminated sites and leaking underground storage tanks make up more than 60 percent of the total cleanups under way and completed in the last fiscal year. One outcome is certain: voluntary cleanups typically require fewer state resources and funding. This allows the department to leverage our resources, concentrate our efforts, and achieve additional cleanups throughout the state. We continue to improve efficiencies in the cleanup program in response to requests by landowners and private parties for state assistance with private cleanups.

This report is meant to help you understand the work we do on a daily basis to protect Washington from toxic contamination and make this a healthy state in which to live and work.

We truly are working with you for a better Washington.

*Linda Hoffman*, Director



# Hazardous Substance Tax

## History of the Toxics Control Account

The Model Toxics Control Act became law in 1988 following voter's acceptance of Initiative 97. The purpose of the state's cleanup law is to:

- 1. Raise sufficient funds to clean up all hazardous waste sites;
- 2. Prevent the creation of future hazards due to improper disposal of toxics wastes; and
- 3. Promote the cleanup and reuse of contaminated properties.

The law authorizes the creation of two accounts:

- (1) State Toxics Control Account; and
- (2) Local Toxics Control Account.

The primary source of money into the accounts is through a hazardous substance tax on the first in-state possession of petroleum products, pesticides, and certain chemicals. The State Toxics Control Account receives .37% (or \$3.70) of every \$1,000 taxed. With respect to the State Toxics Control Account, other sources of revenue (such as fees, fines, and penalties) also contribute to the moneys in the account. The Local Toxics Control Account receives .33% (or \$3.30) of every \$1,000 taxed. Whatever budget is provided to the Department is appropriated by the legislature through the biennial budget process.

### The Hazardous Substance Tax

The Hazardous Substance Tax is a tax imposed on petroleum products, pesticides, and certain chemicals. The tax is calculated at a rate equal to seventy one-hundredths of one percent (0.70%) or \$7 per \$1,000 of the wholesale value of the hazardous substance. This tax is imposed on the first in-state possessor of the hazardous substance. There are currently 8,000 different hazardous substances subject to the tax. More than eighty-five percent (85%) of the revenue is based on petroleum products.

**Figure 1: How agencies receive appropriations from the Toxics Control Account**

1 Money is continuously collected by the Department of Revenue and deposited into the Toxics Control Account.

8 In August of every even year, the budget process starts all over again.

2 Every August of every even year, Ecology and other agencies present their budget requests in the Biennial Appropriations Request Report that is submitted to the Office of Financial Management (OFM).

7 July of every odd year is the beginning of the new biennium. On this date, the agencies can start spending the money that was appropriated to them by the Legislature.

3 In December of every even year, the governor releases his/her budget based on agency input and the governor's own preference.

6 The budget is signed by the governor and becomes law.

4 In January of every odd year, the governor's budget is presented to the Legislature.

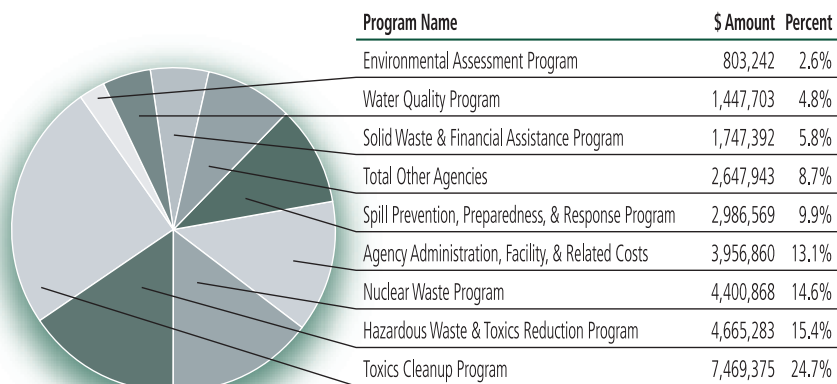
5 The House and Senate review the governor's budget. After reviewing the governor's budget, they both write and pass their own budgets. These budgets then go to a joint conference committee to have any differences between the two budgets resolved. Once a version of the budget is passed by both the House and Senate, it is presented to the governor for approval and signature. If the governor approves and signs the budget, it becomes law.

# Revenue and Expenditures

**Table 1: State and Local Toxics Control Accounts Revenue and Expenditures - Fiscal Year 2004**

Toxics Control Account Revenue	Local Toxics	State Toxics
Hazardous Substance Tax	30,982,746	26,540,693
Mixed Waste Fees		4,719,074
Cost Recovery		2,789,148
Miscellaneous		4,031
Voluntary Cleanup Program Fees		366,616
Fines & Penalties		10,122
<b>Total Revenue</b>	<b>30,982,746</b>	<b>34,429,684</b>
Ecology Expenditures		
Toxics Cleanup Program	455,933	7,469,375
Hazardous Waste & Toxics Reduction Program	85,287	4,665,283
Agency Administration, Facility, & Related Costs	391,499	3,956,860
Nuclear Waste Program		4,400,868
Solid Waste & Financial Assistance Program	1,428,648	1,747,392
Spill Prevention, Preparedness, & Response Program		2,986,569
Environmental Assessment Program		803,242
Water Quality Program		1,447,703
<b>Total Ecology Expenditures</b>	<b>2,361,367</b>	<b>27,477,292</b>
Other Agency Expenditures		
Agriculture		1,171,973
Health		1,221,900
State Patrol		222,106
Revenue		31,964
<b>Total Other Agency Expenditures</b>	<b>2,647,943</b>	<b>2,647,943</b>
<b>Total All Agency Expenditures</b>	<b>2,361,367</b>	<b>30,125,235</b>

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



**Total Expenditures \$30,125,235**

## State Toxics Control Account

The State Toxics Control Account provides funds to state agencies whose mission is to:

- clean up contaminated sites;
- improve the management of hazardous wastes; and
- prevent future contamination from hazardous substances

In Fiscal Year 2004, the Departments of Ecology, Health, Agriculture, Revenue, and Washington State Patrol all received funds from the State Toxics Control Account.

In addition to revenue generated by the Hazardous Substance Tax, the State Toxics Control Account received revenue through the following sources:

- Cost Recovery:** Ecology recovers its expenditures or obtains reimbursement for its costs of providing cleanup oversight and approval for the cleanup of contamination.
- Fines & Penalties:** Ecology issues fines and penalties to liable parties who have not complied with the state's cleanup law.
- Technical Assistance Fees:** Ecology reviews a liable party's planned and completed remedial actions under the voluntary cleanup program.
- Mixed Waste Fees:** Ecology collects fees from facilities that manage mixed waste.

Starting on page 4, this report contains a brief narrative on each agency or program's accomplishments with funding provided by the State Toxics Control Account in fiscal year 2004. Details on how the funds were spent are provided.

## State Toxics Control Account Revenue

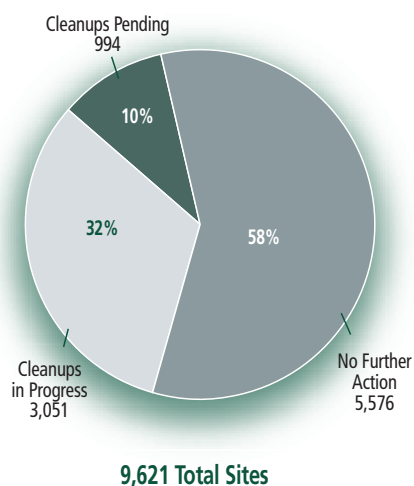
Hazardous Substance Tax	\$26,540,693
Mixed Waste Fees	\$4,719,074
Cost Recovery	\$2,789,148
Miscellaneous	\$4,031
Voluntary Cleanup Program Fees	\$366,616
Fines & Penalties	\$10,122
<b>Total Revenue</b>	<b>\$34,429,684</b>

# Toxics Cleanup Program

**Table 2: Top 25 Cost Recovery Sites by Total Invoiced Amount for FY04**

Site Name	Paid	Total
BNR-Skykomish Maintenance	Y	255,169.74
Goose Lake	Y	197,483.46
Boeing Auburn	Y	116,603.31
Lower Duwamish Waterway	N	107,473.44
Holden Mine - Wentachee	Y	88,836.63
Manson Construction	N	76,810.26
BEI Phillip Georgetown	Y	72,663.43
Boeing Everett	Y	69,111.56
Everett Smelter/Slag	N	65,335.99
ITT Rayonier Pt Angeles	N	63,554.84
Cadet Manufacturing Company	N	61,829.82
Lilyblad Petroleum	Y	54,234.23
Lehigh Portland Cement Co.	N	48,190.21
Moses Lake City	Y	45,180.63
Boeing Plant 2	N	44,837.27
Kaiser Aluminum and Chemical Corp.	N	43,169.18
Holly Street Landfill	Y	39,205.97
Weldcraft Steel and Marine	Y	38,570.33
Unocal Edmonds	Y	37,497.53
Landsburg Mine	Y	31,899.63
Kent Highlands	Y	31,645.91
Olympia Cleaners	N	30,525.89
Pacific Wood Treating	N	30,270.45
Alcoa Vancouver Potliner	Y	30,108.61
Pasco Sanitary Landfill	N	29,340.33
<b>Total</b>		<b>1,709,548.65</b>

**Figure 3: Known and suspected contaminated sites (as of Sept. 30, 2004)**



## Department of Ecology: Toxics Cleanup Program

In Fiscal Year 2004, the Toxics Cleanup Program was appropriated about one-fourth of the funds in the State Toxics Control Account. The Program contributed more than \$3 million in revenue to the Toxics Control Account through cost recovery and technical assistance. The top twenty-five (25) cost recovery sites by invoice amount are shown in Table 2.

During Fiscal Year 2004, the Toxics Cleanup Program's budget from the State Toxics Control Account was distributed amongst several of the following activities:

- Cleaning up high-priority contaminated sites (rank 1, 2, or Superfund);
- Cleaning up lower-priority contaminated sites (rank 3, 4, or 5);
- Providing technical assistance to those cleaning up contaminated sites;
- Providing technical assistance on contaminated sediments;
- Investigating, and if necessary, ranking new sites; and
- Providing program support to staff that work on the above activities.

The Toxics Cleanup Program receives funding from other sources besides the State Toxics Control Account. For example, several program-wide activities include, for example:

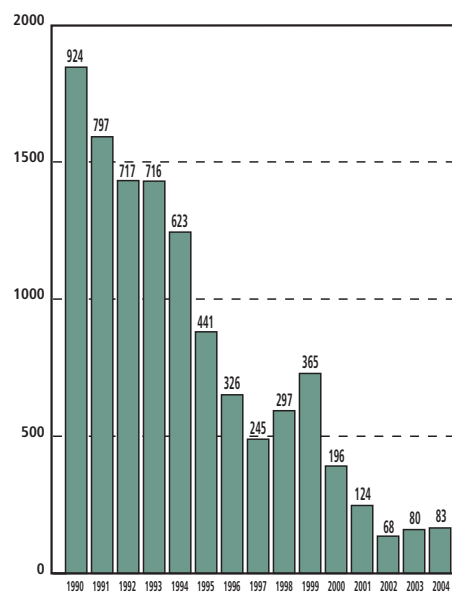
- underground storage tanks funded by a permit fee;
- brownfields and voluntary cleanup program development and administration funded by a grant; and
- the cleanup of a large number of federal facilities also funded under grants.

The many accomplishments under these programs are not part of this annual report as information here is limited to achievements with funding from the State Toxics Control Account. Figure 4 shows the decline in releases from underground storage tanks.

### Cleaning up High-Priority Contaminated Sites

High-priority sites are comprised of Superfund sites and sites Ecology has ranked 1 or 2 using the hazard ranking system. Due to greater health and environmental concerns,

**Figure 4: Number of releases from underground storage tanks**



**Trend in the Prevention of Pollution**  
(data as of July 19, 2004)

Ecology primarily devotes funds from the State Toxic Control Account to the number 1 and 2 ranked sites. All of these sites are included on Ecology's Hazardous Sites List and put onto the Program's strategic plan.

Under Washington's hazard ranking system, "high-priority" is determined by:

- the amount of contaminant(s);
- the type of contaminant(s); and
- how easily a contaminant or contaminants could come into contact with people and the environment.

Public concern and a need for immediate response may also affect which sites get top-priority attention from the Program.

There are currently four hundred and thirty eight (438) high-priority sites in the state of Washington.

- Two hundred and eighty two (282) of these sites are undergoing a cleanup;
- one hundred (100) sites have a cleanup action that is pending; and
- fifty-six (56) sites have received a "No Further Action" determination from Ecology.

There were nine (9) high-priority (rank 0, 1, or 2) sites that were removed from the State's Hazardous Sites List in FY 04. See Table 3.

# Toxics Cleanup Program

## Hazardous Sites List

The Hazardous Sites List is a list of sites that have been assessed and ranked using the state's Washington Ranking Method. Sites are ranked on a scale of one to five, with one representing the highest level of concern and five the lowest. When ranking a site, the primary exposure routes (air, surface water, and ground water) that could pose a risk to the public and the environment are taken into consideration. Every six months, Ecology updates and publishes the Hazardous Sites List. The listing of sites on the Hazardous Sites List can be found at [www.ecy.wa.gov/program/tcp/cleanup.html](http://www.ecy.wa.gov/program/tcp/cleanup.html).

There were nineteen (19) priority sites where the cleanup met the substantive requirements of the cleanup law; therefore, those sites were removed from the Hazardous Sites List during Fiscal Year 2004. See Table 3. Figure 5 shows the upward trend in the cleanup of pollution in the State.

## Natural Resource Damage Assessments (NRDA)

A site enters the Natural Resource Damage Assessments process when natural resources or services are damaged or lost because of contamination. Historically, sites with natural resources damage have been primarily located in marine areas. These sites are often identified as federal Superfund sites by the Environmental Protection Agency. The cost of damages is determined by a group of trustees and can include compensation for the injury caused from date of release to time of full recovery. Compensation is applied at a site to restore, replace, or acquire equivalent habitat.

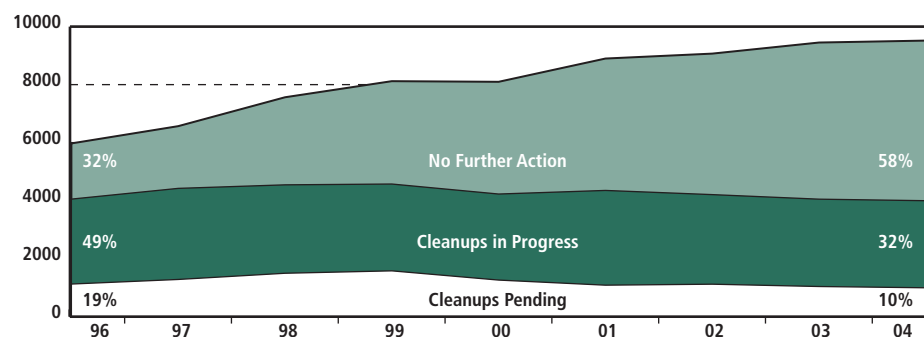
In Fiscal Year 2004, trustees began settlement negotiations with potentially liable parties along the Hylebos Waterway at Commencement Bay. A settlement was reached with Murray-Pacific Corporation. Ecology anticipates reaching settlements with other potentially liable parties along the Hylebos in FY 2005.

In addition to current projects, Ecology continues to pursue restoration opportunities and partnerships at the Tulalip site in Marysville. Ecology completed a proposal for the allocation of natural resource damages along the Duwamish River. Settlement discussions continue between the potentially liable parties and Ecology.

**Table 3: Sites Considered Cleaned Up and Removed from the Hazardous Sites List during Fiscal Year 2004**

Site Name	City	County	VCP	Priority
Allied Technology Group	Yakima	Yakima	Y	3
American Armored Pawn Shop	Verndale	Spokane	Y	5
Arlington Fuel Stop	Arlington	Snohomish	Y	5
Asp Property	Seattle	King	Y	4
Briggs Nursery Debris Field	Olympia	Thurston	N	2
Burlington Northern Othello	Othello	Adams	N	1
Carburetor Ignition	Spokane	Spokane	Y	3
Chevron Spokane Bulk Plant	Spokane	Spokane	Y	5
Davenport Hotel	Spokane	Spokane	Y	5
Glens Metals	Pasco	Franklin	Y	5
Keith Oil Company	Bellingham	Whatcom	N	2
Pope & Talbot Industrial Landfill	Port Gamble	Kitsap	Y	2
Sierra Pacific	Junction	Grays Harbor	Y	1
Simon & Sons	Tacoma	Pierce	N	0
Spokane Custom Wood Treating	Spokane	Spokane	Y	3
Texaco Bulk Plant	Port Townsend	Jefferson	Y	2
Unocal Bulk Plant 0729	Cle Elum	Kittitas	Y	4
Unocal Mt. Vernon Bulk Fuel	Mount Vernon	Skagit	Y	1
Yellowstone Pipeline	Otis Orchards	Spokane	Y	2

**Figure 5: Cleanup progress**



Trend in the Cleanup of Pollution (data as of July 19, 2004)



# Toxics Cleanup Program

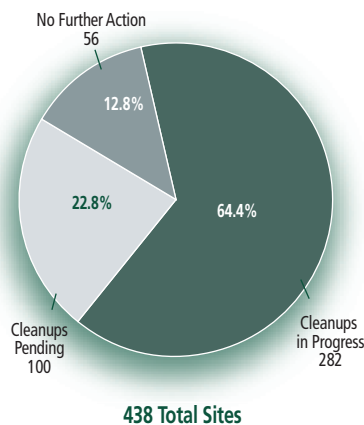
## Cleaning up Lower-Priority Contaminated Sites

The Toxics Cleanup Program provided oversight or technical assistance at four hundred and seventy three (473) contaminated sites with a state ranking of 3, 4, or 5.

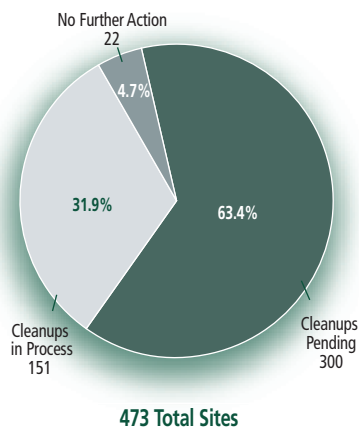
- One hundred and fifty one (151) of these sites were undergoing clean up;
- twenty two (22) sites received a “No Further Action” determination from Ecology; and
- three hundred (300) sites were pending cleanup action.

In Fiscal Year 2004, ten (10) lower-priority sites were removed from the Hazardous Sites list. See Table 3.

**Figure 6: Status of Superfund & State Ranked 1 or 2 Sites** (as of September 30, 2004)



**Figure 7: Status of State Ranked 3, 4 or 5 Sites** (as of September 30, 2004)



*New, clean fill material being placed at site after excavation of contaminated sediments.*

## Weldcraft

### Coordinating Interim Action, Habitat Restoration and Redevelopment

*Written by Mary O'Herron – Bellingham Field Office  
Toxics Cleanup Program – Ecology*

The Weldcraft Steel and Marine site (currently known as the Gate 2 Boatyard) is located on Port of Bellingham property adjacent to Squilicum Harbor in Bellingham. The facility operated primarily as a boatyard since it was established in 1946. The marine contaminants of concern at the site include metals, tributyltin, and mercury in marine sediments, with diesel, gasoline constituents, and lead in the upland areas.

Weldcraft is one of the first of a number of cleanup sites on the Bellingham waterfront to begin cleanup activities under the Bellingham Bay Comprehensive Strategy, a bay-wide guidance document developed by a multi-organizational team in 2000. The Strategy integrates sediment cleanup, control of pollution sources, habitat restoration, and land use on a bay-wide scale.



# Toxics Cleanup Program

## Ecology Consultations under the Voluntary Cleanup Program

Ecology consultations are usually best suited for routine cleanups where cleanup technology is easily identified. Many routine cleanups include leaking underground storage tanks. However, that is starting to change as more high-priority sites are entering the program. In Fiscal Year 2004, fifteen (15) of the nineteen (19) high-priority sites that were removed from the Hazardous Sites List, were cleaned up under the Voluntary Cleanup Program.

A person may enter the Voluntary Cleanup Program by submitting a cleanup report to Ecology. For a fee, staff will review the report and provide a site determination, such as no further action or further action. Since October 1997, two thousand fifty eight (2,058) sites have entered the program:

- One thousand two hundred and seven (1,207) sites received a no further action determination.
- Another eight hundred and forty eight (848) are in the review process.
- Only three (3) sites were pending cleanup on September 30, 2004.

## Sediment Management Activities

Staff are involved in a broad range of activities designed to:

- prevent contamination to sediments;
- clean up contamination at sediment sites; and
- determine disposal options for contaminated sediments and dredged material.

This includes:

- ① Ensuring that discharge permits adequately address sediment quality to minimize the impact of discharges into waterways;
- ② Identifying water bodies impaired due to sediment contamination for listing under Section 303(d) of the federal Clean Water Act;
- ③ Overseeing or collaborating on the cleanup of contaminated sediments throughout the state, including the lower Duwamish River, Spokane River, Lake Union, and numerous locations throughout Puget Sound;

- ④ Identifying the quality of dredged material for appropriate disposal or beneficial use.

Staff is also engaged in ongoing scientific investigations and research to better understand and address contamination in these very unique marine and freshwater environments. This includes the identification of reliable freshwater sediment quality values for use in the State of Washington.

## Investigating, and if Necessary, Ranking New Sites

### Initial Investigations

The first step in the cleanup process is to investigate a site. Once Ecology receives a complaint about a piece of property or the practices of an owner or operator, a program inspector will go to the site and conduct an initial investigation. This involves looking at the site for signs of possible spills and the use and storage of hazardous waste. Some sampling may be involved.

### Site Hazard Assessments

If it is determined that further work is required at a site after the initial investigation, a site hazard assessment may be conducted. A site hazard assessment provides staff with basic environmental characteristics about a site. The program then uses the Washington Ranking Method to estimate the potential threat to human health and the environment if contamination is not cleaned up. A score of one represents the highest level of concern relative to other sites on the list, and a score of five represents the lowest.

By ranking sites according to the Ranking Method, the Toxics Cleanup Program can position itself to concentrate State Toxics Control Account on sites that have a priority ranking. During Fiscal Year 2004, eighty-eight (88) site hazard assessments were completed:

- Of those, fifty eight (58) new sites were added to the Hazardous Sites List.
- Eleven (11) sites were referred to the Voluntary Cleanup Program following completion of the site hazard assessment.
- The remaining nineteen (19) sites received a "No Further Action" determination from Ecology.

## Everett Smelter Site

Written by David L. South – NW Regional Office  
Toxics Cleanup Program - Ecology



Cleanup of arsenic trioxide product (white material). This material was about 40% arsenic.

The Everett Smelter operated in northeast Everett from 1896 until 1912, producing lead and arsenic. It was demolished between 1912 and 1914. Houses were built on the former smelter site. Arsenic contamination on the former smelter site was very high due to smelter operations, spillage, and material left behind when the smelter was demolished. Surrounding land was contaminated with arsenic from the smelting furnace smoke stacks.

In 2004 Ecology, Asarco, the Everett Housing Authority, and the City of Everett worked together to clean up the most contaminated part of the site and some surrounding houses. Soil contaminated with the arsenic trioxide product was excavated and sent to a specially designed disposal facility at the Tacoma Smelter Superfund Site. By the end of the summer, all of the most contaminated soil had been safely placed in the disposal site.

Cleanup activities will continue in 2005, and subsequently single-family town homes will be built.



Former smelter site along East Marine View Drive showing lots where houses used to be.

# Toxics Cleanup Program

## Program Support

There are many individuals working behind the scenes to get sites cleaned up. A number of employees provide administrative and operational support to the Toxics Cleanup Program. Positions include computer specialists, budget analysts, planning and development experts, policy advisors, public involvement officers, attorneys, and administrative personnel. All of these positions are funded in whole or in part by money from the State Toxics Control Account. Some support costs, known as overhead, are recovered from liable parties.

## Contracts Budget from the State Toxics Control Account

### Clean Sites Initiative

Ecology's cleanup funding for the 03-05 biennium was distributed amongst several public works projects at high priority sites. The appropriation of \$2.5 million from the State Toxics Control Account was intended to clean up contaminated sites where the party responsible for the cleanup is either unwilling or unable to pay the costs of removing contamination. In the first year Fiscal Year 04 of the biennium, the Toxics Cleanup Program contracted with environmental consulting firms to continue or start remedial action at more than half a dozen high priority sites. By contracting for the cleanup of contaminated sites with funds from the State Toxics Control Account, Ecology is able to prevent any exposure of contaminants to human health and the environment, one of Ecology's top management priorities.

### Area-wide Soil Contamination Initiative

Soil in large areas of Washington State is contaminated with low-to-moderate levels of arsenic and lead. The source of this contamination has been caused by a range of historical activities including air-borne deposits from smelters (such as those formerly operated in Tacoma and Everett) and the past use of lead arsenate pesticides. Ecology estimates that up to 1,000 square miles of land may contain elevated levels of arsenic and lead that have been caused by past releases. As Washington's population has grown, many of these areas have been



## Area-wide Soil Contamination



developed into schools, child care facilities, neighborhoods and parks. These development activities have created pressures for cleanup and raised health, environmental and financial concerns.

The Departments of Agriculture, Ecology, Health, and Community, Trade and Economic Development formed a Task Force in January 2002 to consider the issues and challenges posed by area-wide soil contamination. In June 2003, the Task Force completed its recommendations for a statewide strategy for meeting those challenges. During fiscal year 2004, Ecology collaborated with other state and local agencies to implement the Task Force's recommendations:

- Reduce exposures at schools and child care facilities;
- Improve public awareness of area-wide soil contamination concerns and solutions;
- Integrate addressing area-wide soil contamination with local land use planning and permitting processes; and
- Explore institutional changes to improve responses to area-wide soil contamination problems.

The agencies are currently focusing on areas with the highest potential for elevated levels of arsenic and lead (e.g. King, Pierce, Chelan/Douglas, Yakima and Spokane counties) and properties where young children are likely to be present on a regular basis (e.g. schools, child care facilities, neighborhoods, parks).

### Reduce exposures at schools and child care facilities

*Written by Dave Bradley  
Toxics Cleanup Program - Ecology*

Ecology has continued to provide financial and technical assistance to local health departments in King, Okanogan and Pierce Counties as soils are tested at schools, child care facilities and parks. Significant progress has been made in testing and responding to elevated levels of arsenic and lead. For example, the three health departments have identified approximately 80 public elementary schools in the three counties with the potential for elevated levels of arsenic and lead.

As of September 2004, soil sampling has been completed at 60 of these schools. Of these schools, 48 were found to have levels of arsenic and lead below the State cleanup standards. Eleven schools were found to have moderate levels of arsenic and lead and one school was found to have high levels of arsenic. Ecology provided technical assistance to the latter school for remedial action to reduce exposure to high levels of arsenic and lead. During FY 04, Ecology also provided \$225,000 to schools for interim actions that addressed contaminated soils.

# Hazardous Waste and Toxics Reduction Program

## Department of Ecology Hazardous Waste and Toxics Reduction Program

The Hazardous Waste and Toxics Reduction Program's vision is to:

- foster sustainability,
- prevent pollution, and
- ensure safe waste management.

The Program's two primary objectives are: (1) to reduce the amount of hazardous waste generated; and (2) to prevent hazards due to improper management or disposal of hazardous wastes. With funding from the State Toxics Control Account, the Program contains several major activities designed to accomplish the objectives.

## Visiting Facilities that Generate Hazardous Waste

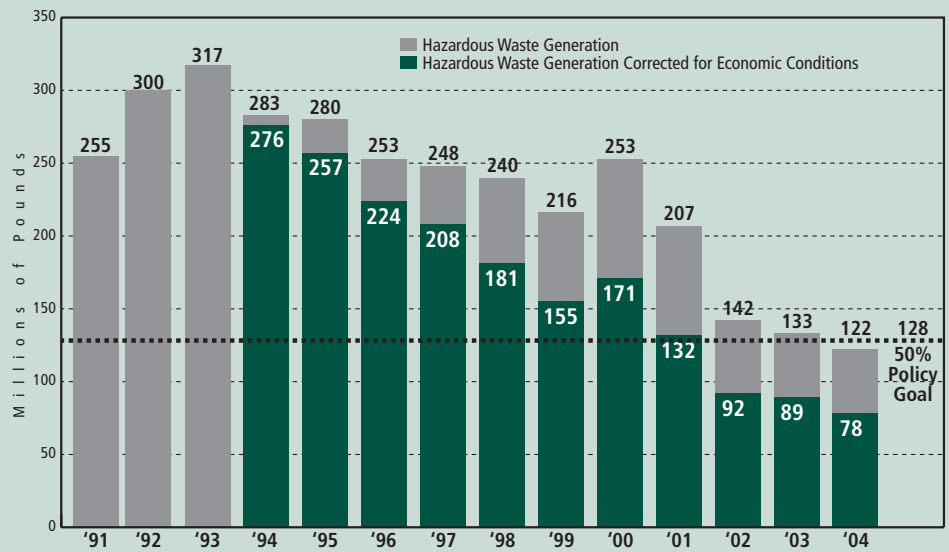
The Hazardous Waste and Toxics Reduction Program provides technical assistance to businesses and governmental entities through a variety of ways. One of the primary methods is face-to-face visits. During these visits, staff provides assistance on reducing and safely managing hazardous waste. Last year, program staff conducted one thousand three hundred and nineteen (1,319) visits.

## Technical Resources for Engineering Efficiency (TREE)

Ecology provides technical assistance to businesses through special projects such as the Technical Resources for Engineering Efficiency Program. This Program provides free service to businesses that want to find out how to reduce waste, increase efficiency and save money. Ecology engineers and scientists with expertise in industrial processes and pollution prevention form a team to consult on business practices.

Once a facility is selected for the Program, the team makes several visits to gather information about operational processes. Ecology prepares a report with specific recommendations on how the facility can reduce waste that is generated, reduce resource consumption and increase savings.

Figure 8: Progress Toward the 50 Percent Hazardous Waste Reduction Goal



Progress towards waste reduction is displayed in the above chart. The amounts shown are from all generating facilities, except commercial treatment and storage and disposal facilities, which manage waste generated from others. The graph also shows the data adjusted for the changing economy. The adjustments show estimated levels of waste generation, assuming the economy remained constant. This process, called "normalizing" data, makes waste totals more comparable from year to year.

## Success Stories

In 2004, the team received the Most Valuable Pollution Prevention award from the National Pollution Prevention Roundtable. For more information go to: [www.ecy.wa.gov/programs/hwtr/tree](http://www.ecy.wa.gov/programs/hwtr/tree).

## Promoting Pollution Prevention

It is a state law that businesses that produce more than two thousand six hundred and forty (2,640) pounds of hazardous waste complete an annual pollution prevention plan. The purpose of the plan is to determine if a business can reduce waste and cut back on the use of chemicals. Ecology provides technical assistance to businesses who want help preparing plans. Some six hundred and twenty five (625) businesses in Washington State currently participate in the program.

## Conducting Enforcement When Necessary

Maintaining a credible enforcement capability is essential to keeping technical assistance effective. In most cases, unless there is an immediate threat to human health and/or the environment, assistance is offered to help a business correct the problem before resorting to an enforcement action. During Fiscal Year 2004, the program issued two hazardous waste enforcement actions totaling \$73,000.

## Permitting Facilities that Treat, Store, or Dispose of Hazardous Waste

Ecology issues and/or modifies permits to facilities that treat, store, and/or dispose of hazardous waste and operate in a manner protective of human health and the environment. In Fiscal Year 2004, staff worked on ten (10) modifications to three (3) existing permits. One (1) permit was reissued. No new permits were issued.

# Hazardous Waste and Toxics Reduction Program

## Priceless Gas (Former)

Written by Michael Boatsman –  
Eastern Regional Office  
Toxics Cleanup Program – Ecology



This former retail gas station site in Davenport has been the subject of several enforcement orders and both independent and Ecology-directed remedial actions. Although there has been substantial cleanup accomplished, groundwater contamination remains a significant off-site threat. In 2004 Ecology chose to use Clean Sites Initiative funding to provide contracting monies for the timely development and implementation of a work plan for the final cleanup action at the site.

Following development of the work plan a contract was awarded for the construction



of a soil/groundwater treatment system. The construction phase of the final cleanup of this site began in December 2004. The mechanical components of the treatment system will be installed by the middle of February 2005 and the system will be activated at that time.

## Conducting Cleanups at Treatment, Storage, or Disposal Sites

This activity involves the cleanup of treatment, storage, and/or disposal facilities that are contaminated with hazardous wastes. In Fiscal Year 2004, on average, the twenty (20) high priority sites the program manages advanced from fifty nine percent (59%) complete to sixty two percent (62%) complete, and the seventeen (17) medium priority sites it manages advanced from forty nine percent (49%) complete to fifty one percent (51%) complete. In terms of the four-step cleanup process, this means that on average, cleanup of the high priority sites is nearly two-thirds complete.

## Making Common Sense Hazardous Waste Management Decisions

Over the past few years, several waste management operations in Washington have closed or abandoned their operations. This included:

- hazardous waste treatment, storage and disposal facilities (TSD);
- hazardous waste recyclers; and
- used oil processors.

In some cases, the owners have paid for removing wastes and safely closing their facilities. In others, wastes have been left behind with the result of significant environmental threats and substantial costs to public agencies, former customers and property owners. Since 2000, the Hazardous Waste and Toxics Reduction Program has been working with stakeholders and the Legislature to keep this from happening. The main goal has been to assure that facility operators are responsible for closing in a safe and orderly manner while recognizing that there are additional costs involved which may cause at least short term impacts to a company's income and competitiveness.

TSD facilities have been required for a number of years to:

- provide plans for closure;
- prepare estimates for costs of closure;
- provide liability coverage for claims of damage to third parties; and
- establish mechanisms for funding closure.

Through new rules (effective January 1, 2005) the Department requires these same assurances from hazardous waste recyclers and used oil processors that accept wastes from off-site. These requirements apply to some 25 to 30 businesses and agencies in the State. An individual owner may choose from one of several acceptable funding mechanisms, or an equivalent alternative. The new requirements will be implemented in a phased approach. The rules may be viewed on Ecology's web site ([www.ecy.wa.gov](http://www.ecy.wa.gov)). The Department will be hiring a consultant to help develop guidance and model closure plans relating to these new requirements.

As part of this overall effort, the Hazardous Waste and Toxics Reduction Program has also created a web site that describes actively operating hazardous waste and used oil processing facilities in Washington. This site is available at: ([www.ecy.wa.gov/programs/hwtr/hwfacilities/](http://www.ecy.wa.gov/programs/hwtr/hwfacilities/)). The guide to selecting waste management contractors that is included on this web site may be of interest to people that generate hazardous wastes or used oil.

## Keeping the Public Informed

The Hazardous Waste and Toxics Reduction Program relied on several methods to provide information to the public. During Fiscal Year 2004 Program staff:

- responded to more than fourteen thousand three hundred and thirty seven (14,337) telephone calls on hazardous waste issues;
- conducted twenty one (21) workshops on safe waste management and pollution prevention that were attended by one thousand four hundred (1,400) people; and
- prepared a quarterly newsletter called Shoptalk to provide the public with current tips on reducing and safely managing hazardous waste.

The Program has also placed much effort into collecting data for public use. It collects:

- hazardous waste generation/management data from six thousand (6,000) businesses;
- hazardous substance use and storage data from three thousand three hundred and thirty three (3,335) businesses;

# Environmental Assessment Program

- pollution prevention planning data from six hundred and twenty five (625) businesses
- Data is also collected from about three hundred and forty one (341) businesses that release toxic chemicals, as required under the federal community right-to-know law.

The public can use this information to monitor hazardous waste in their communities.

## Department of Ecology: Environmental Assessment Program

The Environmental Assessment Program provides objective, reliable information about environmental conditions that can be used to:

- measure agency effectiveness,
- inform public policy, and
- help focus the use of agency resources.

The program is responsible for monitoring and reporting environmental status, trends, and results, and ensuring that Ecology staff, citizens, governments, tribes, and businesses have access to environmental information.

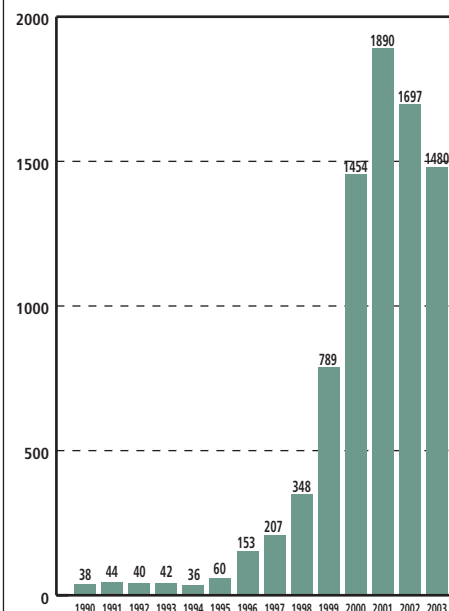
Program activities include:

- environmental studies of toxic pollutants in priority water bodies; and
- technical review and investigations dealing with toxic chemical contamination of marine and freshwater aquatic organisms, sediments, and groundwater.

Staff also conducts total maximum daily load evaluations designed to identify sources of toxic substances in priority watersheds and recommend pollutant load reductions necessary to achieve compliance with state water quality standards. Activities conducted during Fiscal Year 2004 include:

- Spokane River Polychlorinated Biphenyls (\*PCB) total maximum daily load. Sampling and analysis were begun to assess PCB concentrations in industrial effluent, storm water, surface water, sediments, and fish tissues. Data obtained will be used to develop a total maximum daily load for PCBs. The goal of the total maximum daily load and the ensuing water cleanup plan is to meet the National Toxics Rule criteria in Spokane River fish tissue. A draft report is expected in Fiscal Year 2005.

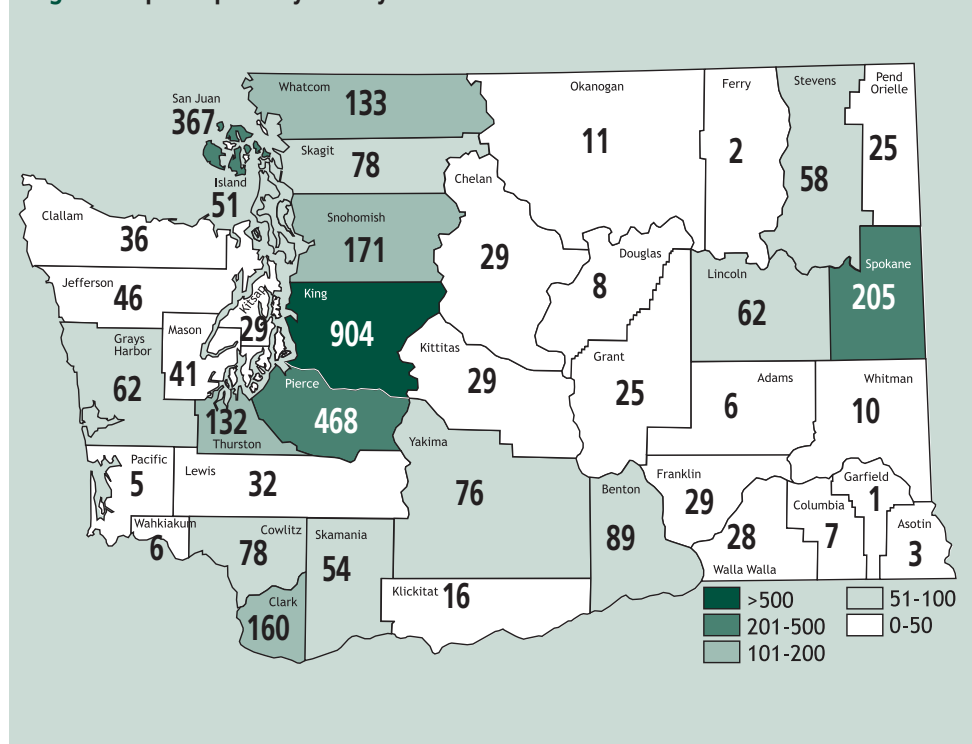
Figure 10: Statewide Reported Drug Labs



- Long-term effectiveness monitoring at toxics cleanup sites. Groundwater data are collected quarterly at multiple sites statewide to determine if cleanup standards have been met, or if additional remedial actions are needed.
- Toxics monitoring. Continued implementation of the Washington State Toxics Monitoring Program, an ongoing program designed to evaluate concentrations of a variety of toxic chemicals in edible fish tissue.

*\*PCBs are mixtures of synthetic organic chemicals with the same basic chemical structure and similar physical properties ranging from oily liquids to waxy solids. Due to their non-flammability, chemical stability, high boiling point and electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications including electrical, heat transfer, and hydraulic equipment; as plasticizers in paints, plastics and rubber products; as pigments, dyes and carbonless copy paper and many other applications. More than 1.5 billion pounds of PCBs were manufactured in the United States prior to cessation of production in 1977.*

Figure 9: Spill Reports by County for FY 04



# Nuclear Waste Program

## Cleanup of Underground Storage Tanks



3,000 gallon underground storage tank being vented with nitrogen gas (photo courtesy of Dick Bassett)

Dramatic results have been achieved by Department of Ecology's and industry's attention to replacing substandard tank systems and preventing leaks from underground storage tanks. In 1990, over 900 releases from commercial and public underground storage tanks were reported to Ecology. This number has fallen to an all-time low of 80 releases reported in FY 04.

To ease the burden on school districts and other public facilities, Ecology provided \$5.7 million in grants to assist 138 publicly-owned sites remove old tanks and cleanup contamination. Ecology has also conducted a number of cleanups each year with federal and state funds at abandoned commercial sites. Many of these cleanups are considered "brownfields" because the cleanup of the property results in the revitalization of economically depressed communities. Today, most cleanups are undertaken through the voluntary action of industry and potentially liable parties.



30,000 gallon underground storage tank (photo courtesy of Dom Reale)

## Department of Ecology Nuclear Waste Program

The Nuclear Waste Program regulates the storage, treatment, and disposal of dangerous waste and mixed waste at Hanford and certain non-Hanford facilities. Mixed waste contains both a hazardous and radioactive component. The Nuclear Waste Program collects fees from facilities that manage mixed waste in the state. This money goes into the State Toxics Control Account where it is appropriated by the legislature to the Nuclear Waste Program. In Fiscal Year 2004, State Toxics Control Account funding helped pay for:

- compliance inspections;
- regulatory oversight;
- technical assistance; and
- review and approval of permit applications at regulated mixed waste facilities.

## Department of Ecology: Program Administration

State and Local Toxics Control Account funds help pay for program administration. These services provide the foundation from which Ecology is able to address the goals of the Model Toxics Control Act. Administration services include the following:

- ① Executive management oversees the Department's mission, goals, and policies;
- ① Regional directors represent the director in local communities and provide coordination on complex local issues;
- ① Legislative and intergovernmental relation staff coordinates legislative activities, represent agency policy to other governments, and coordinate rule development;
- ① Education and public information staff provide primary leadership in environmental education, community outreach, public involvement, and media relations;
- ① Additional costs include computer support, employee services, telecommunications, budget and central planning, accounting and fiscal services, records management, mail handling, facility planning and maintenance, warehousing, and motor pool services.

## Department of Ecology: Spill Prevention, Preparedness and Response Program

The Spill Prevention, Preparedness and Response Program relies on funding from the State Toxics Control Account in order to protect public health, public safety, and the environment. The Program's funding is dedicated to both responding and cleaning up oil and hazardous material spills. These activities include overseeing the cleanup of spills where a responsible party is taking appropriate action to manage the incident. The program also cleans up "orphan" spills where the owner is unknown, unwilling, or unable to fund the necessary removal. Ecology acts as the State's on-scene coordinator and collaborates with the responsible party and other government entities to manage incidents.

Other related activities conducted by the program include:

- ① participation in oil spill drills;
- ① technical assistance;
- ① incident investigation;
- ① enforcement when appropriate; and
- ① emergency cleanup at hazardous waste generation facilities.

The Program strives to recover its costs whenever a responsible party is identified.

In 2003, the Spills Program received reports of three thousand seven hundred and eighty seven (3,787) oil and hazardous material spills. Staff completed two thousand one hundred and thirty five (2,135) field responses to cleanup and investigate the incidents.

The Program also uses State Toxics Control Account funds to remove and dispose of hazardous wastes found at methamphetamine drug labs. The number of illicit drug labs and associated abandoned dump sites in Washington rose dramatically throughout the mid 1990's. In 2003 Ecology cleaned-up one thousand four hundred and eighty (1,480) drug labs. Based upon the continuing trend during the first half of 2004, it appears that the number of responses began to stabilize at approximately 115 labs each month.

# Solid Waste and Financial Assistance Program

The Spills Program continues to refine its award winning effort to control and reduce the costs associated with this activity. The Program has become a national model for other states and is promoted and supported by federal law enforcement agencies.

## Department of Ecology: Solid Waste and Financial Assistance Program

Ecology's Solid Waste and Financial Assistance Program conducts three main services with funding received from the State Toxics Control Account. Those services are:

- Technical assistance and support to local governments on solid waste management issues;
- Regulation of large industrial facilities (such as pulp and paper, petroleum refining, and aluminum smelting); and
- Regulation and enforcement on remedial actions related to closed landfills.

## Solid Waste Prevention and Assistance

### Technical Assistance

The Solid Waste Program supports and supplements the work of local governments, who have primary authority for solid waste in our state. The Program's goal is to reduce the generation of solid wastes, and properly manage the reuse, recycling, and disposal of wastes that are generated. Staff efforts are concentrated on:

- State plan creation, buy-in, and implementation;
- Local plan review and approval, and local permit review;
- Local government technical assistance;
- Statewide consistency in solid waste prevention and management; and
- Statewide rules and policies when needed.

*Technical Innovation and Research:* Staff worked with university researchers, health departments and local farmers to explore beneficial uses of organic wastes. These projects include:

- using biosolids to remediate lead and arsenic contaminated soils;
- exploring the potential use of apple wood waste to serve as a substrate for

specialty mushrooms; and

- creating an initiative to explore the economic and technical viability of using organic wastes for fuel through anaerobic digestion.

Due to the initiative, the program is close to having a pilot anaerobic digester built and operating to demonstrate this viable technology.

The Program also funded a project to look at the viability of using apple waste as a soil amendment. While the project showed that there are no environmental concerns, staff learned that the soil benefits are not economically viable.

Program staff also provides professional hydrogeologic and engineering assistance on solid waste facilities to local health jurisdictions, a specialty area most jurisdictions lack. These reviews cover landfill design and operation issues, like landfill liners, leachate collection systems and groundwater sampling, in order to protect ground and surface water.

*Waste Prevention Research and Information:* Ecology's Beyond Waste planning process was completed during 2004. Initiatives focus on green building, industrial practices, hazardous waste handling and organics. The theme of these initiatives is to save time, resources and money while protecting human health by avoiding toxins and unnecessary wastes. While most of the funding for the planning effort was through the Waste Reduction, Recycling and Litter Control Account, much implementation funding draws from the toxics accounts. Further, this effort is aimed at preventing waste. This is a new strategy in waste management, that has been used successfully in other media.

*Partnering with Local Government:* In June 2004, Ecology hosted the third Statewide Solid Waste Summit, titled "Setting the Course for the Future." The Summit developed statewide goals for the Coordinated Prevention Grant (CPG) program that will align the program with the Beyond Waste State Plan, and also identified statewide priority issues in solid waste. Attended by over 100 local government and Ecology staff



*Site Celebration summer 2002  
(Photo courtesy of Jan Davis)*

## Northwest Maritime Center

*Written by Martha Maggi - SW Regional Office  
Toxics Cleanup Program - Ecology and  
Sbelly Randall - NW Maritime Center*

In 1999, the Northwest Maritime Center, a non-profit organization, approached Ecology with a request. The Center was seeking to purchase a contaminated waterfront parcel in Port Townsend. A site cleanup was needed in order to develop the property as the Center's flagship learning center, dedicated to the region's maritime heritage.

After discussions with the Department of Ecology's Toxics Cleanup and the Solid Waste and Financial Assistance Programs, a solution was found. In January, 2000, the Center and the Port of Port Townsend signed an agreement for the Port to be the Center's governmental sponsor. This allowed the Port to obtain Remedial Action Grant funds for moving on the purchase and cleanup of the property.

A former owner of the site, Unocal Corporation, provided funds to supplement Ecology's grant. The property will be used as public open space until construction of the Maritime Center begins.



*Ariel view after site cleanup  
(Photo courtesy of Darryl Swenson)*



# Water Quality Program

members, summits will be held every other year to continue statewide coordination. This coordination will be essential for successfully implementing Beyond Waste.

*Training:* Staff provided technical overviews of revised solid waste regulations (WAC 173-350) to local health departments and individual assistance as needed. Staff also provided the annual compost operator training.

*Remedial Action Assistance:* Solid Waste staff provided technical oversight for clean up activities at industrial and solid waste landfills across the state:

- ITT Rayonier Landfill in Port Angeles;
- Horn Rapids landfill in Richland;
- Terrace Heights landfill in Yakima;
- Greater Wenatchee landfill in East Wenatchee; and
- Olympic View Sanitary Landfill in Port Orchard.

## Industrial Regulation

Funds from the State Toxics Control Account support regulation of hazardous wastes and oversight of cleanup activities at some of the states largest industries. Specifically, the oil refineries, the pulp and paper mills, and the aluminum smelters all use, generate, and in some cases, dispose of a variety of hazardous wastes. Funding from the account supports regular inspections, enforcement activities, and permitting at these facilities and is also used to require cleanup of historical contamination.

In the last year, the Industrial Section oversaw the negotiations with Kaiser regarding how to clean up the property given bankrupt status. The parties agreed to a settlement of nearly \$30 million. The Industrial Section also made progress in the following areas: defining the steps for cleaning up the old Rayonier mills site; cleaning up the waste surface lagoons at the Goldendale Smelter; cleaning up an oil spill at the US Oil/PW Pipe site; developing the plans for potliner cleanup at Kaiser Tacoma, including some innovative use of dredge spoils to help with site grading needs; and accepting responsibility for the cleanup project at the Lilyblad site.

## Department of Ecology Water Quality Program

The Water Quality Program received State Toxics Control Account funds to pay for activities that help protect Washington's water from contaminants.

### Lower Columbia River

#### National Estuary Partnership

The National Estuary Program was established by Congress in 1987 to identify nationally significant estuaries that are threatened by overuse, development, and pollution and to aid in the development of local management plans to protect and preserve these estuaries. The lower Columbia River has been part of the National Estuary Program since 1995.

The State Toxics Control Account provides funding for a grant to the Lower Columbia National Estuary Partnership. The Partnership's board members include representatives from both Washington and Oregon Governors' Offices, Washington State Department of Ecology, the Oregon Department of Environmental Quality, the U.S. Environmental Protection Agency, industry representatives, local governments and citizens.

The Partnership has identified seven priority issues including toxic contaminants in sediments and fish. The following link has information on Partnership accomplishments including their efforts to secure \$1.7 million from the Bonneville Power Administration for water quality and ecosystem monitoring. <http://www.lcrep.org/accomplishments.htm>

### Aquatic Pesticide Program

This program is aimed at reducing the risk to public health and aquatic life from pesticides used to manage aquatic weeds, invasive plants, and pests. Water Quality staff develop and interpret rules that pertain to aquatic pesticides and provide technical assistance to pesticide applicators, lake associations, and others to ensure the wise use of aquatic pesticides. Staff also assists chemical manufacturers and pesticide applicators and their clients with permit information. Lastly, they provide educational materials on specific pesticides and aquatic pest control methods.

## Implementation and Development of Water Quality Standards for Toxics

Staff provides technical support in the development and implementation of water quality standards for toxic substances. They work on risk assessment issues related to toxics and provide technical assistance to wastewater discharge permit writers using water quality standards to set effluent limits. In addition, staff led workgroups that addressed the reduction of toxic substances, including the interagency committee that is developing Ecology's strategy on persistent bioaccumulative toxic chemicals and the interagency marine toxics work group.

### Stormwater Program

The Clean Water Act and state law require that approximately 2,000 businesses and 100 local governments have a National Pollutant Discharge Elimination System permit for the stormwater they discharge. State Toxics Control Act dollars allow staff to:

- Provide technical assistance and support to permit holders;
- Develop and maintain tools for permit holders and others to use; and
- Develop new permits to provide a compliance pathway for industry and local governments.

## Department of Health

The Department of Health receives funds from the State Toxics Control Account to perform environmental health protection and education, monitoring, and assessment activities. These activities are the responsibility of the Division of Environmental Health and are aimed at protecting the public from exposure to toxic substances released into the environment. The following is a brief description of some of the agency's accomplishments in Fiscal Year 2004.

### Chemical Monitoring of Drinking Water

In Fiscal Year 2004, the Department of Health provided technical assistance to a community in eastern Washington that reported water samples from one of its two permanent sources tested positive for ethylene dibromide (known as "EDB"). All of the samples taken throughout the

year detected EDB above the maximum contaminant level for drinking water. Department staff evaluated this exposure and developed public notification language that was distributed to residents of the community. Staff recommended actions be taken to reduce exposure of individuals using the drinking water source.

Department staff also provided consultation to Ecology, consultants, and local health jurisdictions investigating strong petroleum odors in well water in Whatcom, King, and Pierce Counties. Samples were collected in all three instances and perchlorate was detected in the Pierce county case. Results were very low and no significant follow-up action was required.

Staff continued working with over 50 water systems containing nitrate levels above the maximum contaminate level. This includes providing information on remediation options, public notification requirements, and monitoring requirements.

## Clandestine Drug Lab Program

Department staff chaired a committee that developed the recommended best practices for responding to drug-endangered children. The WE CARE document, available at [www.doh.wa.gov/ehp/ts/cdl.htm](http://www.doh.wa.gov/ehp/ts/cdl.htm) is a comprehensive approach, providing specific procedures for law enforcement, child protective services, medical facilities, and prosecutors.

Staff participated in two separate studies: In the first study, program staff collaborated with four local health departments and property owners to investigate the efficacy of cleanup efforts at methamphetamine residential drug laboratories. This analysis revealed that the current sampling protocol does not reliably identify homes that are above the state cleanup standard. Irregular surfaces, such as light switches and doorknobs, had high levels of methamphetamine. Composite sampling appears to be a valid and cost-effective strategy for improving compliance sampling of former clandestine drug labs.

In the second study, the Department collaborated with The Centers for Disease Control and Prevention to sample remediated residences and evaluate whether or not chemical residues were present.

The Department certified over 100 supervi-

sors, workers and contractors to remediate contaminated properties. Throughout the year, four 3-day certification trainings were conducted. Guidelines for "Environmental Sampling at Drug Lab Sites" were developed.

Four (4) statewide trainings were conducted to implement and educate local health officials and contractors on the guidelines. Enforcement actions were taken regarding complaints and violations with completion of investigator training, development of a compliance strategy, and issuing corrective and disciplinary actions.

The Department's clandestine drug lab program is recognized as a national expert on drug lab remediation and responds to over twenty five (25) weekly requests for technical assistance from local health officials, citizens and government agencies, as well as requests from Alaska, Arizona, Montana, Minnesota, Illinois, Michigan, Colorado, Utah, Oklahoma, Iowa, Georgia, and Tennessee. Program staff participated on two national committees: National Alliance for Drug Endangered Children and Nation Alliance for Model State Drug Laws.

## Indoor Air

Staff provided thousands of indoor air phone consultations this year and conducted several dozen site visits to schools with indoor air quality problems. Site visits focus on possible toxic exposures to children, including asbestos, volatile organic compounds, dusts, molds, and other common indoor air contaminants. Most notable this last year was a school issue in Eastern Washington, which involved a suspected exposure of students and staff to fiberglass. Information provided by the district's consultants was analyzed by staff and it was determined that the exposure did not constitute a risk to human health. This information was provided to the district and the concerned students and staff.

## Aquatic Herbicides

Staff continued to respond to inquiries from Ecology on the use of herbicides for controlling aquatic and wetland invasive plant species. In addition to review of permit applications, the Department assisted Ecology staff in developing the human health risk portion of the Supplemental Environmental Impact Statement for use of



## Middle Waterway

*Written by Russ McMillan -  
SW Regional Office  
Toxics Cleanup Program - Ecology*

Middle Waterway is located on the Tacoma tide flats and possesses one of the last remnants of the Puyallup River delta mudflats. Past years of industrial activities had contributed to extensive contamination that had become encircled by several successful habitat restoration projects. Collaboration between Ecology, Department of Natural Resources and the City of Tacoma resulted in the removal of 2,900 cubic yards of contaminated sediments and restoration of 2.8 acres of very productive habitat.



# Department of Health

glyphosate at aquatic sites. Staff provided detailed technical information on Triclopyr aquatic herbicide and attended a public meeting to provide public health advice on proposed herbicide treatment of Capital Lake in Olympia.

## Toxic Cyanobacteria

Tacoma-Pierce County Health Department has registered its concern for potential public health problems associated with a long-standing toxic cyanobacteria bloom in Lake Steilacoom. The Department and County Health will be working together in 2005 to educate other stakeholders on the potential for harm to public health from exposure to toxic cyanobacteria. The Department provided technical assistance to health specialists on human health effects of toxic cyanobacteria and methods for control in reservoirs and other drinking water sources. The Department continues to respond to requests for information on cyanobacteria blooms from citizens, local health jurisdictions, and other agencies, including those from out-of-state.

## Area-Wide Soil Contamination

### Task Force

The Department estimates that several hundred square miles of land in Washington has been contaminated with arsenic and lead due to emissions from smelters and application of lead arsenate pesticide on agricultural crops. Most of the lead and arsenic from these sources remains in the top six inches of soil where people who live and work in these areas can be exposed to the contamination. To get input from a broad range of stakeholders on possible ways to respond to area-wide contamination, four (4) state agencies (Agriculture, Health, Ecology, and Community, Trade and Economic Development) chartered the Area-Wide Soil Contamination Task Force. The Task Force presented its recommendations to the four agencies in June 2003. The Department of Health continued to work with Ecology to determine implementation measures that would reduce exposure to contaminated soil.

### Soil Contamination in Schoolyards

Soil sampling by local health districts in central and eastern Washington has shown

that several schools may have been built on former orchard lands where lead arsenate pesticide had been used. The Department of Health continued to work with Ecology and local health districts to advise schools on ways to reduce children's exposure to the contamination and provide information to parents about the associated health issues.

### Tacoma Smelter Plume

Soil in many areas of King and Pierce Counties has been contaminated with arsenic and lead as a result of past emissions from the Tacoma Smelter. Since the emissions were spread over many square miles of land with a large number of residents, the contaminated area called the Tacoma Smelter Plume site is a significant public health concern. The

Department continued working closely with Ecology, Public Health-Seattle and King County, and the Tacoma-Pierce County Health Department to assess the health hazard. Together, the state and local governments developed plans for further investigations of the contamination. The goal of these organizations has been to collaboratively develop health information for people living and working in areas affected by the Tacoma Smelter Plume on the potential hazards and how to reduce risk. These messages have been incorporated into both printed and internet-based educational materials.

The Department attended numerous public meetings to provide information and answer questions about health issues related

Photo: Lower Duwamish - Courtesy of NOAA



## Lower Duwamish Waterway

Written by Rick Huey - NW Regional Office  
Toxics Cleanup Program - Ecology

The Lower Duwamish Waterway site is located in Seattle on a 5.5-mile stretch of the Lower Duwamish Waterway. A wide range of contaminants are present, with polychlorinated biphenyls and polycyclic aromatic hydrocarbons as major concerns. Ecology and EPA are implementing a two-phase Remedial Investigation/Feasibility Study with the Lower Duwamish Waterway Group (City of Seattle, Boeing, Port of Seattle, and King County). Early action sediment cleanup has been completed at Duwamish/Diagonal Way, and early actions are being planned for Terminal 117 and Slip 4. Ecology is leading the source control efforts in coordination with local government.

# Lower Duwamish Waterway Continued

Written by Rick Huey – NW Regional Office  
Toxics Cleanup Program – Ecology



Duwamish Diagonal Cap - photo courtesy of King County

## Duwamish/Diagonal Way Early Action

**Sediment Cleanup:** In March 2004, King County completed removal of 66,000 cubic yards of sediment contaminated with PCBs and other substances from the river. Further actions are being planned in this area.



**Remedial Investigation Progress:** In 2004 the Phase 2 Investigation Work Plan for the Lower Duwamish was approved by Ecology and EPA. Early investigations completed in 2004 included a bathymetric survey, surveys of clam, crab, shrimp, snails, sandpiper habitat and juvenile Chinook salmon, a survey of groundwater seeps to the river, and a survey of human use access points to the river.

All 3 Field work photos are courtesy of Winward Environmental

**Public Involvement:** In 2004, Ecology and EPA published a brochure on the Lower Duwamish sediment and source control project (available in English and Spanish), and an update fact sheet (available in English, Spanish, Vietnamese, and Chinese). In October 2004, a public meeting was held in the South Park neighborhood to provide project updates, and discuss source control efforts. Over 200 people attended the meeting.

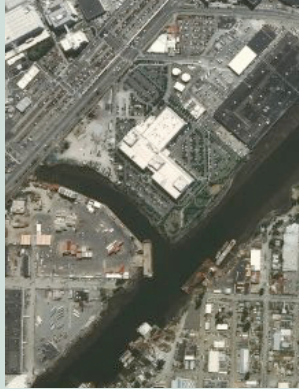


Public meeting (photo courtesy of EPA)

# Lower Duwamish Waterway continued

*Written by Rick Huey – NW Regional Office  
Toxics Cleanup Program – Ecology*

**Terminal 117 and Slip 4 Early Actions:** Since 2003, EPA has been working with the Port of Seattle at Terminal 117, and the City of Seattle and King Co. at Slip 4 to prepare these areas for sediment cleanup. Investigations and planning are proceeding at both areas. Sediment cleanup is likely to occur at Terminal 117 in the summer of 2005, and at Slip 4 in 2006.



*photos are courtesy of the State Department of Health*



*Interagency Inspector Training (photo courtesy of King Co.)*

**Source Control:** Ecology, EPA, King County, the City of Seattle and the Port of Seattle are partners in controlling sources of pollution to the Duwamish that may pollute water and sediments. In 2004 Ecology completed a Source Control Strategy and a plan for the Duwamish/Diagonal drainage. The King County/City of Seattle business inspection program completed hundreds of surveys and inspections to determine how to prevent pollution that may enter the river through storm drains or Combined Sewer Overflows. Inspections have focused on the Duwamish/Diagonal and Slip 4 Early Action drainages.

During source control sampling near Terminal 117, PCBs were discovered in a partially paved area of the South Park neighborhood. The City of Seattle, Seattle-King Co. Public Health, WA Dept. of Health and Ecology acted quickly to inform the public, pave the street, and install stormwater treatment. These temporary actions protected public health and the river. A permanent cleanup of the PCBs will be completed in 2005.



*South Park Soil Remediation (photo courtesy of Seattle Public Utilities)*



*South Park Soil Remediation Project (photo courtesy of Seattle Public Utilities)*

to Tacoma Smelter Plume contamination. Staff have also participated in sessions to help local citizens answer questions that arise in their neighborhoods.

## Site Assessments

In Fiscal Year 2004, Department staff from the Site Assessment Section, worked closely with personnel from Ecology's Toxic Cleanup Program. The Site Assessment Section has responsibility for assessing exposure to hazardous substances in the environment released from both MTCA and federal Superfund hazardous waste sites. The following are a few examples of work completed under this program:

- **Cadet Manufacturing - Vancouver.**

Staff completed an assessment of exposure to chlorinated solvents moving from groundwater into the indoor air of homes located near the Cadet Manufacturing facility. The assessment prompted Cadet to take remedial measures for those homes with elevated concentrations of contaminants in indoor air.

- **Lower Duwamish Waterway - Seattle.**

Educational activities continued to be provided to communities along the Lower Duwamish Waterway. Presentations included educational ways to prepare and cook fish in order to reduce levels of polychlorinated biphenyls and fat-soluble contaminants. Three large interpretive signs were created and posted in areas where people are known to fish from the Lower Duwamish Waterway.

- **Vermiculite Northwest - Spokane**

Vermiculite Northwest is a former processing facility for vermiculite ore. The facility processed vermiculite ore from the mine in Libby, Montana. The ore was contaminated with asbestos. The Department of Health completed a health consultation on the site. In addition, the Department attempted to locate former workers and their family members to provide them with health information related to asbestos and vermiculite.

- **LeRoi Smelter - Northport**

The former LeRoi smelter has soil contaminated with lead and other contaminants within the city of Northport. The Department com-

pleted a health consultation for the site while EPA proceeded with a removal action. Based on the consultation, the Department determined that a health hazard existed in Northport. Blood lead testing was carried out for children six (6) years and under and women of childbearing years. No blood lead levels above the level of concern were found in this limited sample.

## Fish Consumption Advisories

Evaluation of exposure to contaminants in fish continued to be a high priority for the Department in Fiscal Year 2004. Below are some highlights of fiscal year 2004 activities regarding fish consumption advisories:

- **Fish Consumption Advisory Program Coordinator**

The Department of Health hired a Fish Consumption Advisory Program Coordinator in April 2004. This coordinator is responsible for effectively communicating balanced, scientifically sound health information to the public. Other duties of the Coordinator include coordinating the necessary participation of tribes, local health jurisdictions, and at-risk populations and evaluating the effectiveness of the advisories and the program. The coordinator will continue to further the Department's outreach and education efforts.

- **Outreach and Education**

The Department continues to participate in the Marine Resources for Future Generations Community Advisory Committee. This committee includes representatives from several Asian and Pacific Islander community service organizations, including:

- Korean Women's Association,
- Indochinese Cultural and Service Center, Tacoma - Pierce County Health Department; and
- the Washington Department of Fish and Wildlife.

Staff made presentations to both the Filipino and Samoan elders and community workers at Asian and Pacific Islander meal sites.

The Fish Facts Brochure continues to be distributed through the Department's Child Profile mailings. An educational brochure



*A lead/arsenic soil contaminated softball field with orchard in background. School district intends to expand field into orchard as funding permits.*

was developed and distributed highlighting Lake Chelan and dichlorodiphenyltrichloroethane (also known as "DDT") in Lake Trout. The Department of Health coordinated with the Washington State Department of Ecology and the Washington Poison Center to develop a "Prevent Mercury Spills" brochure.

- **Statewide Advisory for Mercury in Fish**

In support of the statewide advisory for mercury in fish, the Department of Health conducted an assessment of mercury levels in canned tuna. Almost three hundred (300) cans of tuna were collected from 89 randomly selected stores from across Washington State with the probability of selection proportional to the store's total food sales. At each store one can of each type of tuna was randomly chosen. The analyses were carried out by the Department of Ecology's Manchester Environmental Lab. Albacore "white" canned tuna had more than three times as much mercury as "light" canned tuna.

In addition, the Department is working with the Environmental Protection Agency and the U.S. Food and Drug Administration and several other states tribal representatives to determine how best to integrate the 2004 food and drug/environmental protection agencies National Mercury Advisory with existing state and tribal advisories. The objective of this workgroup is to gain input on how states and tribes with differing fish consumption advisories can meld their advice with the national advice to produce clear and consistent

# Department of Agriculture

## Waste Pesticide



- 1 Sodium Fluorocetate
- 2 Product for ants, rats, mice and moles containing calcium cyanide
- 3 Seed disinfectant containing mercury
- 4 Insecticide
- 5 Product for insect and rodent control and soil fumigation containing chlorpicrin.
- 6 Waste disposal activities

messages on fish consumption.

### • Assessment of Fish Consumption Patterns

Department of Health staff developed a series of questions to assess the frequency and amount of fish consumed by residents of Washington State. These questions were used in the 2002 and 2004 Behavioral Risk Factor Surveillance System. The results from this survey were combined with the canned tuna results to estimate the proportion of the population that may be exposed to mercury in fish above health guidelines known as the oral reference dose. For those consuming albacore canned tuna exclusively, the Department estimated that 3.5% women of reproductive age and 7.8% of children age one to five would have exposure above the reference dose.

### Comprehensive Control of Cancer State Plan

Department staff directed the development of the environmental part of the Comprehensive Control of Cancer state plan. This included an assessment of the primary exposures to environmental carcinogens and a ranking of policy and program options to reduce exposures to these carcinogens. The plan was finalized in Fiscal Year 2004 and will act as the basis for statewide efforts.

### Pesticides and Farm Worker Health

The Department of Health is developing strategies:

- to address farm worker health disparities as related to pesticides and access to water and latrines at the worksite; and
- to produce a plan for health education and exposure prevention for farm workers.

## Department of Agriculture Waste Pesticide Identification and Disposal Program

The Washington State Department of Agriculture's Waste Pesticide Identification and Disposal Program has two primary goals:

- (1) to significantly reduce and eventually eliminate the backlog of prohibited and otherwise unusable pesticides stored by users, especially those stored on farms and other similar rural locations; and
- (2) to prevent future accumulations of unusable pesticides through education focused in the areas of product storage and handling, as well as improved planning before purchase.

Many of the pesticides have become unusable due to government actions that prohibited most or all of their uses. As of June 2004, the program has collected and properly disposed of over 250,000 pounds of Dinoseb, DDT, Endrin, Parathion and Lead Arsenate alone. A significant amount of cyanide based pesticides and highly toxic vertebrate poisons have also been removed from private storage locations statewide and shipped to facilities where they were destroyed. These are priority pesticides due to their potential to impact public health and the environment.

The program has now collected and properly disposed of 1,627,774 pounds of unusable pesticides from 5,035 customers. The Department collected 218,787 pounds from 514 customers during Fiscal Year 2004. This is the largest volume of pesticides ever collected by the program during a single fiscal year. Over the past four (4) years 619,432 pounds have been collected for a four-year running average of 154,858 pounds per year:

- 141,487 pounds in Fiscal Year 2001;
- 162,565 pounds in Fiscal Year 2002;
- 96,593 pounds in Fiscal Year 2003;
- 218,787 pounds in Fiscal Year 2004

Since inception, the program has removed pesticides from over 5,000 separate storage locations in the state. Other states that have implemented similar programs are also finding that a tremendous amount

of old pesticides remain in storage in their states. In addition to rural areas, the Department found these old pesticides in suburban locations as housing developments expand into traditional agricultural areas.

Implementation of the Federal Food Quality Protection Act of 1996 has increased the amount of pesticide products that are unusable and/or unsaleable. Several widely used pesticides have had use restrictions or prohibitions and phase-out periods placed on them as a result of the Act. The first Act restrictions directly affected the tree fruit industry in Washington State. Now it is also affecting pesticide use in non-farm situations.

Many uses of common organophosphate pesticides such as chlorpyrifos and diazinon are being phased out due to the Act. This has created many additional containers of unusable pesticides throughout the U.S. and is having an impact on the Waste Pesticide Program. The program is encouraging pesticide users to limit the amount of pesticides purchased at one time so that they may be used entirely during a specific application or season.

Unusable pesticides are collected at two types of events: regional and special site. The majority of pesticides are collected at regional events. These events are held around the state and are similar to household hazardous waste collections in that the customer transports their unusable pesticides to a collection site where a hazardous waste contractor packages them into hazardous waste disposal containers. Since the pesticides brought to these sites are fully regulated, the department prepares and sends a specific bill-of-lading to each of the customers based upon an inventory they submit before the event. This document must be in the customer's vehicle while on a public road and available to emergency personnel in case of a spill or accident.

The Department also assists the customers with packaging materials to enhance safe transportation and with chemical analysis of unlabeled containers. The remaining pesticides are collected at special site events. These events are usually held at the customer's pesticide storage locations. These are typically held at the customer's site due to numerous containers of unknown chemicals

and the transportation hazards due to poor container condition and types of pesticides that could pose a risk to other customers if brought to a regional event.

After the pesticides are placed in packages, the Department's contractor transports them to a permitted disposal facility. Most of the pesticides are disposed of by thermal destruction. Only pesticides containing metallic ingredients that cannot be destroyed by heat (such as arsenic, lead and mercury) are disposed of at a hazardous waste landfill. Many pesticides, such as DDT, are "land ban" chemicals and are prohibited from disposal at a hazardous waste landfill. The program's 3.6 employees are funded by the State Toxics Control Account.

## Endangered Species Program

The Washington State Department of Agriculture's Endangered Species Program was established in 2001 to ensure that pesticide use in Washington is not a limiting factor in the recovery of threatened and endangered salmon species. The Program works with the agricultural community, the environmental community, and regulatory agencies to protect aquatic resources and address the potential impact of pesticides on threatened and endangered species.

During Fiscal Year 2004 the program collects data and provides the Environmental Protection Agency and National Oceanic and Atmospheric Administration Fisheries with information relevant to Washington pesticide use. This information includes site-specific pesticide use, surface water monitoring data, and commodity and salmon mapping data. A critical element of the Program is the ability to have current, accurate, Washington-specific data on pesticide residues in salmon-supporting waters.

During Fiscal Year 2004, the Program continued to develop and use geospatial tools to assess pesticide use and potential exposure to endangered species act listed species. Several key data elements under development include the creation of a statewide crop locations geo database. The crop geo database would identify crop types, subtypes, estimated acres, and irrigation practices, for example, at the section level. At present, approximately 85% of the agricultural lands within the National Oceanic

## Yakima Valley Spray

*Written by Richard H. Bassett -  
Central Regional Office  
Toxics Cleanup Program - Ecology*



*Trac-boes excavating in 'pit' area where pesticides were originally dumped.*

The Yakima Valley Spray site in Yakima, Washington, completed excavation of contaminated soil in April, 2004. The origin of the soil and groundwater contamination was from a pesticide formulator/distributor and an adjacent bulk fuel distributor. Yakima Valley Spray began operations in 1908 and continued for 66 years until 1974. An adjacent bulk fuel distributor with six 50,000 gallon tanks operated in a similar time frame. Both businesses contributed significant contaminant releases over time to the site's soil and groundwater, particularly Yakima Valley Spray which dumped its manufacturing residues into an open 'pit'. Eventually, ten chemical and pesticide companies, and a railroad were named as potentially liable parties for the site and its cleanup.

The total cost of the cleanup which included attorneys, consultants, contractors, and Ecology oversight is estimated at \$10-12 million.



*Railroad cars containing contaminated soil on its way to the Rabanco landfill.*



# Department of Agriculture

and Atmospheric Administration Fisheries listed salmon habitat have been mapped. Additional data elements include crop and pesticide use summaries and a surface water monitoring program. The surface water monitoring project has been contracted to Ecology's Environmental Assessment Program which is conducting the monitoring through an interagency agreement.

The Program has been working with the Environmental Protection Agency, National Oceanic and Atmospheric Administration Fisheries and stakeholders to develop a formal plan that gives the Department of Agriculture the authority to implement a 'State-Initiated Plan' for pesticides and endangered species protection in Washington state. The ultimate goal of this Program is to reduce the potential transport of pesticides to salmon habitat by working cooperatively with agricultural and environmental stakeholders.

## Compliance Services Program

The compliance program:

- investigates complaints of pesticide misuse;
- conducts field inspections of pesticide manufacturers and applicators; and
- provides technical assistance to pesticide users.

Compliance field staffs are located in Olympia, Yakima, Wenatchee, Moses Lake and Spokane.

The State Toxics Control Account funds one position located in the Columbia Basin area (Moses Lake) within the Pesticide Management Compliance Services Program.

This position covers all irrigated areas of the state and provides technical assistance to:

- chemigators (commercial and private),
- irrigation equipment distributors and manufacturers,
- irrigation districts,
- farm chemical distributors,
- consultants,
- aerial applicators,
- ground applicators,
- growers,
- lawn care businesses,
- government agencies, and

## Roderick Timber

*Written by Dominick Reale –  
SW Regional Office  
Toxics Cleanup Program - Ecology*

This 200-plus acre site near Aberdeen, WA had surface water, soils, and groundwater pollution. The contamination was from petroleum and chlorinated solvent leaks and spills. In addition, an improperly closed municipal waste landfill was located on the site.

With funding from the Department of Ecology along with other funding sources, the potentially liable persons; the City of Aberdeen; and the Grays Harbor Historical Seaport Authority completed a cleanup remedy at the site in 2004. The cleanup method included removal of municipal waste; soil capping of remaining waste; removal of underground storage tanks; treatment of petroleum-contaminated groundwater; construction of systems to re-route water; and the installation and monitoring of wells.



- other public facilities at the user, consultant and distributor level.

The Department also carried out the Chemigation Fertigation Technical Assistance Program with an emphasis on system inspections.

The fundamental basis for this program is the protection of state ground and surface waters against improper injection of toxic materials into irrigation waters. While the total number of statewide systems that inject into irrigation water is unknown, it is estimated that they number more than twelve thousand (12,000). Yet less than twenty percent (20%) of that number are fully compliant with the state chemigation rule.

Through the activities of this position, the Compliance Services Program has seen an increase in voluntary compliance, enhanced service, additional licenses issued, and in turn a reduction in complaints and need for enforcement actions. In the last year, the program was associated with presentations on how to be compliant with chemigation rules made to about 1,230 people involved in chemigation in over 22 meetings.

Historically similar numbers have been achieved, but this year the emphasis was to some of the outlying areas of the state. This outreach included Walla Walla sweet

onion growers as well as non-typical groups such as the United States Department of Agriculture's engineering staff and irrigation suppliers. The purpose of Department services was to ensure that new systems will be compliant for chemigation and protection of waters of the state. Additionally the Technical Assistance Program is beginning to have impacts outside of the normal agriculture industry such as greenhouses. Also the program is impacting other states (two back east plus California) looking at Washington state rules for chemigation and fertigation through the International Irrigation Association. Additionally impacts are being made in non-typical types of products injected into irrigation water such as "Compost Teas" that are gaining popularity in large farms along the Columbia River.

In this last year, efforts were made to prioritize available time resources to the more critical ground water areas such as Black Sands near George, Washington. About 90 new systems inspections are in process with over 130 systems brought to compliance with the chemigation rules. While these numbers are lower than other years because of staff time devoted to pesticide case investigation work apart from chemigation, there was some case investigation work involving chemigation and ground water protection.

## Pesticide Registration Program

The pesticide registration program reviews, evaluates and registers:

- (1) 10,000 pesticide products annually
- (2) Approval or denial of requests for special local needs (SLN) registrations
- (3) Submission of requests for federal exemption from the requirement of registration under the Federal Insecticide, Fungicide and Rodenticide Act (Section 18)
- (4) Approval or denial of experimental use permits
- (5) Technical support and label review for the Compliance Services program and has involvement in other pesticide related issues such as groundwater, endangered species, worker protection and the Food Quality Protection Act.

The two employees funded by the State Toxics Control Account continue to be critical to the success of the program. The workload for the Pesticide Registration program continues to increase and the funded positions assure that the Department can handle the work in an effective manner. Two of the most critical functions supported by the funding are Section 18 Emergency Exemptions and special local needs registrations. This is a valuable program for the agricultural industry.

## Washington State Patrol

The Washington State Patrol Fire Protection Bureau uses funds from the State Toxics Control Account to prepare firefighters in Washington State who respond to incidents involving hazardous materials. The Bureau's mission is to provide the means for firefighters to receive live-fire training that meets or exceeds the minimum standards required by federal and state regulations governing firefighter training. Additionally, firefighters are provided with the technical knowledge and training needed to recognize and contain hazardous material incidents which threaten our citizens and environment. The training firefighters receive reduces risk to both the firefighter and the property they protect. Funds received from the State Toxics Control Account are dedicated to the delivery of live-fire training in several of the following areas:

## Former Pacific Wood Treating Site at the Port of Ridgefield

*Written by Dan Alexanian –  
SW Regional Office  
Toxics Cleanup Program – Ecology*

For approximately 30 years, Pacific Wood Treating Corporation treated wood on property owned by the Port of Ridgefield. Pacific used a variety of wood treating chemicals including: creosote; pentachlorophenol; and water-borne solutions containing copper, chromium, and arsenic. During the course of Pacific's operations, these chemicals were released to the site's soil and groundwater threatened the adjoining Carty Lake and the Ridgefield National Wildlife Refuge. Removal of creosote and pentachlorophenol from groundwater has traditionally been very-difficult-to-impossible potentially requiring hundreds of years of treatment.

The Department of Ecology and the Port of Ridgefield entered into an emergency interim cleanup action using an adaptation of a steam process that has been used successfully in oil fields around the world. Phase 1 of the steam system was installed and is being operated using funds provided primarily by Ecology through a combination grant and loan. The U.S. Department of Housing and Urban Development and the Port, have also contributed funds. The goals for Phase 1 of the cleanup were achieved in 2004.

If steam had not been used in conjunction with the soil vapor extraction system, it would have taken the liquid extraction system approximately six years to remove the same amount of contamination the vapor extraction system has in six months. Ecology intends to install the entire well field needed for Phase 2 of the cleanup during the 2005-2007 biennium.



*A maze of insulated piping and wells inject 280 degree steam into the ground.*

*Vapor and liquid extraction wells suck the contaminants out of the ground which then flow to the chemical treatment system.*



*Port of Ridgefield Executive Director Brent Grening shows the pure chemicals that are being extracted from the ground in contrast with the treated and cleaned water being released back into Lake River after it has passed through the system.*



*Chemical Engineer and Remediation Project Manager Karl Jolin demonstrates one step in the separation process as the contaminants separate from the groundwater.*

# Washington State Patrol



Whitman County Commissioner Greg Parth takes a break while campaigning to get some recycling tips from the Whitman County Recycling booth. This photo was taken at the 2004 Lentil Festival in Pullman.

## Flammable Liquids

Level 1 provides firefighters with the basic knowledge necessary to identify, control, and recover various flammable liquid emergencies. Instruction includes the behavior of flammable liquids in bulk, fire extinguishing agents, safety, and environmental concerns.

Students practice their skills while extinguishing a live, flammable liquid fire on an overturned tanker.

Level 2 provides additional tactical and fire-ground training and experience with problems involving flammable liquids, including handling a team leader position during a flammable liquid casualty.

The course provides live fire training using a simulated fuel-loading dock, fuel under pressure (broken flange), and a bulk fuel storage container.

## Liquid Petroleum Gas

Students learn the basic property of liquid petroleum gas, issues surrounding liquid petroleum gas powered vehicle fuel systems and storage tanks, and their built-in safety features, leak detection, product identification, and basic tactics for emergencies. Students practice attacking, controlling, and recovering liquid petroleum gas fires on a

simulated storage tank, overhead piping, and a fill station.

## Portable Fire Extinguishers

Students gain experience in fire-ground problems using standard stored pressure water extinguishers, stored pressure foam extinguishers, cartridge-operated dry chemical extinguishers, and carbon dioxide extinguishers.

## Airport Rescue Firefighting

This unique training prop was constructed to provide hands-on live firefighting training for aircraft incidents. This training experience enhances the public safety of all flight operations in and out of airports in the state.

## Marine Firefighting

This program is designed to include academic and live hands-on firefighting for those personnel working within the marine industry.

The training is designed to meet the current Code of Federal Regulations, National Fire Protection Association and International Maritime Organization requirements. In addition, several governmental agencies participate in this program including the U.S Coast Guard, Navy and Army.

## Waste Management

Funds from the State Toxics Control Account are utilized to provide for the removal, transportation and disposal of hazardous waste products manufactured as a result of live fire training and for the treatment of contaminated waste water from the aircraft rescue training.

## Hazardous Material Training

The Hazardous Materials Training program is designed to include academic and hands-on training for first responders to meet the current Washington Industrial Safety and Health Act; Occupational Safety and Health Administration; Department of Transportation; and National Fire Protection Association requirements. In addition, the training is an invaluable tool in providing practical scenarios for those personnel that respond to clandestine drug labs, terrorism, weapons of mass destruction, confined space rescue, spills response, and issues relating to the transportation of hazardous chemicals and waste.

## Required Training

The need and impact of specialized hazardous materials training continues to be significant in our state. The Washington Industrial Safety and Health Act standards place requirements for training on emergency responders. Initial training and retraining is mandated for firefighters who respond to hazardous materials incidents. The State Toxics Control Account is the most significant source of funding for hazardous materials training in the state and without this continued support the Washington State Patrol's Hazardous Materials Program will not be able to meet the mandated training requirements for the state's twenty five thousand (25,000) firefighters. Additionally, the frequency is increasing for the transportation of hazardous chemicals and other environmental conditions promoting chemical disasters. Firefighters need specialized training in hazardous materials in order to safely handle these life-threatening incidents.

## Department of Revenue

The Department of Revenue oversees the collection of the Hazardous Substance Tax.

# Solid Waste and Financial Assistance Program

## Local Toxics Control Account

### Revenue

Local Toxics Control Account Revenue Total \$30,928,746

### Expenditures

Toxics Cleanup Program \$455,933

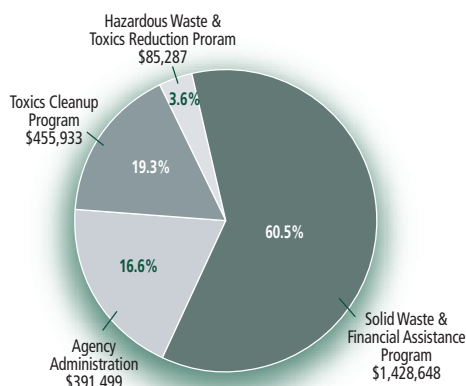
Hazardous Waste & Toxics Reduction Program \$85,287

Agency Administration \$391,499

Solid Waste & Financial Assistance Program \$1,428,648

Total All Agency Expenditures \$2,361,367

**Figure 11: Local Toxics Control Account Expenditures**



## Department of Ecology Solid Waste and Financial Assistance Program

The Local Toxics Control Account is used to fund grants to local governments. The Solid Waste and Financial Assistance Program administers the grants program. Local governments may use grants to clean up contaminated sites, manage solid and hazardous waste, or provide drinking water to those whose wells have been contaminated as a result of a contaminated site. Grants are also offered to not-for-profit organizations and citizen groups for participation in cleanup actions and promotion of waste management priorities.

## Public Participation Grants 2004

The Public Participation Grants Program provides citizen groups and not-for-profit organizations with funding for projects that motivate people to change their behavior and take action to improve the environment and protect their health. The projects create awareness of the causes and costs of pollution. Public Participation grants are funded from one percent of the Local and State Toxics Control Accounts. All the grant funds were offered to 31 projects at the beginning of the 2003-2005 biennium. In fiscal year 2004, 30 grants were written and signed. See Table 4 for a list of awards.

Sixteen (16) grant awards were for Hazardous Substance Release Site grants, and fourteen (14) were for Pollution Prevention Education/Technical Assistance grants. The following is a list of the thirty grant recipients and descriptions of the funded activities:

- ④ NW Everett Neighborhood Association: continue to educate the impacted community of the progress of the Everett ASARCO Smelter Cleanup Site.
- ④ Brackett's Landing Foundation: monitor and educate the community about the progress of the cleanup of the Edmonds UNOCAL sit.
- ④ Citizens for a Healthy Bay: educate/involve the community about pollution problems and/or hazardous waste cleanup activities and initiate sustainable practices.
- ④ NW Renewable Energy Festival: sponsor a three day Energy Festival that informed and educated energy producers and consumers about the benefits of using renewable energy sources.
- ④ Lake Roosevelt Forum: improve public's understanding of EPA's investigation process of the pollution of Lake Roosevelt.
- ④ The Green Zone: show positive options available to businesses, homeowners and for play areas to enhance a more sustainable environment.
- ④ Georgetown Crime Prevention & Community Council: continue to educate the community about the progress of the cleanup of the Philips Service Facility site and the importance of their involvement in the decision-making process for cleanup of the site.
- ④ Washington Toxics Coalition: provide the tools for the community to be aware of the dangers of pesticides and hazardous household products and to avoid using them.
- ④ WA Physicians for Social Responsibility: provide educational tools that explain the human/environmental history of the Hanford site and the challenge of cleaning up its burden of radioactive wastes.
- ④ People for Puget Sound: continue to educate the neighborhoods, which abut the Duwamish River, on the progress of the river's cleanup and encourage involvement by the local residents.
- ④ The RE Store: improve the awareness of contractors and the building public to the existence and availability of reusable building materials. Design and distribute a "Used Building Materials Guide".
- ④ Columbia Riverkeeper (Hanford): continue to educate the residents, in the Mid-Columbia region, about the issues and progress of the cleanup of the Hanford Nuclear Waste site.
- ④ WA Citizens for Resource Conservation: education/outreach project on computer recycling and design issues related to producer responsibility.
- ④ People for Environmental Action & Children Health: educate the public about Sustainable Resource Management and/or the Zero Waste Program.
- ④ South Sound Outreach Services: extend environmental education/outreach to include seniors, disabled and other low-income people.
- ④ Spokane Neighborhood Action Program: increase the knowledge and practice of the "Living Green Program" among all residents through community education.
- ④ Skykomish Environmental Coalition: continue to educate the residents/property owners on the various phases of the cleanup process for removing contaminants from the old Burlington Northern Santa Fe Maintenance Facility.
- ④ Waste Matters: educate residents about preventing pollution by reducing/eliminating waste at the source.
- ④ ECO Solutions: education/outreach activities about the toxic effects of hazardous chemicals and harmful contaminants used in home landscaping and gardening.

# Solid Waste and Financial Assistance Program

- ④ WA Citizens Advisory Committee: coordinate with other Spokane River outreach groups and provide public meetings/forums for interested citizens to learn about the cleanup of the Spokane River.
- ④ Columbia River Keeper: coordinate with other Spokane River outreach groups and provide education materials to the community and local schools. Design and distribute a newsletter whose articles focus on the Spokane River Cleanup.
- ④ Sustainable Seattle: create opportunities for sustainable development in the Puget Sound area through youth education and community action.
- ④ Hanford Information Network: continue to take "The Road Show" statewide to schools, community colleges and colleges/universities to provide basic information specifically on the underground tank cleanup at the Hanford site.
- ④ WA State Recycling Association: through education/outreach activities, increase recycling programs in rural communities (pilot project).
- ④ Island Remediation & Public Participation Center: provide education/outreach to the residents on cleanup of the heavy metals contamination on the islands from the Tacoma ASARCO plants air emissions.
- ④ The Lands Council: coordinate with other Spokane River outreach groups on development of education/outreach materials. Focus will be on providing outreach materials to non-English speaking communities explaining the cleanup process of the Spokane River.
- ④ Environmental Information Cooperative: train educators in special stream pollution identification and pollution prevention then incorporate the new knowledge in classroom curriculum.
- ④ Justice Alliance Education Fund: provide education on energy conservation and waste stream management into public institutions.
- ④ Olympic Environmental Council: continue to educate the residents in the area about the cleanup process of the Rayonier Mill site and two associated landfills.
- ④ Heart of America Northwest: expand public participation in the annual meetings on Hanford Cleanup site priorities and Hanford Cleanup Budget Priorities.

**Table 4: Public Participation Grants-Fiscal Year 2004**

Recipient	Grant Number	Total Project	Local Toxics Control Account Amount	State Toxics Control Account Amount
Automotive Recyclers of Washington	G0500070	15,000	-	15,000
Brackett's Landing Foundation	G0400002	60,000	60,000	-
Citizens for a Healthy Bay	G0400003	25,000	25,000	-
Columbia Riverkeeper	G0400015	50,000	50,000	-
Columbia Riverkeeper	G0400086	16,660	16,660	-
EcoSolutions	G0400065	38,000	-	38,000
Environmental Information Cooperative	G0400225	9,000	-	9,000
Georgetown CP & C Council	G0400007	45,000	45,000	-
Hanford Information Network	G0400120	5,000	-	5,000
Heart of America Northwest	G0400286	50,000	-	50,000
Island Remediation & Recycling	G0400132	30,000	-	30,000
Justice Alliance Education Fund	G0400226	20,000	-	20,000
Lake Roosevelt Forum	G0400005	25,000	25,000	-
NW Everett Neighborhood Association	G0400001	50,000	50,000	-
NW Renewable Energy Festival	G0400004	10,000	10,000	-
Olympic Environmental Council	G0400237	20,000	-	20,000
PEACH	G0400026	20,000	-	20,000
People for Puget Sound	G0400011	45,000	45,000	-
Skykomish Environmental Coalition	G0400044	27,680	-	27,680
South Sound Outreach Services	G0400032	25,000	25,000	-
Spokane Neighborhood Action Programs	G0400042	30,000	-	30,000
Sustainable Seattle	G0400111	30,000	-	30,000
The Green Zone	G0400006	9,000	9,000	-
The Lands Council	G0400140	16,660	-	16,660
The Re-Store	G0400014	25,000	25,000	-
Wa Citizens Advisory Committee	G0400066	16,660	-	16,660
WA Citizens for Resource Conservation	G0400020	19,000	19,000	-
Wa Physicians for Social Responsibility	G0400010	18,000	18,000	-
WA State Recycling Association	G0400126	20,000	-	20,000
Washington Toxics Coalition	G0400009	25,000	25,000	-
Waste Matters	G0400047	12,000	-	12,000
<b>Total Public Participation Grants</b>		<b>447,660</b>	<b>447,660</b>	<b>352,320</b>

# Solid Waste and Financial Assistance Program

Table 5: Coordinated Prevention Grants - Fiscal Year 2004

Recipient	Grant Number	Total Project & Amount	Grant \$ Amount
Adams County Public Works	G0400308	156,987	117,740
Adams County Health District	G0400283	83,000	62,250
Algona City of	G0400152	5,008	3,756
Arlington City of	G0400180	17,087	12,815
Asotin County Health District	G0400275	76,843	57,632
Asotin County	G0400309	166,780	125,085
Auburn City of	G0400219	55,980	41,985
Bellevue City of	G0400238	121,832	91,374
Benton County Solid Waste	G0400230	468,735	351,551
Benton-Franklin Health District	G0400231	198,000	148,500
Black Diamond City of	G0400172	7,176	5,382
Bothell City of	G0400153	43,641	32,731
Carnation City of	G0400154	4,105	3,079
Chelan County	G0400221	306,813	230,110
Chelan-Douglas Health District	G0400189	198,000	148,500
Clallam County Environmental Health	G0400348	159,000	119,250
Clallam County Health	G0400243	132,000	99,000
Clark County Public Works	G0400321	985,399	739,049
Clark County	G0400279	132,000	99,000
Columbia County Health District	G0400263	4,000	3,000
Covington City of	G0400155	22,280	16,710
Cowlitz County Building/Planning	G0400293	66,667	50,000
Cowlitz County Public Works	G0400291	261,339	196,004
Des Moines City of	G0400158	44,273	33,205
Douglas County	G0400208	196,400	147,300
Edmonds City of	G0400151	50,772	38,079
Enumclaw City of	G0400191	17,623	13,217
Everett City of	G0400175	123,609	92,707
Federal Way City of	G0400289	123,343	92,507
Ferry County Waste Management	G0400314	134,770	101,078
Franklin County Solid Waste	G0400329	239,875	179,906
Garfield County Health District	G0400262	13,000	9,750
Garfield County Public Works	G0400357	46,250	34,690
Grant County Health District	G0400276	132,000	99,000
Grant County Public Works	G0400333	299,583	224,687
Grays Harbor County	G0400241	132,000	99,000
Grays Harbor County	G0400318	200,723	150,524
Grays Harbor County	G0400325	80,000	60,000
Island County Health	G0400185	132,000	99,000
Island County Public Works	G0400177	291,951	218,963
Issaquah City of	G0400220	21,399	16,049
Jefferson County Health	G0400242	132,000	99,000
Jefferson County Health	G0400363	53,333	40,000
Jefferson County Public Works	G0400341	127,540	95,655
Kelso City of	G0400292	20,371	15,278
Kenmore City of	G0400192	29,241	21,931
Kent City of	G0400228	110,628	82,971
King County	G0400227	852,008	639,006
Kirkland City of	G0400218	134,628	100,971
Kitsap County Health	G0400186	253,555	190,166
Kitsap County Public Works	G0400169	556,413	417,310
Kittitas County Health Department	G0400209	50,000	37,500
Kittitas County Solid Waste	G0400207	200,461	150,346
Klickitat County Health	G0400188	70,000	52,500
Klickitat County Solid Waste	G0400247	163,436	122,577
Lake Forest Park City of	G0400201	20,045	15,034
Lewis County Department of Community Development	G0400295	308,355	231,266
Lewis County Health	G0400294	132,000	99,000
Lincoln County Health District	G0400277	30,000	22,500
Lincoln County Public Works	G0400307	141,699	106,274
Longview City of	G0400281	61,120	45,840

## Weldcraft

### Coordinating Interim Action, Habitat Restoration and Redevelopment

*Written by Mary O'Herron –  
Bellingham Field Office  
Toxics Cleanup Program – Ecology*

The Port of Bellingham conducted an interim cleanup action at the Weldcraft site from September 2003 through February 2004, that included the dredging of contaminated marine sediment and the removal of an inactive marine railway and creosote pilings. The Port was awarded a 50% matching state grant from Ecology in the amount of \$910,294 for the cleanup portion of the work. A number of redevelopment activities were coordinated with the site cleanup without funds from the Toxics Control Account: these activities include restoration of historically lost habitat on the outside face of the breakwater for the Squalicum Harbor, and construction and repair to a pier, wharf, and bulkhead.



### Coordinated Prevention Grants

Coordinated Prevention Grants are awarded to local governments to prevent pollution from improper management and disposal of solid waste and moderate risk waste. The grant program runs on a two year cycle, with Fiscal Year 2004 being the first year of the current cycle. The Coordinated Prevention Grant cycle began on January 1, 2004, and ends December 31, 2005. In the first year's grant cycle, \$17,392,409 was awarded in 121 grants to Washington cities, counties, and public health jurisdictions. These grants will leverage \$23,189,874 in solid and moderate risk waste projects by local governments who provide twenty five percent (25%) of the costs. Table 5 contains a list of the Coordinated Prevention Grant recipients for the first year of the grant cycle.

# Toxics Cleanup Program

## Department of Ecology: Toxics Cleanup Program Remedial Action Grants

The administrative and accounting functions of the Remedial Action Grants program are administered by the Solid Waste and Financial Assistance Program. Based on site clean up criteria and decisions made by the Toxics Cleanup Program, staff awards grants to local governments to clean-up publicly owned contaminated sites and related work.

Approximately \$26.3 million in funds were allocated by the Legislature for local government grants during the period July 1, 2003, through June 30, 2005. The funds are intended to be distributed during the biennium for various grant activities as follows:

- ⑦ Seven (7) local governments received grants to study and clean up publicly-owned contaminated sites;
- ⑦ \$350,000 was transferred to the Office of Superintendent of Public Instruction to support the Governor's commitment to conduct the states elementary school water sampling (lead) program;
- ⑦ Seventeen (17) county health departments received grants to continue or begin investigating contaminated sites and preparing Site Hazard Assessments, including drug labs and the Tacoma Smelter Plume site;
- ⑦ Fourteen (14) local governments received grants to conduct independent clean ups at publicly-owned sites and enter the Voluntary Cleanup Program;
- ⑦ Port of Ridgefield received a loan to pay their 25 percent grant match.
- ⑦ \$6,126,320 was awarded as amendments to existing projects.

See Table 6 for a list of awards in fiscal year 2004. See Figure 12 for categories of awards.

Table 5: Coordinated Prevention Grants - Fiscal Year 2004 cont.

Recipient	Grant Number	Total Project & Amount	Grant \$ Amount
Lynnwood City of	G0400150	43,733	32,800
Maple Valley City of	G0400193	23,217	17,413
Marysville City of	G0400178	35,487	26,615
Mason County Health	G0400240	132,000	99,000
Mason County Utilities	G0400324	105,167	78,875
Mason County	G0400320	64,457	48,343
NE Tricounty Health District	G0400260	96,625	72,469
Newcastle City of	G0400159	13,272	9,954
Normandy Park City of	G0400206	58,259	43,694
Okanogan County Public Health	G0400190	132,000	99,000
Okanogan County Public Works	G0400248	230,904	173,178
Pacific City of	G0400160	9,199	6,899
Pacific County Department of Community Development	G0400244	132,000	99,000
Pacific County Department of Community Development	G0400323	166,756	125,067
Pend Oreille County	G0400356	145,520	109,140
Pierce County Solid Waste	G0400322	1,074,991	806,243
Port Angeles City of	G0400376	51,190	38,393
Port Angeles City of	G0400327	61,451	46,088
Public Health Seattle & King County	G0400183	132,000	99,000
Public Health Seattle & King County	G0400211	1,445,541	1,084,156
Redmond City of	G0400202	61,749	46,312
Renton Solid Waste Utility	G0400246	79,676	59,757
Sammamish City of	G0400203	51,767	38,825
San Juan County Health	G0400184	125,000	93,750
San Juan County Public Works	G0400176	145,000	108,750
SeaTac City of	G0400171	38,176	28,632
Seattle Public Utilities	G0400253	1,023,637	767,728
Shelton City of	G0400319	66,667	50,000
Shoreline City of	G0400245	70,817	53,113
Skagit County Health	G0400182	152,000	114,000
Skagit County	G0400179	368,000	276,000
Skamania County Health District	G0400288	132,000	99,000
Skamania County Solid Waste	G0400290	140,981	105,736
Skykomish Town of	G0400170	1,647	1,235
Snohomish County Public Works	G0400174	1,272,095	954,071
Snohomish Health District	G0400181	256,000	192,000
Snoqualmie City of	G0400173	7,459	5,594
Spokane Regional Health District	G0400261	132,000	99,000
Spokane Regional Solid Waste	G0400342	1,133,977	850,483
Stevens County Public Works	G0400353	348,703	261,527
Sultan City of	G0400210	5,031	3,773
Tacoma City of	G0400282	508,000	381,000
Tacoma-Pierce County Health District	G0400280	266,172	199,629
Tacoma-Pierce County Health District	G0400296	132,000	99,000
Thurston County Health	G0400239	132,000	99,000
Thurston County Health	G0400278	312,231	234,173
Thurston County Water & Waste Management	G0400316	312,231	234,173
Thurston County Water & Waste Management	G0400369	50,000	37,500
Tukwila City of	G0400313	19,796	14,847
Wahkiakum County Health	G0400287	12,000	9,000
Walla Walla County	G0400268	30,000	22,500
Walla Walla Department of Community Development	G0400315	492,799	369,599
Whatcom County Public Works	G0400167	660,673	495,505
Whitman County Health District	G0400259	80,000	60,000
Whitman County Public Works	G0400328	214,315	160,736
Woodinville City of	G0400204	15,637	11,728
Yakima County Health District	G0400187	132,000	99,000
Yakima County Public Works	G0400205	654,797	491,098
<b>Total Coordinated Prevention Grants:</b>		<b>\$23,189,874</b>	<b>\$17,392,409</b>

# Other Activities

## Other Activities Funded with Local Toxics Control Account Dollars

### Department of Ecology: Toxics Cleanup Program

Remedial action grants are available to local governments for cleaning up publicly-owned contaminated sites and related work. Staff from the Toxics Cleanup Program oversees the cleanup of these sites to ensure the cleanup meets the requirements of the Model Toxics Control Act.

### Department of Ecology: Administrative Services

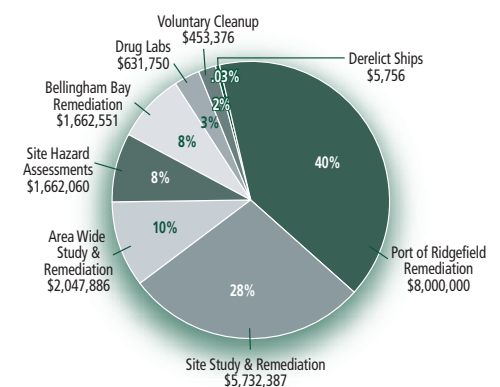
Administrative Services uses funds from the Local Toxics Control Account interchangeably across Ecology activities. These services provide the foundation from which Ecology is able to address its core environmental goals.

### Department of Ecology: Hazardous Waste and Toxics Reduction Program

- Providing Technical Assistance on Hazardous Waste-Derived Fertilizers

In fiscal year 2004, Ecology reviewed two hundred seventy (270) fertilizer product registration applications for the state of Washington. In addition to meeting the standards required by the Washington State Department of Agriculture for all fertilizers, fertilizers that contain waste materials must also meet compliance standards set by Ecology. Technical assistance provided to the public and other state agencies in a one-on-one format or via the Fertilizer Database on Ecology's web site is an important part of this activity.

**Figure 12: Categories of Remedial Action Grants**



**Table 6: Remedial Action Grants - Fiscal Year 2004**

Recipient	Grant Number	Total Project Cost	Local Toxics Control Account Amount
<b>Area Wide Study and Remediation</b>			
Kitsap County Health Department	G0400008	272,650	21,396
Seattle-King County Public Health	G0400087	1,174,447	1,174,447
Spokane Regional Health District	G0400114	136,750	136,750
Subtotal		1,583,847	1,332,593
Amendments to Previous Year Grants			715,293
<b>Total</b>			<b>2,047,886</b>
<b>Site Study and Remediation</b>			
Housing Authority/City of Everett	G0400349	2,553,382	1,000,000
Kitsap County Public Works	G0400100	316,000	55,300
Tacoma City of	G0400373	24,418	12,209
Warden City of	G0400362	101,000	75,750
Subtotal		2,994,800	1,143,259
Amendments to Previous Year Grants			4,589,128
<b>Total</b>		<b>2,994,800</b>	<b>5,732,387</b>
<b>Bellingham Bay</b>			
Bellingham Port of	G0400049	4,113,527	910,294
Bellingham Port of (Harris Ave.Shipyard grant)	G0400064	160,000	60,000
Subtotal		4,273,527	970,294
Amendments to Previous Year Grants			692,257
<b>Total</b>		<b>4,273,527</b>	<b>1,662,551</b>
<b>Derelict Ships</b>			
Tacoma, City of	G0400103	50,000	5,756
<b>Total</b>			<b>5,756</b>
<b>Drug Labs</b>			
Kitsap County Health Department	G0400008	272,650	53,000
Chelan-Douglas Health District	G0400090	71,175	15,000
Grays Harbor County Public Services	G0400089	15,000	15,000
Island County Health Department	G0400088	85,000	6,250
Lewis County Public Health & Social Services	G0400091	86,000	20,000
Skagit County Health Department	G0400092	52,200	20,000
Snohomish County Health District	G0400093	267,000	70,000
Spokane Regional Health District	G0400267	150,000	95,000
Tacoma-Pierce County Health Department	G0400029	1,078,000	245,000
Whatcom County Health Department	G0400094	144,760	10,000
Yakima County Health Department	G0400043	37,500	37,500
Subtotal		2,259,285	586,750
Amendments to Previous Year Grants			45,000
<b>Total</b>			<b>631,750</b>
<b>Site Hazard Assessments</b>			
Kitsap County Health Department	G0400008	272,650	169,175
Chelan-Douglas Health District	G0400090	71,175	56,175
Island County Health Department	G0400088	85,000	78,750
Lewis County Public Health & Social Services	G0400091	86,000	66,000
Skagit County Health Department	G0400092	52,200	32,200
Snohomish County Health District	G0400093	267,000	152,000
Spokane Regional Health District	G0400267	150,000	55,000
Tacoma-Pierce County Health Department	G0400029	1,078,000	833,000
Whatcom County Health Department	G0400094	144,760	134,760
Subtotal		2,206,785	1,577,060
Amendments to Previous Year Grants			85,000
<b>Total</b>			<b>1,662,060</b>
<b>Ridgefield</b>			
Ridgefield Port of (grant)	G0400045	5,200,000	5,200,000
Ridgefield Port of (loan)	L0400002	2,800,000	2,800,000
<b>Total</b>		<b>8,000,000</b>	<b>8,000,000</b>
<b>Voluntary Cleanup Actions</b>			
Franklin Pierce School District	G0400101	75,324	37,662
Franklin Pierce School District	G0400102	200,000	100,000
Mount Vernon School District	G0400213	47,191	23,345
Oak Harbor School District #201	G0400334	74,188	37,094
Olympia Port of	G0400212	200,000	100,000
Pierce County Fire District #3	G0400233	200,000	100,000
Walla Walla Public Schools	G0400166	24,030	12,015
Yakima, City of	G0400108	57,680	43,260
<b>Total</b>		<b>878,413</b>	<b>453,376</b>
<b>Total of Remedial Action Grants</b>			<b>20,195,766</b>





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