Model Toxics Control Account

Fiscal Year 2007 Annual Report

Ecology Publication No. 07-09-098

Foreword

The Model Toxics Control Act defined those toxic substances that pose greatest risk to human and environmental health. The Act created a mechanism for funding cleanup of environmental contamination.

The people who wrote this law recognized that we could never complete environmental cleanup, until we stop generating waste.

Waste is part of the cycle of all life—for plants and animals as well as for people. But our species creates some wastes—especially hazardous substances—that disrupt the cycle…

Inside this report you'll find examples of projects we—state and local government entities—conducted during fiscal year 2007, to control the volume and hazards of wastes in Washington state.

Our work helps pay our collective and individual "solemn obligation" to each other and the generations to follow…

--the Editor

Before (Squalicum Harbor structural removal project, Bellingham)

The Model Toxics Control Act

RCW 70.105D.010 – Declaration of policy.

(1) Each person has a fundamental and inalienable right to a healthful environment, and each person has a responsibility to preserve and enhance that right. The beneficial stewardship of the land, air, and waters of the state is a solemn obligation of the present generation for the benefit of future generations.

(2) The main purpose of Chapter 2, Laws of 1989 is to raise sufficient funds to clean up all hazardous waste sites and to prevent the creation of future hazards due to improper disposal of toxic wastes into the state's land and waters.

Front cover: "Squalicum Harbor, Bellingham" after the structural removal

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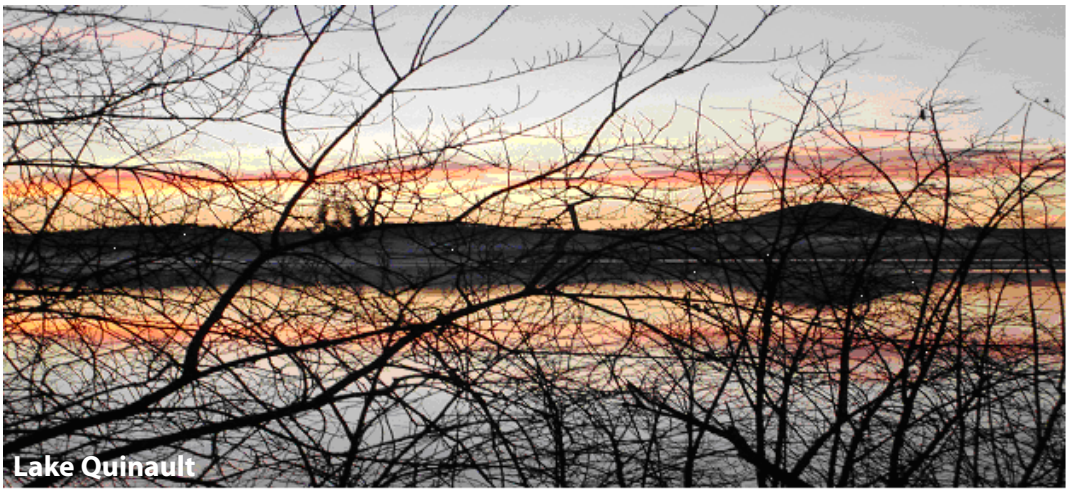
Washington State Department of Ecology

Mission Statement: 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.


Lake Quinault

Purpose of this Report

The purpose of this report is to provide a review of the last fiscal year's uses of both Toxics Control Accounts. The legislature appropriates dollars from the *State Toxics Control Account* to agencies to fund toxic cleanup projects, hazardous substance control, and waste reduction and recycle campaigns. Local Toxics Control Account funding helps local governments clean up contaminated sites in the community and supports waste reduction and recycling systems; local governments obtain Local Toxics Control Account funding through Ecology's grant or loan programs.

This Report offers snapshots of our environmental stewardship of the environment—work that affects the economic well-being and the quality of life in our state. These snapshots show how each investment served the people and the environment of our state during the period between July 1, 2006 and June 30, 2007.

This report includes the amount of revenue generated, which governments received funding, how much money was allocated, and how the funds were spent. The first part will focus on accomplishments from the State Toxics Control Account. The second part will focus on the Local Toxics Control Account.

Message from the Director

Washington's citizens spoke clearly about their vision and strongly about their mandate for environmental protection and cleanup.

During fiscal year 2007, our work to fulfill their vision continued under the Model Toxics Control Act. The fiscal year 2007 Model Toxics Control Account Report details how state and local governments put money to work on the ground and in the waters of our state. We collected money—primarily through the Hazardous Substance Tax on petroleum and other products—and invested it in projects that prevent toxic threats and that promote a cleaner, greener Washington to compete in the global economy.

Rising oil prices made more money available for projects to reduce toxic pollution and threats to human and environmental health. The increased revenue supported our efforts to prevent new toxic chemicals from polluting our air, water, and land; and it boosted attempts to clean up a huge backlog of contaminated sites. We also invested more resources toward cleaning up major state waterways such as the Columbia and Spokane rivers, and the Puget Sound.

We passed about 60 percent of this money to local governments in grants and loans: Department of Ecology staff worked with local entities to reduce health risks posed by diesel emissions and wood smoke, to remove and replace contaminated soil on playgrounds, and to fund wastewater treatment plants. We helped them improve solid waste management and recycling services, we pre-positioned rapid response oil spill equipment in smaller communities, and we addressed other local environmental challenges.

We mostly focused on protecting people – especially our children – from threats posed by toxic chemicals. These toxics invade our air, our water, and our soil; they lurk in the products we buy and use at home or at work. Pound-for-pound, children breathe more air, drink more water, and eat more food than adults do. So we focused on kids just being kids during 2007 -–putting their hands in their mouths, playing with pets or toys, rolling on the ground, not washing their hands— because our children were exposed to toxics in ways that adults weren't.

Preventing pollution and protecting and preserving our shared environment required the dedication and expertise of several state agencies. This report describes those environmental programs carried out by the following state agencies:

- The Department of Ecology – Managed hazardous materials, reduced toxics, and recycled solid wastes; responded to spills and prevented others; and removed known contaminants from the environment.
- The Department of Health – Implemented programs and activities to prevent harm to human health from exposures to toxic substances.
- The Department of Agriculture -- Worked with farmers to reduce (and eventually stop) storing and using banned pesticides.
- The Washington State Patrol – Helped first responders learn strategic responses to hazardous materials incidents and to combating special fuels fires.

We partnered with local governments, industries, and commercial enterprises; and with interested communities to clean up contamination, protect resources, and maintain healthy environments for ourselves, our children, and our competitive economy. And, of course, we worked to fulfill our citizens' shared vision for a healthier environment and healthier people.

Jay J. Manning, Director,
Washington State Department of Ecology

Citizens Initiative

The citizenry passed Initiative 97 mandating toxics waste cleanup in Washington. In March of 1989, the law known as the Model Toxics Control Act went into effect---changing the way hazardous waste sites in this state are cleaned up.

History of the Model Toxics Control Act

The Model Toxics Control Act became law in 1989 following voter's acceptance of Initiative 97.

The purpose of the state's cleanup law is to:

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

The law authorizes the creation of two accounts:

(1) State Toxics Control Account.

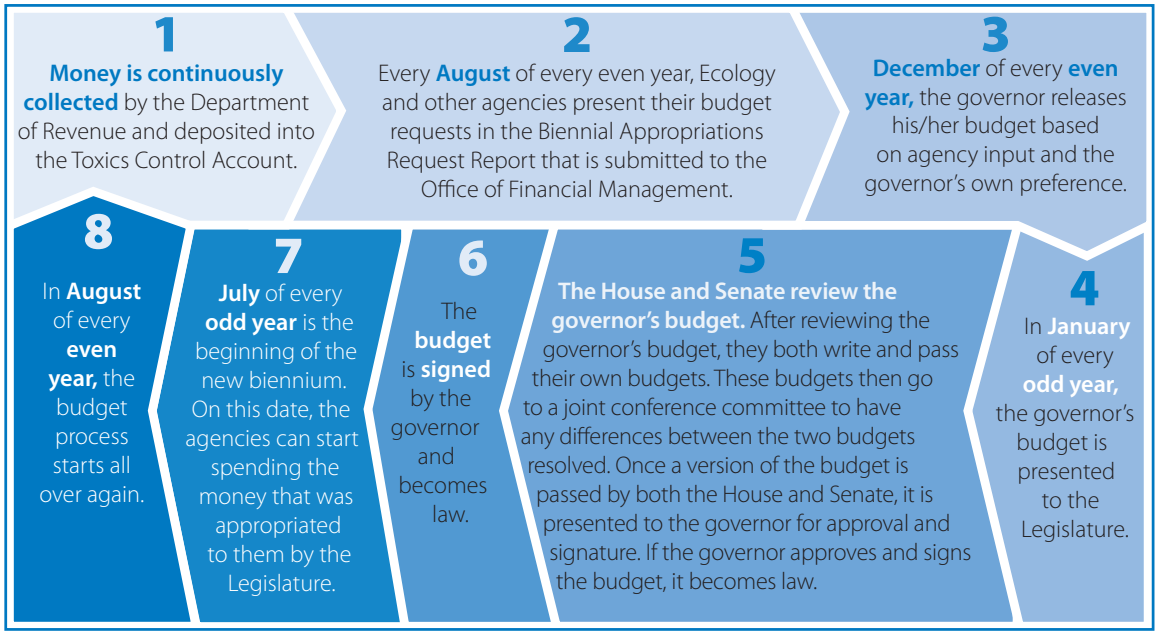
(2) Local Toxics Control Account.

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. See Figure 1 on how state agencies receive appropriations from the Toxics Control Accounts.

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 state agencies receive appropriations from the Toxics Control Account.



PART 1 –
State Toxics Control Account

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

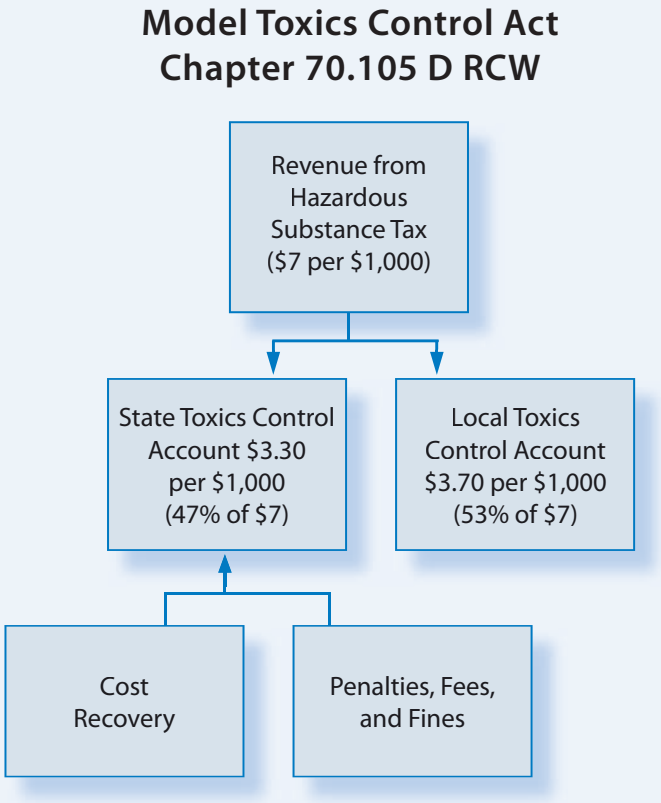
- Clean up contaminated sites.
- Improve the management of hazardous wastes.
- Prevent future contamination from hazardous substances.

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

- Cost Recovery for cleanups under Decree or Order. Ecology recovers its expenditures or obtains reimbursement for its costs of providing cleanup oversight and approval for the cleanup of contamination at properties under a decree or order.
- Cost Recovery for Technical Assistance and Voluntary Cleanup. Ecology collects its costs from persons who submitted a request for Ecology's services to review a planned or completed cleanup action and Ecology provides a determination of Further Action or No Further Action.
- Fines & Penalties. Ecology issues fines and penalties to liable parties who have not complied with the state's cleanup law.
- Mixed Waste Fees. Ecology collects fees from facilities that manage mixed waste.

See Figure 2 for an illustration on revenue sources.

Figure 2: Revenue sources to the Toxics Control Accounts



Jetty Island

Appropriations - State Toxics Control Account

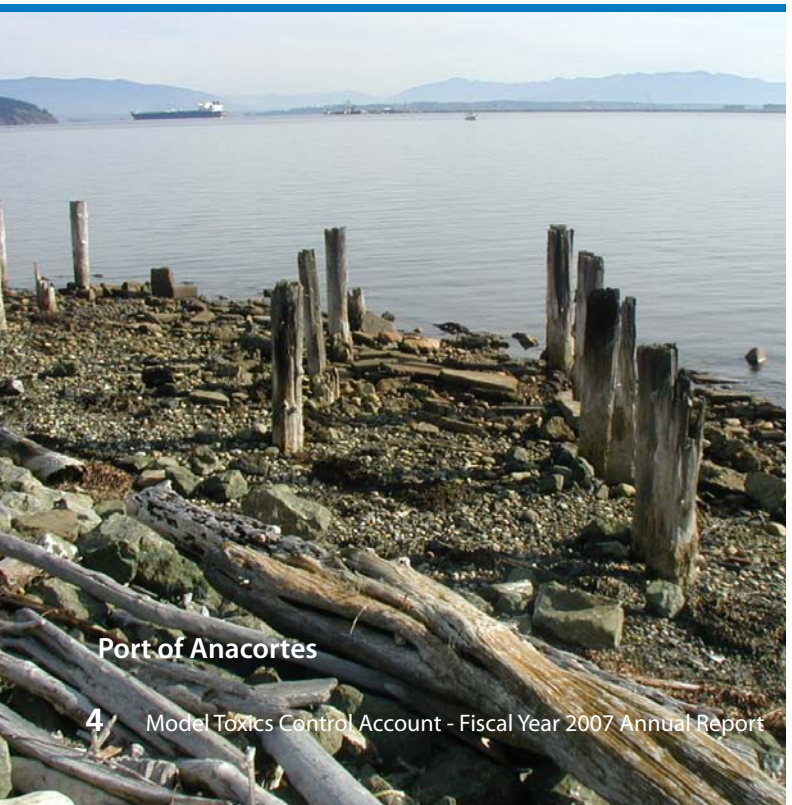
In Fiscal Year 2007, the following agencies all received funds from the State Toxics Control Account:

- Department of Ecology.
- Department of Health.
- Department of Agriculture.
- Department of Revenue.
- Department of Natural Resources.
- Washington State Patrol.
- University of Washington.
- State Parks and Recreation Commission.

This report contains a brief narrative on each agency's or program's accomplishments with funding provided by the State Toxics Control Account in Fiscal Year 2007. Details on how the funds were spent are provided in Tables 2 and 3.

Table 1 - Revenue - State Toxics Control Account Fiscal Year 2007

Revenue Source	Revenue	Percent %
Hazardous Substance Tax	53,370,935	84%
Mixed Waste Fees	5,426,041	9%
Cost Recovery	3,711,397	6%
Miscellaneous	14,878	< .5%
Voluntary Cleanup Program Fees	406,586	1%
Fines & Penalties	443,504	1%
Total Revenue	**$63,373,341**	**100%**



Port of Anacortes

Table 2 - Expenditures - Ecology State Toxics Control Account Fiscal Year 2007

Ecology Programs	Expenditures	Percent %
Toxics Cleanup Program	16,469,598	29%
Hazardous Waste & Toxics Reduction Program	7,310,720	13%
Agency Administration, Facility, & Related Costs	5,157,642	9%
Nuclear Waste Program	4,586,581	8%
Solid Waste & Financial Assistance Program	3,041,724	5%
Spill Prevention, Preparedness, & Response Program	3,979,284	7%
Environmental Assessment Program	2,007,007	4%
Water Quality Program	1,959,898	3%
Shorelands and Environmental Assistance	87,660	< .5%
Capital Program	11,478,077	20%
Total Ecology Expenditures	**$56,078,191**	**100%**

Table 3 - Expenditures - Other State Agencies - State Toxics Control Account Fiscal Year 2007

Other State Agencies	Expenditures	Percent %
140 Department of Revenue	36,900	< .5%
225 Washington State Patrol	246,615	3%
303 Department of Health	1,555,539	19%
360 University of Washington	2,025,125	24%
465 Department of Parks and Recreation	467,777	6%
490 Department of Natural Resources	2,111,939	25%
495 Department of Agriculture	1,944,285	23%
Total Other Agency Expenditures	$8,388,180	100%
Grand Total - All State Agencies	**$64,466,371**	**100%**

Figure 3: State Toxics Control Account Revenue - Fiscal year 2007

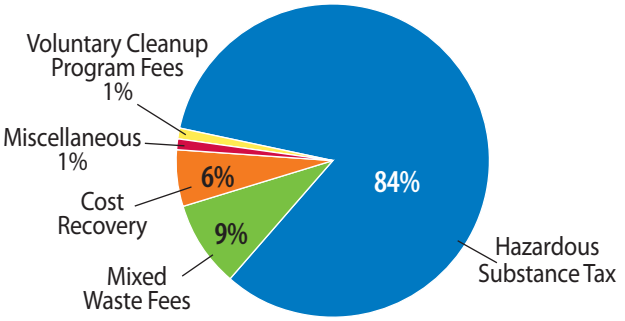


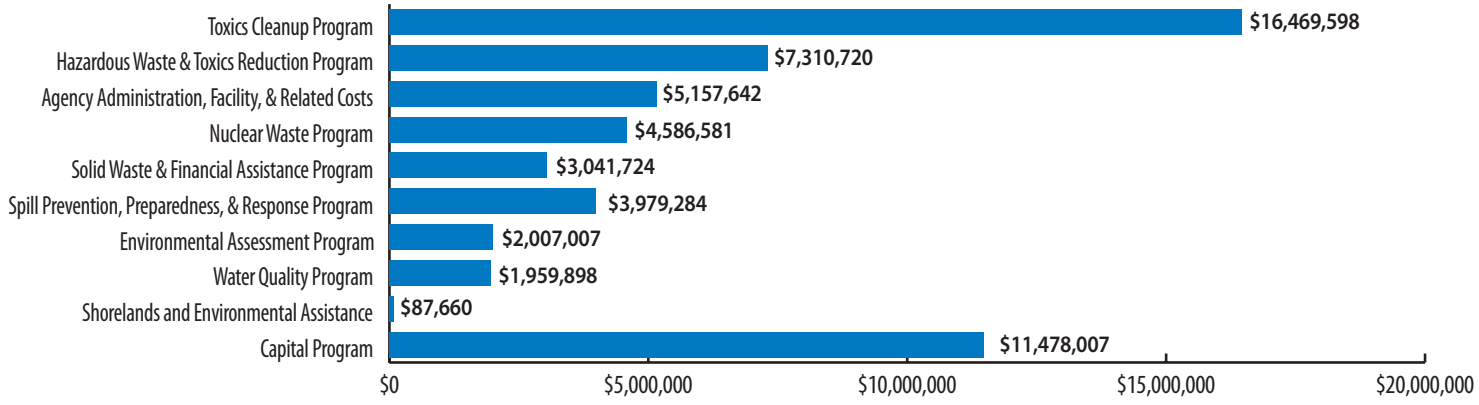
Table 4: Top 25 Cost Recovery Sites for Fiscal Year 2007. Listed in descending order.

Site Name	Amount
BNR Skykomish	496,831.69
Scott Paper Mill-Anacortes	185,462.80
ITT Rayonier-Pt. Angeles	164,085.26
BEI Philip Kent Facility	133,534.37
Lower Duwamish Waterway	122,724.91
SMC/Cadet Site	118,830.28
Occidental Chemical	115,838.58
Lilyblad Petroleum	109,914.86
North Lake Union Sediments	75,389.23
Aluminum Recycling	69,425.81
Whatcom Waterway	63,552.83
Lehigh Portland Cement Co.	63,358.83
GE Aviation	63,222.38
BEI/Philip - Georgetown	62,308.45
J H Baxter & Co. Inc.	57,130.69
Briggs Nursery, Inc.	55,566.25
Hytec Littlerock	52,422.29
Spokane River	42,839.38
Boeing Auburn	40,595.89
Little Squalicum Park	37,316.43
Terminal 91 Tank Farm	33,838.15
ST Services	32,145.46
Pacific Wood Treating	31,154.90
BEI Washougal	29,047.71
Tacoma Landfill	28,633.08
Total	**$ 2,285,170.51**

What are toxic substances?

Chemicals and naturally occurring substances that can harm people, animals and the environment are considered toxic. Some household products, like cleaners or yard chemicals, can pose an immediate health threat and require medical treatment if swallowed. However, most toxic substances get into your bodies more gradually. In some cases, our bodies can eliminate these materials without much delay or difficulty. Other substances not only stay in our bodies but continue to build up to harmful levels.

Figure 4: State Toxics Control Account Expenditures - Fiscal Year 2007



Toxics Cleanup Program

Program Mission: The mission of the Toxics Cleanup Program is to remove and keep contaminants out of the environment.

Environmental Threats

The Toxics Cleanup Program has identified over 10,000 toxics-contaminated sites since the mid-1980s. Over half of these sites were the result of underground storage tanks leaking into the environment and contaminating the soil and/or groundwater. Of the 10,000 contaminated sites, 58 percent require no further cleanup action, and 23 percent are in the process of being cleaned up.

The Program protects public health and natural resources by cleaning up and managing contaminated upland sites and contaminated sediments in the aquatic environment. Our resources are first focused on cleaning up contaminated sites that pose the greatest risk to public health and the environment. These include sites where contamination:

- Threatens drinking water.
- Exists in a large quantity.
- Is very toxic.
- May affect a water body or the environmental health of sediments.
- May affect people that are living, working, or recreating near the site.

Contamination may be in the soil, sediments, groundwater, air, drinking water, and/or surface water.

Focused Response

Contamination at each site is unique and can pose a different type and level of risk to public health and the environment. Cleanup efforts are first focused on high-priority sites. These sites are comprised of Superfund sites and sites Ecology has ranked 1 or 2 using the hazard ranking system. Under Washington's hazard ranking system, "high-priority" is determined by:

- Amount of contaminants.
- Type of contaminates.
- How easily the contamination 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.

Figure 5: Known and suspected contaminated sites (As of July 23, 2007) **Total Sites: 10,575**

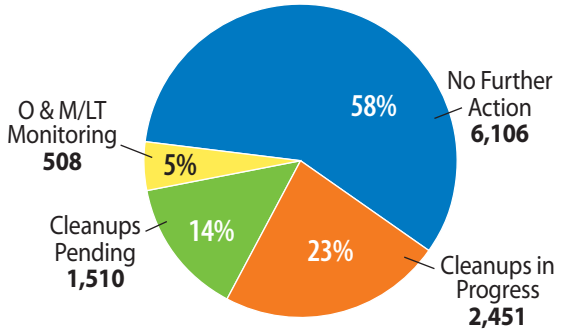
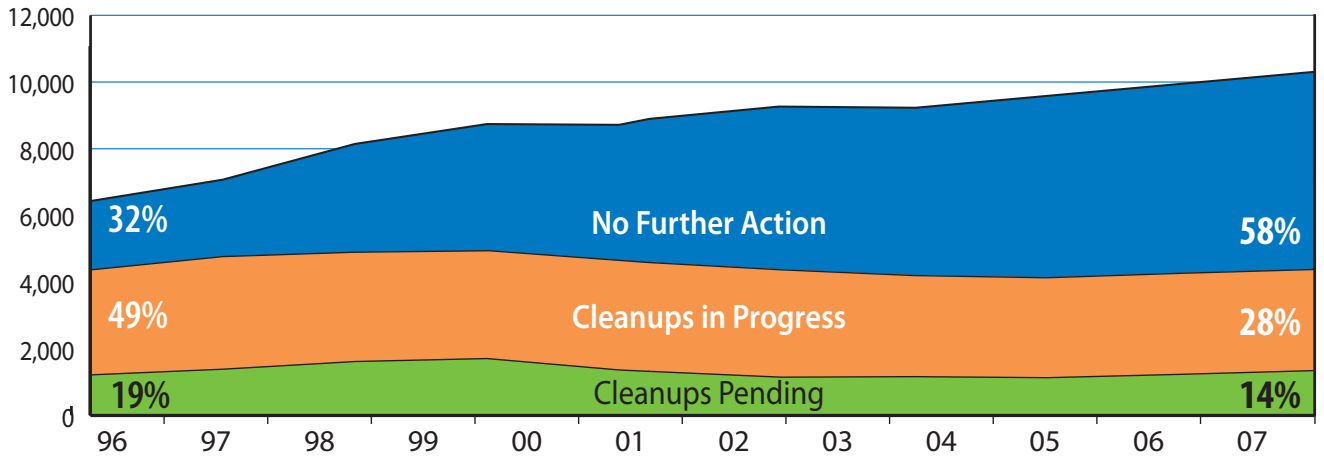


Figure 6: Cleanup trends of known and suspected contaminated sites (As of July 23, 2007)



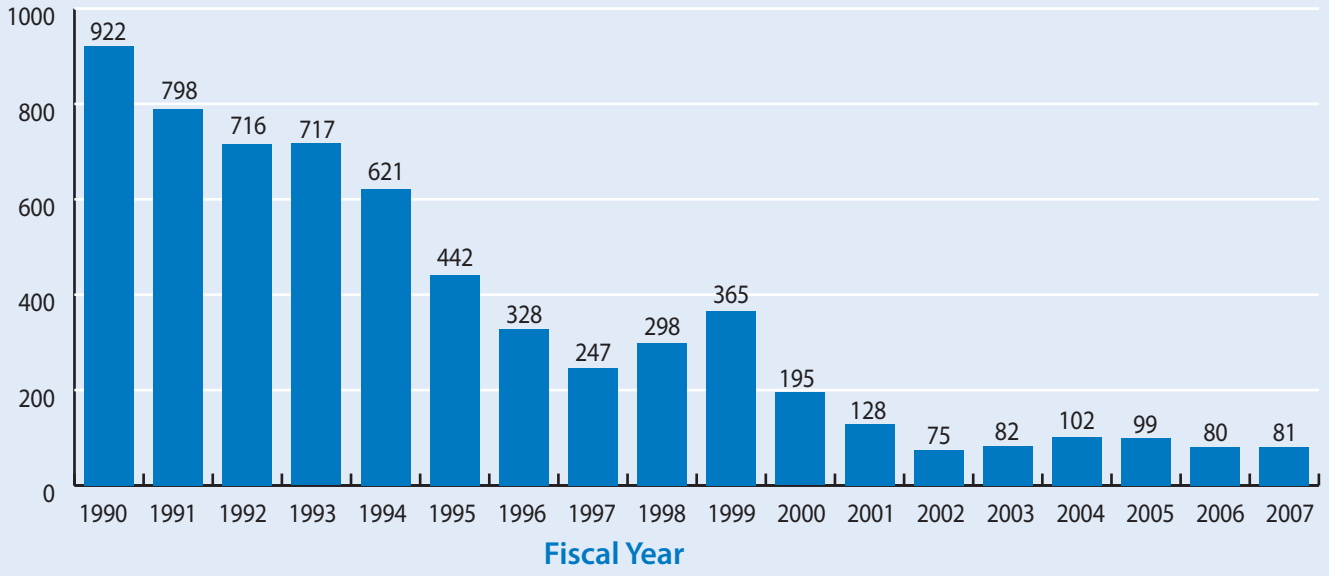
Hazardous Sites List

The Hazardous Sites List includes all 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 which can be found at http://www.ecy.wa.gov/programs/tcp/mtca_gen/hazsites.html.

Prevention

Ecology currently regulates nearly 10,000 active storage tanks in or on properties such as gas stations, industries, commercial properties and government entities. Our permitting process ensures that tanks are installed, managed, and monitored in accordance with federal standards and in a manner that prevents releases into the environment. Properly managing underground storage tanks saves millions in cleanup costs and prevents contamination of limited drinking water and other groundwater resources.

Figure 7: Number of underground storage tank releases (As of July 23, 2007)



Voluntary Cleanup Program

The Voluntary Cleanup Program is best suited for routine or less complex cleanups. These would be cleanups where the sources of contamination and cleanup technologies are easily identified. The majority of voluntary cleanups have been related to petroleum contamination from leaking underground storage tanks.

A person may enter the Voluntary Cleanup Program by submitting a cleanup report to the Program. Staff will review the report and provide a site determination such as further action needed or no further action. Since October 1997, 1,532 contaminated sites have been cleaned up voluntarily, and another 850 are in the process of being cleaned up.

High interest in the Voluntary Cleanup option had created a challenge for the Program. An increase in real estate transactions was beginning to form a backlog in requests for technical assistance. By the end of this fiscal year, the Program had made several operational changes to reduce the backlog and to consistently respond to requests in a timely manner. The Voluntary Cleanup Program provides high value to human health and the environment in that a large number of often lower-priority sites are cleaned up. There are also large economic and community benefits as these contaminated lands are recycled back into productive use.

Toxics Cleanup Program
Capital Budget


Spokane River at Barker Road (Spokane Area Metals Cleanup Project) – Bruce Andre photography

The Washington State Capital Budget provides funding for activities such as public works projects and building structures. Capital Budget projects must be completed by the end of the two-year Capital Projects funding cycle.

In the Toxics Cleanup Program, the capital budget was used to provide cleanups of contaminated lands. These large-scale public works projects included cleanups on state-owned aquatic lands and uplands within a half-mile of Puget Sound, and cleanup actions for lead and arsenic contamination at schools and playgrounds. These projects included:

- Safe Soils Initiative (cleanups at schools and playgrounds).
- Spokane Area Toxics Cleanup.
- Everett Asarco Cleanup.
- Cleanup Toxics Sites - Puget Sound.
- Upland/Aquatics Toxics Cleanup.

These projects are described in more detail below.

Safe Soils Remediation and Awareness

Environmental Threat

In 2001, an area-wide soil contamination Task Force was formed to address special problems posed by the discovery of wide-spread, low-level, lead and arsenic contamination. The contamination represented decades of emissions from commercial enterprises—such as metals smelters and from agricultural pesticide applications. In 2005, the Legislature passed ESHB 1605, directing the Department of Ecology to implement the findings from the Task Force.

The immediate concern was exposure to children. Children exposed to lead and arsenic contaminants face a greater risk of adverse health effects than adults due to their smaller size and faster metabolisms.

Focused Response

The Task Force recommended that government conduct soil sampling, followed closely by soil cleanups or other remedial actions to minimize children's exposures. The members recommended that Ecology focus sampling efforts at school play-grounds, in parks, or around daycare centers—wherever groups of children have access or exposure to dirt and soil. The Task Force advised Ecology staff to focus in areas of Pierce, King, Snohomish, Yakima, Chelan, Okanogan, Stevens and Spokane Counties where historical zoning and land uses showed industrial and agricultural production.


Heritage Christian, Tacoma

Table 5: Safe Soils Actions in 2007

School or Daycare	City	Amount
Bridgeport Schools Site	Bridgeport	502,998
Brigadoon	Federal Way	14,134
Cascade View	Tukwila	17,858
Chautauqua Elementary/Admin Office Garden	Vashon Island	75,116
Green Gables	Federal Way	1,902
Heritage Christian	University Place	45,054
Orondo Elementary School	Orondo	407,124
Skyline Montessori	Tacoma	59,286
Starbreak	Vashon Island	50,021
Sunset Primary	University Place	14,394
Grand Total		**$1,187,887**

A cleanup site at Spokane River

Spokane Area Metals Cleanup

Environmental Threats

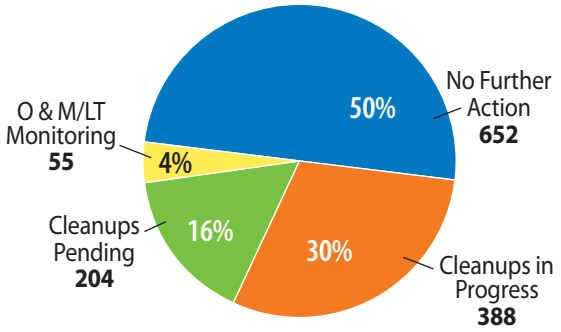
Historical mining practices in Idaho's Coeur d'Alene basin resulted in soil and sediment contamination washing along the shoreline of the Spokane River in Washington. From the Idaho state line to Spokane's Upriver Dam, concentrations of lead, arsenic, cadmium, zinc, and other heavy metals exceed levels safe for human health and the environment.

Focused Response

Ecology and U.S. E. P. A. prioritized cleanup at nine recreational areas through this reach of the River: Starr Road, Island Complex, Murray Road, Harvard Road North, Barker Road North and South, Flora Road, Myrtle Point, and the Islands Lagoon. Ecology and the EPA chose these locations for prompt remediation based on their individual contamination levels, recreational uses, and ecological significance.

The state legislature appropriated money so Ecology could accelerate site cleanup activities. Cleanup actions at Island Complex, Murray Road, and Harvard Road North, currently lead the progress. Ecology also added more sampling and characterization studies at Barker Road South, Flora Road, Myrtle Point, and the Islands Lagoon. The EPA completed cleanup at Starr Road in September 2006 with Ecology's assistance. The city of Spokane Valley will likely complete cleanup at Barker Road North in conjunction with its construction of a new bridge there.

Figure 8: PSI* known and suspected contaminated sites (As of July 23, 2007) **Total Sites: 1,299**



*PSI=Sites within 1/2 mile of Puget Sound or in the water

Puget Sound Initiative (PSI) Cleanup Sites

For nearly two decades, the Toxics Cleanup Program identified and addressed contaminated sites in the Puget Sound area. As petroleum prices rose, greater tax revenues flowing into those accounts allowed us to expand our efforts toward cleanup, restoration, and protection of the bays within the Sound.

Through the Puget Sound Initiative, additional efforts focused on those sites within one-half mile of Puget Sound. Staff reviewed these sites and prioritized them for additional cleanups based on their proximity to the Sound and their threat to human health and the environment. Collaboration among local, tribal, state, and federal governments, along with business and environmental interests has been key.

The highest priority Puget Sound bays that were selected are:

- Fidalgo/Padilla Bays
- Budd Inlet
- Port Gardner/Snohomish River Estuary
- Oakland Bay, Shelton
- Port Angeles Bay-wide
- Port Gamble/Kitsap Peninsula and Bremerton
- Dumas Bay

Early actions that will occur in these bays will:

- Protect and restore valuable shellfish and marine resources.
- Improve critical habitat.
- Protect human health.

Program staff designed a "bay-wide" or geographic approach to the cleanup of these sites. This is allowing faster cleanups than the traditional site-by-site cleanup method. This approach will result in larger areas of cleaned up and restored shoreline habitat for fish, wildlife, and people. Following are activities from two of the priority bays-Fidalgo/Padilla Bays and Budd Inlet.

Fidalgo and Padilla Bays

Environmental Threats

Fidalgo and Padilla Bays are part of the seven priority bays identified for early cleanup and restoration actions under the Puget Sound Initiative. The contaminants of concern found at these sites include dioxins, petroleum hydrocarbons, and polychlorinated biphenyls (PCBs); metals (including mercury), sulfides, and ammonia; phthalates, and polycyclic aromatic hydrocarbons—contaminants toxic to both human and aquatic life. Mercury, PCBs and dioxins can be toxic to fish and shellfish, but they can also build up in fish tissue—posing a risk to humans who eat them. We also found wood waste, which is harmful to the aquatic habitat. When wood waste builds up in the aquatic environment, it can harm productive near-shore habitat that sustains life such as shellfish, forage fish, and salmonids.

Focused Response

Ecology designed a comprehensive bay-wide sediment investigation. We began planning and negotiating with the Samish Indian Nation to conduct a Remedial Investigation and Feasibility Study for replacing the rock causeway that bisects and impacts Fidalgo Bay. We also negotiated with the Port of Anacortes for a plan to remove the "Enchantress", a derelict vessel.

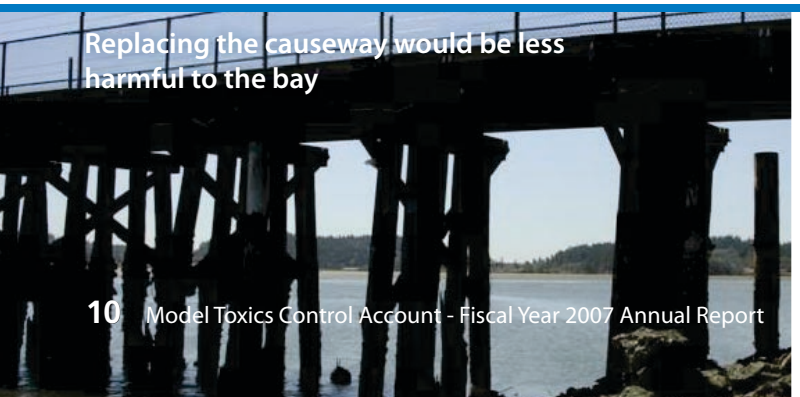
Increased efforts for this area also include:

- Carrying out existing Agreed Orders.
- Issuing Potentially Liable Party notices.
- Completing in-progress site assessments and field studies.
- Negotiating new Agreed Orders at five sites.
- Beginning the Remedial Investigation and Feasibility Study process at these sites.

Sediment Investigation

Ecology's summer 2007 extensive sediment investigation of Fidalgo Bay helped us by:

- Informing cleanup priorities.
- Finding any new areas needing cleanup.
- Discovering the sources and extent of contamination throughout the bay.
- Providing information for human health assessments.



Replacing the causeway would be less harmful to the bay

Enchantress poses hazards to the bay

This investigation included sampling surface sediments and cores, and testing tissue taken from area clams, crabs, and fish. We expect to complete the final report by the end of 2008 and make it available in print and on line.

Next steps

Immediate next steps include:

- Publishing the completed bay-wide sediment investigation report.
- Signing Agreed Orders to define and compel formal Remedial Investigation & Feasibility Studies.
- Completing an interim action removing more contaminated sediments from a Port site.
- Completing the negotiations to remove the derelict vessel.

Figure 9: Locations of Cleanup Sites and Projects in Fidalgo and Padilla Bays.

Figure 10: Locations of Cleanup Sites in **Budd Inlet**

Budd Inlet

Environmental Threats

Ecology identified Budd Inlet as a priority embayment for cleanup and restoration under the 2006 Puget Sound Initiative. This happened after the Port of Olympia discovered elevated levels of dioxins in sediments in an area scheduled for maintenance dredging.

The investigations found chemical contaminants that can be toxic to both human and aquatic life—such as dioxins, petroleum hydrocarbons, and polychlorinated biphenyls; and metals, phenols, and polycyclic aromatic hydrocarbons. Most likely, storm-water runoff contributed to dioxin contamination to the Inlet, or resulted from historical industrial uses of the shore areas. Ecology also found wood waste that depletes aquatic life by harming essential habitat.

Focused Response

We responded by launching an extensive baywide investigation of the sediments, during the spring of 2007. In addition to the sediment investigations, Ecology accelerated work on cleanup projects throughout the Inlet. We focused on seven cleanup sites in various stages of negotiation and planning, to speed progress on current cleanup actions and on implementing new enforcement cleanup actions. Our increased efforts include carrying out existing Agreed Orders, and completing Site Assessments in progress. We're negotiating new Agreed Orders at five sites, and beginning the Remedial Investigation & Feasibility Study processes there.

Next steps

The next steps include:

- Focused sampling to define boundaries and help prioritize areas for cleanup.
- Continued cleanup of the seven sites throughout Budd Inlet.
- Finalizing formal Agreed Orders.
- Completing in-progress Remedial Investigations & Feasibility Studies.

We also plan to complete an interim action to remove contaminated sediments near the Port of Olympia's shipping berths, and work with the Port to adopt Best Management Practices, ensuring that future maintenance dredging will protect environmental and human health. This work will help reduce the overall risk of exposure to toxics for humans and the environment in Budd Inlet.

Hazardous Waste and Toxics Reduction Program

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

- **Foster sustainability.**
- **Prevent pollution.**
- **Ensure safe waste management.**

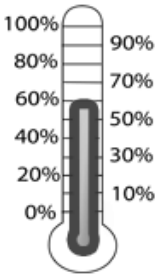
The Program's two primary objectives are to:

(1) Reduce the amount of hazardous waste generated.

(2) Prevent hazards due to improper management or disposal of hazardous wastes.

The State Toxics Control Account funds several major activities designed to accomplish the objectives.

Watch the Mercury Drop



Ecology and partners divert 12,000 pounds of mercury from environment; Don't toss that fluorescent bulb!

Take it back!

Reduced hazardous waste generation and toxic substances use

Prevention is the key to breaking the cycle of ongoing cleanups. Facilities that produce more waste have more chances to mismanage it. Hazardous waste can result in contamination that poses risks to human and environmental health, and so eventually it requires cleanup.

Ecology's Hazardous Waste and Toxics Reduction Program (HWTR) staff completed the following tasks in Fiscal Year (FY) 2007, under Model Toxics Control Act (MTCA) authority (Chapter 70.105D RCW), to prevent hazards:

1. Beyond Waste: In FY 2005, the Department of Ecology adopted "Beyond Waste," a 30-year plan to eliminate or recycle wastes. During FY 2007 we established multiple measures of Washington's progress toward reducing hazardous and solid wastes. The measures show how sustainable practices take root in Washington (e.g., green building, composting, recycling.) The Beyond Waste plan was developed-and work is performed jointly-by our HWTR Program and the Solid Waste Financial Assistance Program. We posted a full description of completed work and a list of performance measures related to Beyond Waste progress on-line at http://www.ecy.wa.gov/beyondwaste/
2. Mercury Chemical Action Plan (MCAP): The HWTR Program manages one of the nation's most robust efforts to reduce mercury pollution. We made industry-specific efforts in 2007 to collect mercury waste and to prevent its release into the environment. Our campaigns focused on mercury used in dental clinics and hospital equipment, and mercury switches for the auto recycling and construction industries. We worked to show them why and how to collect, and recycle or properly dispose of mercury wastes from amalgam, medical equipment, auto switches, thermostats and fluorescent lamps.

3. Technical assistance: We provided assistance -- innovative programs to reduce hazards and to avoid wasting resources. During site visits we offered business-specific waste prevention tips. We focused on improving the operations and maintenance in industries showing the highest rates of waste generation and non-compliance with waste control rules. We showed operators how to achieve energy savings, conserve water, and produce less hazardous waste. During FY 2007 we also used STCA funds to match a federal EPA grant; the joint funding allowed us to complete three "Lean & Green" pilot projects. Those pilot project participants worked through lean manufacturing methods and new practices within individual businesses, emphasizing environmental (resource) and expense savings.

Total FY 2007 STCA expenditures: $2,332,000

Technical Assistance visits to 289 businesses in higher-priority industries.

Total measurable results:

- 12,000,000 fewer pounds of hazardous waste generated than last year in Washington.
- 10,000 pounds of mercury collected.

Increased hazardous waste management safety:

Managing hazardous waste appropriately helps protect people and the environment, and it avoids the need to pay significant cleanup costs. HWTR's technical assistance staff made site visits to help business operators learn how to manage waste. Technical assistance visits increased the number of businesses that achieved and stayed in compliance with regulatory requirements. We visited new businesses to explain hazardous waste handling requirements and best management practices, and we began recycling agricultural pesticide containers.

Total FY 2007 expenditures = $1,700,000

180 Technical Assistance visits to start-up and existing businesses in higher-priority industries.

Increased compliance with requirements, reduced environmental threats

Our scheduled and unannounced inspections at facilities that generate or manage hazardous waste promoted compliance with state and federal regulations. Our credible, formal enforcement capability preserved the effectiveness of technical assistance and informal advisory efforts. While staff undertook formal enforcement infrequently, any facility's repeated refusal or inability to correct violations escalated to formal enforcement actions.

Total FY 2007 expenditures = $1,570,000

Technical staff performed 194 compliance inspections.

FY 2007 measurable results:

We resolved 298 significant hazardous threats to the environment.

Prevented hazardous waste pollution through permit restrictions, corrective action, or closure

Ecology wrote or modified permits we issued to facilities that treat, store, or dispose of hazardous waste (TSDs). Those facilities must operate in a manner that protects human health and the environment. HWTR staff managed cleanup actions at current or former TSD facilities contaminated with hazardous waste. Each such cleanup process moved through four steps:

(1) Discovery and identification.

(2) Investigation and scoping.

(3) Remedy design.

(4) Cleanup plan implementation.

These tasks take 10-to-12 years to complete, but we intend to complete cleanup at all existing TSD sites by 2020.

Total FY 2007 expenditures = $840,000

FY 2007 results:

- 72% average progress toward completion of 27 high-priority cleanup sites.
- 55% average progress toward completion of 16 medium-priority cleanup sites.

Improved community access to hazardous substance and waste information

HWTR's automated data systems intake, maintain /store, and report hazardous waste information. We retrieved and reported the data to individuals and businesses, to emergency responders, and to local government decision-makers. Our Website, printed materials, telephone help line, and quarterly newsletters, provided current hazardous waste information.

Total FY 2007 expenditures = $725,000

FY 2007 contacts:

- 400,000 visits (hits) to our hazardous waste information and data Websites.
- 17,000 responses to telephone calls from persons with hazardous waste management issues.

Program Administration

State and Local Toxics Control Account funds help pay for program infrastructure. These services provide the foundation from which Ecology is able to address the core mission and goals of the Model Toxics Control Act.

Program Administration include the following:

Administrative Services

Administrative Services includes information technology (desktop, network, applications, and data), facility and vehicle management, risk management, mail services, central records and public disclosure, and the library.

Communication and Education

Communication and education can play a major role in protecting and improving the environment. The Office of Communication & Education (C&E) seeks to support the Department of Ecology's mission and goals by employing communication, education, and outreach tools strategically and effectively.

Financial Services

Financial Services' mission is to manage the agency's financial resources and support agency planning so that environmental goals and strategic priorities are met.

Government Relations

Our office performs a variety of functions.

We coordinate all agency request legislation. We work with legislators, their staff, and Ecology employees to make sure our voice is heard during each legislative session.

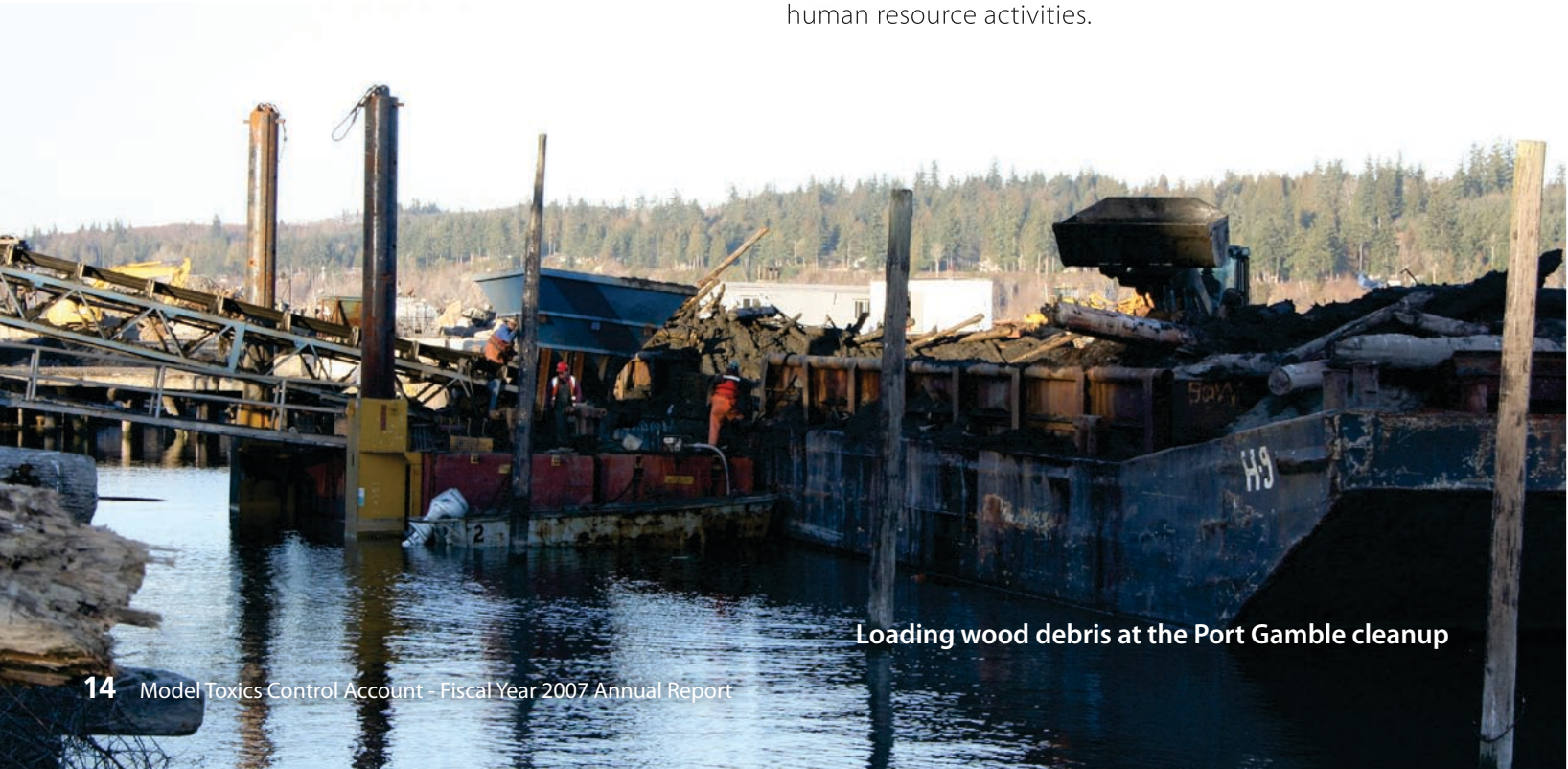
We also oversee agency rule-making activity to make sure we are in compliance with all rule-making laws and rules.

Our economists perform many types of economic analysis for rules, permits, and legislation.

We also provide information about government in Washington tribes and British Columbia.

Human Resources

Human Resources' mission is to assist managers and employees in creating a safe, supportive and diverse work environment for current and future Ecology employees by providing comprehensive and innovative human resource activities.



Loading wood debris at the Port Gamble cleanup

Nuclear Waste Program

The mission of the Nuclear Waste Program (NWP) is to ensure sound management of nuclear waste statewide, and to promote the sound management and protection of the environment at, and adjacent to, the U.S. Department of Energy's Hanford Site.

To accomplish this mission, Ecology's Nuclear Waste Program will:

- Enforce regulatory compliance and cleanup at the Hanford Site and at other facilities managing nuclear waste [in our state].
- Promote public involvement, congressional and federal [government official] contact, and [monitor] interstate activities…to enhance nuclear waste management compliance and cleanup of the Hanford Site.
- Ensure appropriate oversight for the safe management and disposal of radioactive wastes at the Richland commercial low-level radioactive waste disposal site.

The Department of Ecology's Nuclear Waste Program regulates the storage, treatment, and disposal of "dangerous waste" and "mixed waste" at the Hanford Nuclear Reservation. Our Program also regulates the storage, treatment, and disposal of mixed waste at certain non-Hanford facilities. (The most dangerous waste is radioactive liquid and sludge: the mixed waste includes hazardous waste with a radioactive component.)

We offer technical oversight and issue permits for the transfer and disposal of mixed waste, and we collect permit fees from those facilities that manage mixed waste in our state. We deposit those fees into the State Toxics Control Account from which the legislature appropriates funding to the Nuclear Waste Program.

In Fiscal Year 2007, State Toxics Control Account funds help pay our costs:

- Litigation related to Hanford.
- Compliance inspections.
- Regulatory oversight.
- Technical assistance.
- Permit applications review and approval (for regulated mixed waste facilities).

The Hanford Problem

Residual contamination from manufacturing nuclear weapons, the lack of methods to stabilize radioactive wastes, and the search for effective ways to clean up hazardous contaminants mixed with radioactive components at Hanford pose a decades-long challenge to our nation, the state of Washington, and the Columbia River.

- Wastes generated by decades of building nuclear weapons.
- Hazards compounded by inadequate containment of the wastes.
- Reliance upon budget requests for funding appropriations from federal government.

Federal and State authorities negotiated a timeline of cleanup milestones at Hanford, defined and recorded in the Tri-Party Agreement. Our Nuclear Waste Program staff compare actual activities to the expectations set in that Agreement. We evaluate and comment on short-term project proposals, and we advocate for visible progress and long-term cleanup-related action. On behalf of Tribal nations, Hanford stakeholders, and the people and environment of the state of Washington, we persist.

Spill Prevention, Preparedness and Response Program

The Spill Prevention, Preparedness and Response (Spills) Program focuses on:

(1) Containing oil or chemical spills that impact or threaten Washington's waters.

(2) Rapid response to releases to soil and air that threaten public health and safety.

The Spills Program relies, in part, on funding from the State Toxics Control Account to support our actions. The Program responds to contain releases, and it conducts timely clean up of oil and other hazardous substance spills (or we oversee a cleanup where the responsible party is taking appropriate action to manage the incident). If we can't identify the owner of a spill site or if the owner refuses or can't fund hazards removal ("orphan spills"), we work with the responsible party and the affected government entities to manage such incidents and recover the costs later.

Responding to Meth Labs

The State Toxics Control Account pays some of the costs to remove and dispose hazardous chemicals and wastes found at clandestine methamphetamine manufacturing sites (meth or drug labs). We've developed expertise in safely handling and disposing highly hazardous wastes found at meth labs—such as pressurized anhydrous ammonia cylinders, ammonia generators, and pressurized containers of gaseous hydrochloric acid.

The Program is the only public agency in Washington that cleans up the hazardous chemicals and wastes that result from meth lab operations. In Fiscal Year 2007, Ecology responders cleaned up 294 meth labs and dump sites (100 percent of law enforcement requests) around Washington. The Spills Program continues to coordinate with local governments and authorities on meth activities.

Success Measures

The Spills Program responded to reports within 24 hours of notice 99 percent of the time (3,742 timely responses out of 3,786 reports). We measured our Fiscal Year 2007 success by performance figures:

- We recovered 78 percent of claimed state costs from the spillers (responsible persons).
- We recovered 57,148 of the reported 99,928 gallons of oil spilled (57% recovery rate).
- We recovered 49,423 pounds of hazardous material (other than oil) from the environment.

Related Activities

- Coordinating or participating in oil and hazardous materials drills.
- Providing technical assistance to help others prevent and clean up hazardous spills.
- Investigating spills to determine their source and cause.
- Providing training for first responders around Washington.
- Taking appropriate enforcement actions against carriers or polluters.

Solid Waste and Financial Assistance Program

The mission of the Solid Waste and Financial Assistance Program is to reduce both the amount and the effects of wastes generated in Washington State. The Solid Waste and Financial Assistance Program conducts four main services with funding received from the State Toxics Control Account. Those services are:

1. Providing technical assistance and support to local governments on solid waste management issues.
2. Reducing persistent bioaccumulative toxins in the environment.
3. Regulating large industrial facilities (such as pulp and paper, petroleum, refining, and aluminum smelting).
4. Regulating and overseeing cleanups of contaminated industrial sites and closed landfills.

Technical Assistance and support to local governments on solid waste management issues

The Solid Waste and Financial Assistance Program helps local governments regulate waste management in the state. The 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 technical assistance and local permit reviews and policy guidance and research.

The Program 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. The Program staff also offer technical trainings on revised solid waste regulations and annual compost operator training. Lastly, the Program staff review local permitting decisions to ensure compliance with state regulations.

When needed, the staff develops and revises statewide rules and policies in order to ensure statewide consistency in solid waste prevention and management. Program staff conduct research on technical issues involving recycling and identifying initiatives such as how today's farm wastes can be turned into energy and marketable chemicals.

Reducing persistent bioaccumulative toxins in the environment

Persistent Bioaccumulative Toxins (PBTs) are a particular group of chemicals that can significantly affect the health of humans, fish, and wildlife. The agency developed, and the Legislature funded in the 2001-03 biennium, implementation of a long-term strategy designed to reduce PBTs in Washington's environment over the coming years. The 2005 Legislature provided funding to complete the Chemical Action Plan for polybrominated diphenyl ethers (PBDEs - a flame retardant found in many household products), to monitor a number of Washington lakes for mercury and PBDEs, and to complete a third Chemical Action Plan. In early 2007, Ecology finalized its schedule of Chemical Action Plan (CAP) development for the next three years. This schedule is as follows:

PBT Chemical	Schedule
Lead. A naturally occurring metal, lead is a powerful neurotoxin. Until it was banned as an additive, lead was used widely in gasoline and house paint. Lead continues to be used widely in manufacturing.	March 2007 – March 2008
Polycyclic aromatic hydrocarbons (PAHs). PAHs are a group of more than 100 different chemicals. Some occur as a by product of the burning of organic substances like coal, oil, gas or garbage and end up as soot. Some PAHs are manufactured and are used to make products ranging from roofing tar to medicines, from plastics to pesticides. Animal studies have linked PAHs to reproductive problems and weakened immune systems.	March 2008 – March 2009
Perfluorooctane sulfonates (PFOS). PFOS and their chemical variations were used historically as water, oil, soil and grease repellents for carpets, fabric and upholstery and food packaging, and in specialized applications such as fire-fighting foams, aviation hydraulic fluids, and insecticides.	March 2008 – March 2010


Port Townsend Paper Company

The Industrial Section originated in the legislation that created the Department of Ecology

Industrial Regulation

The State Toxics Control Account funds regulation of hazardous wastes at some of the state's largest industries. Oil refineries, pulp and paper mills, and aluminum smelters all use, generate, and in some cases, dispose of a variety of hazardous wastes. Staff issue permits for hazardous waste use and management, conduct regular inspections, and assist persons in correcting violations.

Regulating and overseeing cleanups of contaminated industrial sites and closed landfills

Solid Waste and Financial Assistance staff provided technical oversight for cleanup activities at contaminated industrial sites and solid waste landfills across the state. The Alcoa Vancouver Site, located on the north bank of the Columbia River in Clark County, exemplifies the type of cleanup work overseen by Solid Waste and Financial Assistance staff. Alcoa constructed an aluminum smelter on the western portion of the site in 1940. Between 1944 and 1970, a number of fabrication operations were added to the facility to form aluminum into finished goods such as wire, rod, and extrusions. Alcoa operated the entire facility for approximately 45 years until its closure in 1985. Evergreen Aluminum worked with Ecology in 2007 and 2008 to characterize and clean up the smelter portion of the Site. Evergreen has since completed the removal of approximately 62,500 tons of contaminated soil and waste to an off-site landfill.

Ecology is still actively negotiating a cleanup strategy with Alcoa to address the TCE contamination in the groundwater beneath the landfill. The current negotiations are focused on a Consent Decree amendment and Cleanup Action Plan for the East Landfill. When an agreement is reached, the public will be invited to comment on the proposal.

To date, Alcoa has spent approximately $42 million on cleanup at the Vancouver site, including $34 million on cleanup of PCBs.

Water Quality Program

The mission of the Water Quality Program is to protect and restore Washington's waters. State Toxics Control Account funds pay for activities to help protect Washington's water from contaminants.

Lower Columbia River National Estuary Partnership

Congress established the National Estuary Program in 1987 to identify those nationally significant estuaries threatened by overuse, development, and pollution. The Program would help develop local management plans designed to protect and preserve those important natural systems. The Lower Columbia River entered the National Estuary Program in 1995.

The State Toxics Control Account funded a grant to the Lower Columbia River National Estuary Partnership (the Partnership) whose Board members include representatives from:

- Office of the Governor of the state of Washington
- Office of the Governor of the state of Oregon
- Washington State Department of Ecology
- Oregon Department of Environmental Quality
- U.S. Environmental Protection Agency
- Industry and Commerce
- Local Governments and Citizens

The Partnership identified seven priorities—among them were toxic contaminants in Lower Columbia River sediments and fish. To support work on those priorities, the Partnership sought an investment of $1.7 million from the Bonneville Power Administration (BPA). The BPA's funds would pay the costs of water quality and ecosystem monitoring.

Aquatic Pesticide Program

Green Lake park and path

Water Quality Staff aimed to reduce risks to human health and the aquatic environment from exposure to pesticides used to manage aquatic weeds, invasive plants, and foreign water-dwelling creatures. We developed and clarified rules that pertain to aquatic pesticides and gave expert technical assistance to pesticide applicators, lake associations, and similar interests. We also gave permit information to chemical manufacturers, pesticide applicators and their client groups, including materials to educate them about the uses and dangers of specific pesticides and about other methods to control aquatic pests.

Water Quality Staff applied their expert knowledge to develop water quality standards for toxic substances. We began with ways to assess the risks of exposure to toxics, and we collaborated with Wastewater Discharge Permit Writers who use water quality standards to set effluent limits. Staff also led work groups seeking ways to reduce toxic substances in water, including an inter-agency committee developing Ecology's strategy to combat persistent, bioaccumulative, toxic chemicals (PBTs), and the interagency Marine Toxics work group.

Stormwater Program

The federal Clean Water Act and our state laws require entities (approximately 2,000 businesses and 100 local or municipal governments) to obtain a National Pollutant Discharge Elimination System (NPDES) permit before they may discharge stormwater into Washington's water bodies. State Toxic Control Account dollars allowed our staff to:

- Develop new permits, providing a compliance pathway to industrial facility operators and local government entities.
- Provide technical assistance and support to permit holders.
- Develop and maintain tools to help permit holders and others operate their facilities in ways that meet our stormwater management requirements.

State Toxics Control Account funds provided $2,500,000 for Local Innovative Stormwater Grants.

State Parks Wastewater Upgrades

The legislature appropriated $3,500,000 from the State Toxics Control Account for the sole purpose of upgrading the wastewater treatment systems at Twanoh, Dosewallips, and Fort Casey state parks; and at Fort Ebey, Birch Bay, and Sequim Bay state parks along Puget Sound.

Sequim State Park

Environmental Assessment Program

The mission of the Program is to measure and assess environmental conditions in Washington State. Our vision is to provide credible science to guide Washington's environmental choices.

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

- Measure agency effectiveness.
- Inform public policy.
- 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.
- Technical review and investigations dealing with toxic chemical contamination of marine and freshwater aquatic organisms, sediments, and groundwater.
- Staff also conduct 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 2007 include:

- Statewide assessment of polybrominated diphenyl ether flame retardants (commonly known as PBDEs[1]) in rivers and lakes. The program collected and analyzed freshwater fish and water samples in rivers and lakes around the state. Results will be used in order to establish baseline conditions that can be used to evaluate the effectiveness of the Washington State PBDE Chemical Action Plan and other efforts to reduce PBDE inputs to the environment.

Walleye from the Columbia River

- 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.
- Continued implementation of the Washington State Toxics Monitoring Program. The program is designed to evaluate concentrations of a variety of toxic chemicals in edible fish tissue. During this year, the program added mercury trends as a new component to the program.

1 PBDEs are compounds that function as flame retardants in resins and plastics used in furniture (foam cushions), carpet padding, electronics enclosures, wire and cable insulation, adhesives, textile coatings, and other applications. First reported in 1981, PBDE levels have been increasing in environmental samples. PBDEs have been linked to neurotoxicity, impaired thyroid function, fetal toxicity, endocrine effects, and tumor generation in animal studies.

Shorelands and Environmental Assistance Program

The mission of the Shorelands and Environmental Assistance (SEA) Program is to work in partnership with communities to support healthy watersheds and promote statewide environmental interest. State Toxics Funds help pay for aquatic and near shore cleanup project support.

Enhance Puget Sound Cleanup Projects

The SEA Program received funds from the State Toxics Control Account (STCA), specifically to regulate dredging operations and ensure that contaminated sediments were safely removed and disposed.

Increased Sediments Dredging

Recent increased numbers of dredging projects in progress, and increased amounts of material dredged at those projects are a result of three factors:

(1) Economic development by Puget Sound Ports

(2) Navigational dredging to make water ways passable by large ships.

(3) Sediment cleanup activities to improve water quality in the near-shore marine environment for people and fish.

State Toxics Support

STCA funding paid for one full-time employee to focus on Ecology's duty to prevent dredging projects from creating new contamination. Ecology better managed the following activities affecting Puget Sound dredging projects:

- Evaluating sampling and analysis plans to determine suitability for the project and site.
- Examining sediment quality data from the undisturbed site.
- Scrutinizing project plans for dredging operations, water quality monitoring protocols, and post-dredge affects monitoring.
- Evaluating sediments newly exposed by dredging to ensure the project complies with our state's anti-degradation policy.

Snohomish River silt-Dredging to deepen waterway

Collaboration

The staff person funded by this money supports the "Ecology/DNR Puget Sound Cleanup" between the two state agencies by enforcing environmental standards, safe-guarding and preserving healthy natural systems, and helping to restore other systems to a natural and health state.

Dredged materials flow to impoundment

State Parks and Recreation

Puget Sound - Hood Canal Cleanup Projects

Hood Canal and other Puget Sound ecosystems face serious problems. Toxic pollutants wash into the water bodies and settle on the bottom, removing available oxygen and smothering benthic plants and animals. Bottom-feeders work those toxins into the food chain--the toxins accumulate in fatty tissues of the "feeder stock" eaten by larger fish, ultimately threatening the entire ecosystem.

Our Governor and Legislature set a high priority on improving water quality in Puget Sound and the Hood Canal. We invested nearly half a million dollars during Fiscal Year 2007 in Washington State Parks. During the summer of 2006, we planned and began working on a multi-year, multi-government effort.

The on-the-ground goal of the Puget Sound–Hood Canal cleanup is:

- To speed cleanup at toxic sites.
- To help home owners repair failing septic systems.
- To pre-position spill response equipment.
- To reduce storm water runoff.

Washington Parks' task is to improve storm water management and wastewater treatment systems in the 26 state parks that affect the Hood Canal and Puget Sound.

Washington State Parks' project targets the following 26 state parks: Bay View, Belfair, and Birch Bay; Blake Island, Camano Island, and Deception Pass; Dosewallips, Fay Bainbridge, and Fort Casey; Fort Ebey, Fort Flagler, and Fort Worden; Illahee, Kitsap Memorial, and Kopachuck; Larrabee, Penrose Point, and Pleasant Harbor; Possession Point, Potlatch, and Scenic Beach; Saltwater, Sequim Bay, and Shine Tidelands; Triton Cove, and Twanoh.

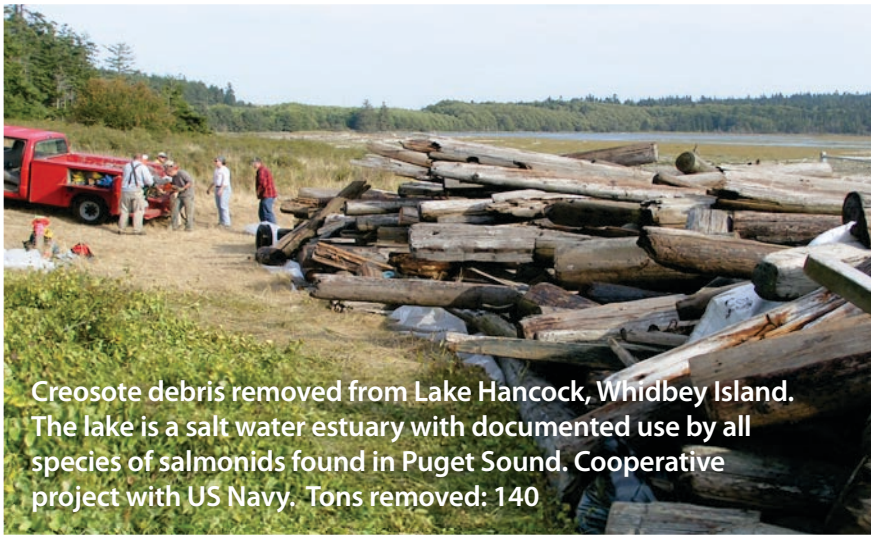
Funds allocated for this work help State Parks fulfill its mission of natural resources stewardship, and moves the Washington State Parks Commission toward its Centennial 2013 goal of better caring for our existing public parks.

Other State **Clean Water Initiative** partners:

- Washington State Department of Ecology
- Washington State Department of Health
- Department of Natural Resources
- Puget Sound Partnership
- Washington State Department of Archeology and Historic Preservation
- Governor's Office of Indian Affairs
- Washington Department of Fish and Wildlife

For further information see: http://www.parks.wa.gov/cleanwaterprojects/

Flying logs off the beach using a helicopter at Jetty Island, Everett. Part of a public service day in Everett with cooperation from City, Port and US Navy. Removal enhances an area of high habitat and public access values. Tons Removed: 70



Creosote debris removed from Lake Hancock, Whidbey Island. The lake is a salt water estuary with documented use by all species of salmonids found in Puget Sound. Cooperative project with US Navy. Tons removed: 140

Department of Health

Recent concern about toxic substances stems from heightened awareness of the actual or potential effects of toxic substances in the environment. Government action stems from a broad desire to protect our environment from degradation and to prevent observed harmful human health effects that result from exposure to these substances.

In Fiscal Year 2007, the Department of Health (DOH) received $1,555,539 from the State Toxics Control Account to perform environmental health protection, monitoring, and assessment activities. These activities help us protect public health from exposure to toxic substances released into the environment. We also addressed public concern about such emerging issues as:

- Persistent bioaccumlative and toxic chemicals.
- Health concerns related to mercury contamination in aquatic species.
- Implementing new national ambient air quality standards for particulate matter and ozone levels.
- Area-wide lead arsenate contamination from historic releases.
- Dioxin and non-dioxin polychlorinated biphenyls (PCBs) exposures.
- The related need for efficient and effective health education efforts, particularly directed to cultural and ethnically diverse populations.

Following we describe some successes accomplished during Fiscal Year 2007.

Chemical Monitoring of Drinking Water

The Office of Drinking Water provided technical support to local entities:

We helped:

- More than 62 water systems address nitrate levels measured above the allowed Maximum Contaminate Level.
- More than 113 water systems address arsenic concentrations greater than the allowed Maximum Contaminate Level (MCL of 10 mg/L).
- Three water systems address Uranium concentrations greater than the allowed Maximum Contaminate Level for safe drinking water.

We provided information on correction options, public notification requirements, and appropriate water quality monitoring schedules.

Clandestine Drug Lab Program

Potential health hazards associated with illegal drug manufacturing at Clandestine Drug Lab (CDL) sites include both residual methamphetamine contamination in the area and the hazardous wastes generated during the drug manufacturing process.

Site treatment often requires investigation and assessment of contaminated soil, septic systems, underground water flows, and surface water bodies, in addition to cleaning or removing contaminated surfaces throughout the CDL structure.

Licensed CDL cleanup contractors must comply with federal Occupational Safety and Health Administration (OSHA) and our state Model Toxics Control Act (MTCA) regulations. These contractors must treat each CDL site as we do other hazardous waste sites—applying the same types of environmental assessment precautions and cleanup procedures (e.g., contain and remove hazardous waste, restrict access to the site) to prevent human exposures.

Law enforcement agencies reported decreased numbers of clandestine drug labs, due in part to controls imposed on pharmaceutical products to reduce availability of the key ingredients for manufacturing methamphetamine.

Clandestine Drug Lab interior.

Historically, "meth cooks" developed different recipes and manufacturing methods. But our CDL program maintains a degree of activity needed to respond to current methods—and the readiness to respond to future increases—of illegal drug manufacturing.

Our Program stays abreast of new CDL-related research and data so we can adapt to the rapidly changing world of drug lab remediation. Our CDL Program Website serves as an important education and outreach tool; it received 38,000 page hits and downloaded more than 43,000 documents in 2007.

Each week we respond to 20-30 telephone and e-mail inquiries and requests for technical assistance. The inquiries come primarily from Local Health Officers and concerned citizens. Our services may involve checking cleanup contractor (practitioner) certification, but also a broad range of other CDL-related issues.

Our CDL Program doubled training opportunities when we certified a second CDL Certification training provider. This Spokane-area trainer offers the comprehensive courses required to certify workers and supervisors in the cleanup protocols of drug-contaminated properties.

Cleanup residue.

During Fiscal Year 2007, the Clandestine Drug Lab Program certified 12 CDL cleanup contractors and conducted a refresher training class for approximately 85 CDL cleanup workers, supervisors, contractors and local health jurisdiction staff.

Indoor Air Quality

The Indoor Air Quality (IAQ) Program provides technical assistance, assessment training, and information about the potential human health impacts of poor IAQ. We offer proven approaches to prevent and respond to IAQ problems. We received hundreds of inquiries each month from tenant associations, property owners, landlord groups, private and public schools, local health jurisdictions, and others on a broad range of IAQ issues.

Our IAQ and School Environmental Health & Safety Program websites received more than 212,000 page visits and more than 90,000 downloads during the year. Information and resource links range from topics related to asbestos, asthma, carbon monoxide, mold, ozone, and pesticide exposures, and extends to general IAQ information.

To protect children and promote a healthy school indoor environment, we created an IAQ monitoring equipment loan program. Educational Service Districts (ESDs), schools, and local health jurisdictions borrowed the portable monitoring stations for use within K-12 schools throughout Washington State.

Program staff presented IAQ information at nine workshops: for school and local health jurisdiction staff, at building industry and landlord association meetings, and at local community college classes for students of English-as-a-second-language.

Reports of mold-related problems in residential rental units, spurred us to print and supply landlords and tenants with copies of the EPA pamphlet, "A Brief Guide to Mold, Moisture, and Your Home," in English and in Spanish. And in cooperation with the Northwest Clean Air Agency, we

Indoor air quality monitoring station

We outfitted each monitoring station with a multi-function meter and a particle counter. The multi-function meter records carbon monoxide, carbon dioxide, temperature, and relative humidity levels. The particle counter measures a range of six sizes of airborne particles. The collected data—stored on a laptop computer—provides useful information about room ventilation, cleanliness, and comfort. A manual included with the station instructs the user to download, and it tells how to interpret the air quality monitoring data. DOH can use the data to identify broad trends, and to help school officials address specific Indoor Air Quality concerns.

purchased and offered on loan more than 2,000 copies of the video/DVD "Mold in Your Home: Causes, Prevention, and Clean-up" for viewing by landlords, tenants, and home owners.

Toxic Cyanobacteria*

The Department of Health and the Department of Ecology continued working together on the Toxic Cyanobacteria issue. Ecology's Freshwater Algae Control Program tested for microcystin in samples from lakes. Health interpreted the toxicity test results (for human health exposures) and recommended lake postings and closures where appropriate.

Figure 11: Aerial view of Cadet Facility and SMC site

Our outreach efforts included an informational pamphlet on toxic cyanobacteria and a website display of related toxicity facts and human health information. We developed recreational guidelines for microcystin (used by local health jurisdictions in a three-tiered DOH lake management protocol) when a bloom occurs. We provided assistance to combat cyanobacteria blooms in Clark, Grant, Island, King, Kittitas, Lewis, Mason and Pierce Counties.

*The cyanobacteria of concern are generally freshwater or brackish water species and are commonly found as 'blooms' in slow-flowing, nutrient-rich waters, usually in the warmer months of the year (when both temperature and sunlight are optimal). Blooms are often found in farm dams or ponds where very little mixing occurs, allowing warm water layers to form near the surface. As a result, highly toxic 'scum' material often forms on the water surface, creating a potential danger for livestock and, indeed, humans.

Site Assessments

Staff from our Site Assessment Section worked closely with personnel from Ecology's Toxics Cleanup Program. Our section staff assessed exposures caused by releases to the environment of hazardous substances (defined in both the state MTCA and the federal Superfund laws). Following are examples of site work completed under this program funded from both the State Toxics Control Account (STCA) and the federal Agency for Toxic Substances and Disease Registry (ATSDR).

Cadet Manufacturing Company and Former Swan Manufacturing Company (SMC)

Chlorinated solvents, particularly trichloroethylene (TCE) and tetrachloro-ethylene (PCE), were discovered in groundwater underlying the Fruit Valley residential neighborhood, located down-gradient of the Cadet and the former SMC properties in Vancouver, WA. We have been evaluating possible health risks at these sites since 2001.

Our two primary public health goals include:

1. Assess, and reduce where necessary, possible community exposures to solvent vapors migrating from the contaminated groundwater into indoor air in Fruit Valley neighborhood homes.
2. The figure 11 shows the approximate extent of the shallow solvent contaminated groundwater (blue shading) that underlies the Fruit Valley neighborhood. Solvent vapors below the defined area extend somewhat beyond the groundwater plume boundaries shown. We hope to prevent possible future exposures to solvents found in groundwater associated with the two sites when the groundwater in the area is developed as a drinking water source.

The State's Departments of Health and Ecology are educating the community about health risks associated with the two sites. Education and outreach efforts included public meetings and providing educational material to the community--including giving community members steps to reduce their possible exposures.

Former Irondale Iron and Steel Plant

The former Irondale Iron and Steel plant (Irondale Beach Park) was placed on Ecology's Confirmed or Suspected

Contaminated Sites list in 2006. Under Governor Gregoire's Puget Sound Initiative (to protect and restore Puget Sound and Hood Canal to good ecosystem health by 2020), Irondale Beach Park was identified as a high-priority cleanup. Polycyclic aromatic hydrocarbons (PAHs) and metals were discovered in a single multi-species composite shellfish sample. Sample results indicated that lead may be of concern to human health, especially for young children, although the nature in which the sample was taken did not follow standard protocols.

The public health goal for Irondale Beach Park is to measure the mean or median concentrations of selected chemicals (metals) in specific shellfish species targeted for human consumption to determine whether people can safely eat them. The Department of Health worked closely with Ecology to draft a sampling and analysis plan for shellfish in the area and developed a Health Consultation plan.

Eastern and Central Washington Schools

Lead arsenate was the primary insecticide used to control coddling moth and other insects in Washington fruit tree orchards, between1905 and 1947. [After 1948, lead arsenate use dropped but was replaced by DDT (1,1,1-trichloro-2,2-bis(p-chlorophenyl)ethane). By the mid-1960s, DDT was found to cause cancer and was banned.] The historical use of lead arsenate left elevated concentrations of arsenic and lead in the soils of former apple and pear orchards. Subsequently, some of these orchards in Wenatchee, Chelan, Douglas, Yakima, and Okanogan counties were converted to elementary school properties.

The Department of Health worked with Ecology and local public health agencies to determine children's exposures to lead and arsenic through direct contact with soil. We concluded that public health hazards exist until exposure to contaminated soil is reduced or eliminated. Long-term chemical exposure (greater than one year) at the site could result in harmful health effects.

As a result of the health consultation, the Department of Ecology conducted remedial activities in school playgrounds. Health hazards were removed at some schools through remediation; cleanup of exposure pathways completely eliminated others. But at some schools (e.g., Gilbert and Apple Valley Elementary Schools), outreach and education help prevent children from playing in areas having bare soil or known concentrations of lead and arsenic.

The PBT Chemical Action Plan Schedule

The Persistent, Bioaccumlative Toxin (PBT) Rule finalized by Ecology in January 2006 (Chapter 173-333 WAC) describes the process and criteria for selecting the next listed toxin to evaluate. In 2006 and 2007, DOH staff collaborated with Department of Ecology to select the next PBTs for evaluation using Chemical Action Plans (CAPs). DOH staff wrote portions of the Multiyear PBT CAP Schedule report defining the PBT selection process finalized in March 2007.

Women's Diet Survey – Data Analysis

In 2005-2006, DOH staff conducted the Women's Diet Survey (WDS). The objective of the WDS was to improve methods for collecting fish consumption data for estimating exposures to environmental contaminants from eating fish. We learned that eating certain types of fish--including tuna--is the main way most people are exposed to mercury. Data analysis conducted in 2007 and preliminary results were presented at EPA's Fish Forum meeting in Portland, Maine in July 2007. Staff will report the final results, published as journal articles.

The Health of Washington State Report

In 2007 DOH revised the agency report, The Health of Washington State. We update this report about every 5 years to include current health and exposure data for the state. Our 2007 Report included chapters on: shellfish safety, drinking water quality, and food borne illnesses; pesticide-related illness and injury, outdoor air quality, and indoor air quality; children's environmental health, and dental x-ray and mammography safety, among other environmental health topics. We published the 2007 edition on the Internet to increase access and use by policy makers, local health jurisdictions, and the public who want state-specific data.

Fish Consumption Outreach and Education

In 2007 the Department of Health improved our outreach to tribes to better protect tribal members from exposures resulting from their high rates of fish consumption. This effort included continued participation in the Columbia Basin Tribal Outreach & Education Workgroup (workgroup members are the Confederated Tribes of the Umatilla, the Yakama Nation, the S.H.A.W.L Society, Oregon Health & Science University, and DOH), and presentations to the Northwest Indian Health Commission and the Northwest Indian Fisheries Commission (NWIFC).

DOH developed an outreach project that offered grocery store employees materials and training to aid their customers in making smart fish choices - low in contaminants - based

on recent commercial fish monitoring conducted by our office. We will expand this successful project in 2008.

DOH continues to participate in the Marine Resources for Future Generations Community Advisory Committee. This committee includes representatives from several Asian and Pacific Islander (API) 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.

Columbia River

DOH continued to participate in the Columbia River Toxics Reduction Strategy meetings. The meetings gathered state and federal agencies, tribes, and concerned groups whose goal is to better understand the complex issues facing the Columbia River system. Thus far, the work involved problem formulation in assessment that established the goals, breadth, and focus of the assessment. It also established the ecological, human health, and cultural values to be protected. This step described both existing and potential exposure pathways and effects. As part of the problem statement formulation, we developed a conceptual model that describes the relationship between exposure and effects. Problem formulation culminates in agreements on what will be assessed, the exposure pathways, and the main questions to be answered (such as condition, trends, data gaps, etc.). These agreements also describe the approach, types of data, analytical tools to be used, and how the data will be interpreted.

Fish Consumption Guidance: Technical Protocol

In an effort to ensure that fish consumption advisories are developed in a consistent, scientifically defensible and open process, DOH developed guidelines for drafting them. These guidelines will reduce the amount of time required to evaluate fish tissue data and to determine whether issuance of fish consumption advisory is warranted. The guidelines passed internal review and will be shared with other federal, state, tribal, and local agencies for comment.

Oregon Human Health Focus Group

DOH staff assisted Oregon's Department of Environmental Quality (DEQ) with major revisions to Sections 303(d) and 305(b) of the federal Clean Water Act. The revisions will ultimately affect Water Quality Improvement Projects (TMDLs)—a key tool in the work to clean up polluted waters. The Oregon Fish and Shellfish Consumption Rate Project (FCR) will provide one variable we can use to calculate water quality criteria that are protective of human health.

Oregon established a Human Health Focus Group (HHFG) –a group of technical experts in the areas of toxicology, risk assessment, public health, biostatistics, and/or epidemiology—focusing only on the science, and not on the policy components of the issues discussed. DOH staff participated on the HHFG to advise the DEQ about human health issues. The resulting revisions to the fish consumption rate will ultimately affect numerical standards used to determine compliance with the federal Clean Water Act.

Fish Advisories

DOH reviews fish tissue data collected primarily from Ecology's Total Maximum Daily Load (TMDL) and Toxics Monitoring Programs (WSTMP) to make determinations on potential health impacts to the public. Other common sources of fish tissue data has come from Washington State Department of Fish and Wildlife, EPA, and USGS. Analysis of fish or shellfish tissue data collected from the Columbia River, the Wenatchee River, Lake Washington and Green Lake resulted in the issuance of four separate fish advisories in 2007.

Department of Agriculture

Waste Pesticide Identification and Disposal Program

The Waste Pesticide Identification and Disposal Program is one of the WSDA's more well-known and far-reaching programs. This activity's two main goals are to:

1. Significantly reduce and eventually eliminate containers of unusable pesticides stored on farms and at similar locations.
2. Prevent future accumulation of unusable pesticides through user education.

In Fiscal Year 2007, WSDA collected 124,685 pounds of unusable pesticides and pesticide material from 253 customers. Since the start of this program in 1988, WSDA removed a total of more than 2 million pounds of pesticides from more than 5,700 storage locations in the state—and assisted more than 5,900 individuals.

WSDA collects unusable pesticides at two types of events: regional and special site.

(1) Most regional collection events offer participants the necessary manifests, and any packing materials needed to safely transport the hazardous material to the collection location. Our WSDA staff work with local county representatives to set up the sites, to ensure safe handling of the materials, and to promptly clean up after each collection event. In FY 2007, WSDA held 10 regional collections around the state.

(2) For special waste events, WSDA staff travel to a customer's site and assist with the packing and handling of pesticides that could pose a greater risk of exposure if brought to a regional event. In FY 2007, WSDA held two such events.

For both types of collection events, a state hazardous waste contractor transported the pesticides to hazardous waste disposal facilities that operate under state and federal permits. The WSDA facilitates the voluntary pesticide collection program by assuming liability for the hazardous waste collected.

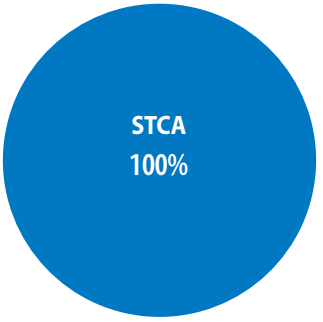
To help prevent future accumulations of unusable pesticides, the WSDA encourages pesticide users, distributors, and retailers to plan carefully, to stay informed about current federal and state pesticide use laws, and to limit pesticide purchases to the amounts needed only for specific applications or seasons.

Find further information at http://agr.wa.gov/PestFert/Pesticides/WastePesticide.htm

State Toxics Control Account: $499,387

Figure 12: Waste Pesticide Program

Endangered Species Program



WSDA's Endangered Species Program collects data to evaluate the impacts of current pesticide use on threatened and endangered species. We post the collected data in a geographic information mapping system which links usage and location to assess the impact of pesticide use on these species.

In 2003, the Department of Ecology and the WSDA cooperatively began a long-term monitoring study. The study data, collected during typical pesticide use seasons, helped characterize pesticide concentrations in surface water designated as salmon habitat.

The study began with two watersheds: (1) the Cedar-Sammamish, represented an urban watershed, and (2) the Lower Yakima represented common eastern Washington agricultural practices. (3) In 2006, we added the Lower Skagit to represent common western Washington agricultural practices. (4) Funding from the 2006 supplemental budget allowed us to add an Upper Columbia watershed, to represent common central Washington agricultural practices, beginning with the 2007 sampling season.

The 2006 monitoring study included samples collected during March through October, in the three watersheds. Concentrations of all pesticides monitored were generally low and close to analytical detection limits. The category of pesticides most frequently detected in both the urban and agricultural basins was herbicides. Dichlobenil was the most frequently detected compound in the

urban watershed. Atrazine was the most frequently detected compound in the eastern agricultural basins; 2,4-D was the most frequently detected compound in the western agricultural basins.

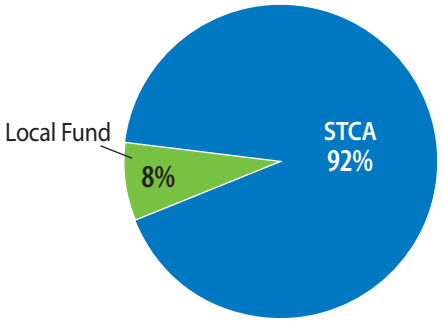
The WSDA worked with agricultural commodity groups to address possible sources, and to refine application methods to avoid the potential for pesticide drift or runoff.

Find further information at

http://agr.wa.gov/PestFert/NatResources/EndangSpecies.htm

State Toxics Control Account: $1,107,248

Figure 13: Endangered Species



Pesticide Compliance and Registration

The Pesticide Compliance program staff investigated complaints of pesticide misuse; conducted field inspections of pesticide manufacturers, distributors, and applicators; and provided technical assistance to pesticide users.

The State Toxics Control Account funded one of the 21 FTEs in WSDA's Pesticide Compliance program. This field position covered all irrigated areas of the state and provided technical assistance to those involved in chemigation (application of pesticides and related products with irrigation water). This group included commercial pesticide applicators, irrigated crops growers, and irrigation districts; and irrigation equipment distributors and manufacturers, farm chemical distributors and consultants, and others.

The technical assistance program emphasized system inspections and education to help others safely apply products through irrigation systems without harming the environment or contaminating water sources. In FY 2007, the WSDA made chemigation rule presentations to more than 700 people at 10 meetings; and distributed related information through newsletters and brochures. Field staff conducted more than 50 system inspections.

The Pesticide Registration program staff must review and approve the registration of a pesticide before it can be used in Washington State. Under two state-specific programs the WSDA reviewed residue, efficacy, and adverse effect data to determine whether a special local need or emergency warranted using certain pesticides in limited circumstances. These registrations help protect Washington's agricultural industry, with its extensive crop diversity and specific pest control needs.

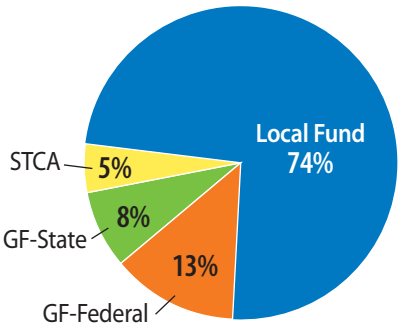
Two of the seven FTE's responsible for registering pesticides are funded by the State Toxics Control Account.

Both programs ensured that pesticides were used safely, and that appropriate pesticides were available to protect Washington's agricultural enterprises.

Find further information on these activities at http://agr.wa.gov/PestFert/default.htm.

State Toxics Control Account: $224,365

Figure 14: Pesticide Compliance & Registration



Washington State Patrol

The Washington State Patrol's (WSP) State Fire Training Academy provides live-fire training that meets or exceeds the minimum standards imposed by federal and state regulations for firefighter skills-building. The WSP oversees the Academy's use of funds from the State Toxics Control Account (STCA) to prepare firefighters in Washington State to respond to incidents involving the release or threatened release of certain fuels and other hazardous materials.

Changing hazards

Fluctuating crude oil prices, conflicting international relations, and environmental concerns lead to growing use of alternative fuels and renewable energy sources. These fuels pose tactical and strategic challenges to firefighters and other first responders to vehicle accidents, structure fires, and chemical spills. Two of the most common such fuels—hydrogen and ethanol—burn with a nearly invisible flame. Their clean burning makes them a more environmental choice, but also makes them more dangerous for responders because:

- Ignition is harder to see and the source harder to locate.
- Suppression foam requires an alcohol-resistant chemical formulation.
- It must be mixed in correct proportion and applied in the proper density.
- Liquid hydrogen presents cryogenic hazards.

The Academy offers the technical information and practice most firefighters need to recognize and suppress or contain hazardous material incidents which threaten people's safety and the environment. The training helps reduce risks to responders and to our shared environment. Funds received from the State Toxics Control Account pay costs to staff, equip, and purchase the consumables and services we use to deliver live-fire training in the following areas:

Flammable Liquids

- Level 1 offers basic information needed to identify, control, and recover from various flammable liquid emergencies. Instruction topics include: the behavior of flammable liquids in bulk, fire extinguishing agents, safety, and environmental concerns. Students practice these skills by extinguishing a live, flammable liquid fire on an overturned tanker.
- Level 2 offers additional tactical and fire-ground training and experience with problems involving flammable liquids, including practice in a team leader position during a flammable liquid casualty. The live-fire training uses a simulated fuel-loading dock, fuel under pressure (with broken flange), and a bulk fuel storage container.

Portable Fire Extinguishers

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

Liquid Petroleum Gas (LPG)

Students learn the basic properties of LPG, special problems posed by LPG-powered vehicle fuel systems and storage tanks; and the systems' built-in safety features (leak detection, product identification), and basic tactics for handling LPG emergencies. Students practice attacking, controlling, and recovering from LPG fires by working on a simulated storage tank, overhead piping, and an LPG fill station.

Airport Rescue Firef ghting (ARFF)

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

Hazardous Material Training (HazMat)

The Hazardous Materials Training program includes academic and hands-on training for first responders to fulfill current WISHA, OSHA, DOT and NFPA requirements. In addition, this tool provides training scenarios for those personnel who respond to clandestine drug labs, to terrorism or weapons of mass destruction threats, and to confined-space rescue; and responders to any spills and risks associated with the transportation of hazardous chemicals and waste.

Marine Firef ghting

This program includes academic, and live hands-on firefighting, for people who work within or near the marine industry or recreation. Training prepares responders to meet the current Code of Federal Rules, the standards of the National Fire Protection Association and the International Maritime Organization requirements. In addition to community firefighters, federal agencies that participate in this program include the U.S Coast Guard, the Navy, and Army specialists.


Live-Fire Training


Live-Fire Training


Live-Fire Training


Live-Fire Training

Waste Management

Funds from the State Toxics Control Account pay for the removal, transportation, and disposal of hazardous waste by-products resulting from live-fire training. STCA funds also pay to appropriately treat contaminated waste water generated from the aircraft rescue training.

On-going Training

The Washington Industrial Safety and Health Act (WISHA) defines standard requirements for training emergency responders. The law mandates initial training (and regular retraining) for people we call upon to respond to hazardous materials incidents. The State Toxics Control Account provides the most funding to support the WSP's Hazardous Materials Program and the mandated training required for our state's 25,000 firefighters.

Each year the frequency of hazardous chemicals transport increases, as do environmental conditions susceptible to releases that contaminate our environment. Newer homes and small structures are often constructed with layered and glued composite materials; these materials burn through much faster than solid wood construction with adhesives between the layers that release added toxins. Firefighters need this specialized hazardous materials training to attack, control and minimize new life-threatening exposures and environment-degrading incidents.

Department of Revenue– Hazardous Substance Tax – Chapter 82.21 RCW

Administration

The Department of Revenue oversees the collection of the Hazardous Substance Tax. Firms in possession of taxable hazardous substances report the tax as part of their Combined Excise Tax Returns. Ecology determines (and publishes) the substances subject to the tax.

Tax Base

The wholesale value of certain substances –defined by statute as "hazardous" or determined by the Department of Ecology (Ecology) to cause a threat to human health or the environment. The law imposes a privilege tax on the first possession of such substance within our state. The tax applies primarily to petroleum products, then to pesticides, and to certain listed chemicals. Ecology has identified more than 8,000 different substances currently subject to the Tax.

Tax Rate 0.7 percent **Levied by** State of Washington

Table 6 - Department of Revenue Collections by Fiscal Year

Fiscal Year	Collections*	% Change	% of All State Taxes
2007	$111,701,000	19.0 %	0.7 %
2006	90,810,000	12.2	0.6
2005	80,929,000	17.4	0.6
2004	68,921,000	35.9	0.5
2003	50,721,000	12.3	0.4
2002	45,172,000	(37.7)	0.4
2001	72,455,000	46.5	0.6
2000	49,472,000	50.1	0.4
1999	32,966,000	(24.0)	0.3
1998	43,398,000	(14.2)	0.4

*Includes receipts for both the State and the Local Toxics Control Accounts. For Fiscal Year 2007:

- The State Toxics Control Account received $52.5 million.
- The Local Toxics Control Account received $59.2 million.

Receipts Distribution of Model Toxics Control Accounts defined by RCW 70.105D.070

- Ecology receives an allocation of 47.1 percent of the total tax receipts into the **State Toxics Control Account** to pay for hazardous waste sites cleanup and related planning and regulation activities.
- The amount of 51.9 percent of the total Hazardous Substance Tax revenues goes into the **Local Toxics Control Account** for disbursal by Ecology in the form of grants or loans, to bolster local municipal governments' hazardous waste control programs.
- And one percent of the total receipts from both Toxics Control Accounts fund **Public Participation Grants** to promote meaningful public involvement in hazardous waste cleanup projects and waste reduction campaigns.

Exemptions, Deductions, Credits

- Previously taxed hazardous substances (limits the tax to first possessor).
- Products purchased/imported for personal or domestic use—not for business purposes.
- Minimal amounts of hazardous substances (apart from petroleum products or pesticides) in the possession of retailers.
- Alumina or natural gas.
- Persons/activities exempted* from such tax by our federal (U.S.) Constitution.
- Products already present within our state before March 1, 1989 (effective date of the Model Toxics Control Act).
- Credit for taxes paid on fuel exports from our state, in vehicle fuel tanks.
- Credit for the amount of similar taxes paid on the substance in another state.

Household products subject to hazardous substance tax

The Departments of Revenue and Ecology have published a list of household products that are subject to the tax on hazardous substances. The list, compiled with the help of the Washington Retail Association and independent retailers, is intended to simplify tax reporting.

One of the most difficult problems in determining hazardous substance tax liability is identifying which substances are taxable. This is especially true in the case of hazardous substances packaged as household products, which are sold under a variety of tradenames.

The list makes it easy. If you sell any of the household products included in the list, then you owe hazardous substance tax **unless** your supplier or a prior possessor has paid the tax. **If a household product is not included in the list, it is not subject to the tax.**

View the list of hazardous substances here:

http://dor.wa.gov/content/getaformorpublication/publicationbysubject/taxtopics/householdhaztax.aspx

Household products

History

The hazardous substance tax resulted when Washington voters passed Initiative 97, in November 1988; the tax took effect March 1, 1989. An earlier, similar tax, levied since January 1, 1988 at a rate of 0.8 percent, did not apply to petroleum products destined for export from our state. Under the Model Toxics Control Act we collect more revenues, despite the lower (0.7 percent) rate, because the Hazardous Substance Tax now applies.

*In 2002, legislation updated state references to the taxable products defined (or exempted) in federal law.

Challenges

Any substance-based tax that applies to thousands of specific products, requires that we continually inform and educate tax-payers about their liability. Last year approximately 550 businesses reported paying the Hazardous Substance Tax. But sometimes identifying firms liable for the Hazardous Substance Tax gives us pause:

- With smaller firms or ones that use such products infrequently.
- With firms that don't recognize which substances or products out of their large inventories are taxable.
- With firms that don't know which of their business purchases (e.g., items imported from a non-taxing state), makes the Washington firm the "first possessor" of a substance subject to the Tax.
- With firms—or auditors—trying to learn whether the firm's supplier paid the tax.

Finally, we derive the largest portion of the combined Toxics Control Accounts from the Hazardous Substance Tax imposed on the market value of petroleum products. Our Tax receipts rise and fall as oil market prices fluctuate—without regard to Washington's immediate needs, Ecology's long-term plans, or legislators' current priorities.

University of Washington

Decommissioning the Nuclear Research Reactor at More Hall – Seattle

The Reactor

From April 1961 through June 1988, the University of Washington operated a 100-kilowatt Argonaut research reactor (one of an estimated ten built for research universities in the United States). Designed at the Argonne National Laboratory (near Chicago) in the 1950s, federal grants funding paid for its installation. The prestigious Argonaut reactor formed the center of the University's Nuclear Engineering Department—an elite graduate-level program—for nearly 30 years.

The reactor's core, about one cubic meter in size, sat in the heart of a block of reinforced concrete, ten feet thick. Graphite blocks squeezed between the core and the reinforced concrete absorbed the neutrons produced by the nuclear fuel. Maneuvering the graphite blocks controlled the reaction.

Dismantling

During the span between 1989 and 1990, authorities removed the uranium fuel from the core's reactor and shipped it to the Hanford Nuclear Reservation (in southeastern Washington) for disposal. The reactor sat dormant through the 1990s. Partially dismantled, the reactor waited in "safe storage" for the state legislature to appropriate funding to finish closing it down. After 1990, the building housed College of Engineering offices, storage, and a robotics laboratory.

Funding

The legislature appropriated $2,025,125 of State Toxics Control Account funds to the University—specifically to pay costs of dismantling the remaining reactor components—in Fiscal Year 2007. After a thorough survey of the building, specialists removed the remaining metal components and much of the surrounding concrete. They removed all equipment from the control room overlooking the concave waste. Marty Howlett completed the decommissioning process to the Nuclear Regulatory Commission's satisfaction during the spring of 2007.

Next Steps

The More Hall Annex research reactor was decommissioned; after the reactor license expires, the University will demolish the building. The University is negotiating with the Nuclear Regulatory Commission to finalize the paper work (records, logs, manifests). Actual demolition should take less than three months. The plan calls for the lot to be leveled and the area landscaped.

Project contact: Stan Addison, Radiation Safety Officer – E-mail: rso@u.washington.edu

Direct phone (voice-mail): 206 / 543-4929

Radioactive Waste Container

Loading Radioactive Waste

Department of Natural Resources

Creosote Debris and Piling Removal Program

The funding continues to support the program from the Puget Sound Initiative that the Governor launched in December 2005 to revitalize efforts to protect and restore Puget Sound.

During Fiscal Year 2007, the Department of Natural Resources invested about $2,111,939 in State Toxics Control Account funding to expand its Creosote Debris Removal Program, including derelict pilings and structures, throughout Puget Sound. Goals and objectives of this program included:

- Reducing creosote and treated wood contamination in the sediments and water column of marine and estuarine environments.
- Reducing the potential for human exposure to those contaminants on public beaches.
- Educating the public about impacts of creosote in the marine and estuarine environment.
- Removing dilapidated pilings and structures.
- Encouraging the replacement of creosote-treated wood with non-toxic materials.

The funding is also used to support public education about the hazards of creosote exposure and other marine-related issues. Volunteers informed the Department of choices of sites for beach-based removals. Beach Watchers volunteers inventoried creosote debris and assisted in its removal when feasible.

The main resources at risk from exposure to creosote and its primary components (PAHs) include herring spawn, English sole, other forage fish, juvenile salmonids, and area marine sediments.

Program priorities

Derelict pilings and structures gained top priority for removal where habitat features were highly valued and where their removal would help spur future restoration at the site. This program reached several sites where our efforts to remove derelict structures jump-started habitat restoration.

We also considered economic factors in our decision-making. While the focus of the program was first to remove derelict structures, we also provided funding to organizations that are redeveloping or repairing docks. Funding provided for these projects encouraged and enabled the removal of creosote-coated wood pilings, and their replacement with steel or concrete, where such work would not otherwise have been financially feasible.

DNR staff planned and supervised all project work. We hired marine contractors to remove pilings through the Public Works process. We removed hazardous wastes by hand hauling, using heavy equipment (crawler cranes or backhoes), transporting via barge, tug boat, or helicopter. Removing toxins from public beach sites provided environmental benefits to the habitat and organisms, and increased public safety through reduced exposure routes.

Program challenges

We faced two primary challenges with this program:

1. How to predict the weight of piling materials to be removed, when we lack accurate information about standing piling length. In future, we will report numbers of pilings removed and will concurrently report tons of material removed. Regardless of how we quantify our efforts, removing the toxic materials benefits habitat by reducing toxics and by reducing the shading cast by overwater structures.
2. Three interests expressed concerns about our piling removal projects:

   (a) Divers who are losing vertical dive attractions.

   (b) Birders who are concerned about the loss of pilings for birds' uses.

   (c) People who want to preserve historical sites.

We will address each of these concerns at a local level through historical and biological review, through public announcements, and through conducting community meetings to discuss how best to meet the objectives of our efforts.

In Fiscal Year 2007, the Department of Natural Resources has removed 1,702 tons of creosote from seven piling removal projects as well as 562 tons of creosote from seven beach debris removal projects.

PART 2 –
Local Toxics Control Account

The Department of Revenue oversees the collection of the Hazardous Substance Tax. Revenues to the Local Toxics Control Account are entirely comprised of Hazardous Substance Tax Collections, and in Fiscal Year 2007 were as follows:

State Toxics Control Account Revenue – Fiscal Year 2007

Toxics Control Account Revenue	Local Toxics
Hazardous Substance Tax	$60,184,246

The law RCW 70.105D.070(3)(a) charges the Department of Ecology with the responsibility of distributing funds from the Local Toxics Control Account for grants and loans to local governments for the following purposes:

- Remedial actions.
- Hazardous waste [management] plans and programs.
- Solid waste [reduction and recycling] plans and programs.
- Assessment and cleanup of methamphetamine manufacturing facilities.
- Abandoned and derelict vessels.

Table 7: Expenditures- Ecology Local Toxics Control Account – Fiscal Year 2007

Ecology Programs	Expenditures	Percent %
Toxics Cleanup Program	624,033	1%
Hazardous Waste & Toxics Reduction Program	128,370	0%
Agency Administration, Facility, & Related Costs	451,006	1%
Solid Waste & Financial Assistance Program	1,588,171	4%
Spill Prevention, Preparedness, and Response	145,000	0%
Capital Program	38,064,627	93%
Total Ecology Expenditures	**$41,001,207**	**100%**

Composting is an important component of our statewide strategy for "closed loop" recycling of organic residuals. By composting, we can transform "wastes" such as yard debris, food scraps, manure, and crop residues into valuable products.

Program Support

Hazardous Waste & Toxics Reduction Program

Technical assistance is provided by program staff to the public and other state agencies. A valuable resource in assistance is Ecology's web site and the fertilizer database that is available from the web site.

Agency Administrative Support

Administrative Services relies on funds from the Local Toxics Control Account to provide Ecology programs with services such as facilities, personnel, payroll, financial, computer, and information.

Toxics Cleanup Program

Staff from the Toxics Cleanup Program oversee and provide technical assistance to local governments that receive remedial action grants from the Department of Ecology.

Solid Waste & Financial Assistance Program

The Solid Waste & Financial Assistance Program administers the grant programs that receive funding from the Local Toxics Control Account. 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 offered to not-for-profit organizations and citizen groups for participation in cleanup actions and promotion of waste management priorities.

Ecology's Solid Waste Financial Assistance Program staff build relationships with local government (and other not-for-profit organizations') staff, acting as guide and conduit for LTCA-funded environmental improvements. Grants and loans staffers negotiate the terms, write the Agreements, and enforce performance-based requirements.

Local Government Grant Program

The Local Toxics Control Account is used primarily to provide grants to local governments. The bulk of the money goes into grants that help communities pay for hazardous waste cleanup, consumer (and packaging) waste reduction education, recycling information systems design, and waste management planning. During Fiscal Year 2007, more than $3,000,000 reached Washington communities in the form of grants or loans.

Remedial Action Grants or Loans: Help local government deal with hazardous or toxic waste problems if the polluter or property-owner (the potentially liable person) is unable or unwilling to pay for cleanup action.

Coordinated Prevention Grants: Help recipient local governments plan community waste reduction campaigns, promote healthy environmental choices, show people how and why to reduce material waste habits, and promote materials' reuse and recycling practices.

Public Participation Grants: The Model Toxics Control Act specifically sets an amount equal to one percent of both MTCA accounts' revenues to support public participation in site cleanup and local or business sector (peer-to-peer) waste reduction campaigns.

Statewide Oil Response Equipment Caching: Ecology's Spill Prevention, Preparedness and Response Program received $1,450,000 during Fiscal Year 2007, allowing placement of "Early Spill Response Equipment" at strategic locations throughout the state. The equipment helps first responders contain oil spilled into a water body during fuel transfer procedures.

Remedial Action Grant/Loan Program

Introduction

The Department of Ecology (Ecology) developed new guidance for local governments that qualify for Remedial Action financial assistance under, RCW 70.105D.070(3)(a) of the Model Toxics Control Act, according to rules published in Chapter 173-322 WAC.

We wrote new guidelines and published them at the end of Fiscal Year 2007 for use during the next biennium. These updates reflect unmet needs identified by local governments, they withstood public review of and comment on our proposed revisions, and the revisions received legislative approval (promised funding).

Purpose

When local government confronts the need to investigate and clean up a hazardous site, the RAG/Loan Program funding sources can encourage prompt action and help expedite cleanup to protect human and environmental health.

For purposes of Ecology assistance programs, "local government" means any bona fide political subdivision within Washington, a regional tax-funded unit or district, or any town, city, or county.

Funding Categories

These resources lessen the impacts of costs to rate payers and taxpayers:

- **Oversight Remedial Action Grants** – help local government study and fund cleanup of any hazardous waste sites in the community.
- **Site Hazard Assessment (SHA) Grants** – help the local health district or health department assess the degree of contamination at suspected hazardous sites within the jurisdiction.
- **Safe Drinking Water Action Grants** – help local government supply safe drinking water to populations in areas of suspected or confirmed drinking water contamination.
- **Area-Wide Groundwater Remedial Action Grants** – enable local government to help clean up groundwater and redevelop property contaminated by hazards from multiple sources.
- **Independent Remedial Action Grants** – help offset some expense when a local government enters Ecology's Voluntary Cleanup Program.
- **Methamphetamine Lab Assessment and Cleanup Action Grants** – aid local government conduct initial investigation and assessment of suspected meth labs, and oversee cleanup activities.
- **Derelict Vessel Remedial Action Grants** – help pay costs of hazards removal and the disposal of derelict and abandoned vessels.

The loan program can help a local government fulfill the match required to obtain an Oversight Remedial Action Grant through this program.

Table 8: Remedial Action Grants-Fiscal Year 2007

Recipient	Grant Number	Total Project Cost	Local Toxics Control Account Amount
Oversight Remedial Actions			
Port of Pasco	G0700055	439,992	329,994
Port of Grays Harbor	G0700258	111,895	83,921
Grant County	G0700293	3,054,096	2,290,572
Port of Tacoma	G0700317	3,400,000	1,700,000
Subtotal		**7,005,983**	**4,404,487**
Amendments to Previous Years Grants:			5,055,929
Total		**7,005,983**	**9,460,416**
Independent Remedial Actions			
Lewis County	G0700061	266,667	200,000
City of Bremerton	G0700260	47,319	23,660
City of Bremerton	G0700261	43,861	21,931
City of Bremerton	G0700256	40,827	20,414
Tacoma Housing Authority	G0700273	151,901	75,951
Total		**550,575**	**341,956**
Bellingham Bay			
Port of Bellingham	G0700058	993,472	496,736
Port of Bellingham	G0700287	31,094,280	15,547,140
Subtotal		**32,087,752**	**16,043,876**
Amendments to Previous Years Grants:			333,889
Total		**32,087,752**	**16,377,765**
Site Hazard Assesments			
Amendments to Previous Years Grants:			113,156
Total			**113,156**
Methamphetamine Labs			
Amendments to Previous Years Grants:			18,000
Total			**18,000**
Area Wide Gound Water Contamination			
All written in Fiscal Year 06			
Derelict Ships			
None			
Safe Drinking Water Actions			
None			
Written with Biennium 03-05 Deobligated grants money			
Yakima County Health	G0400043		37,500
Grant County Health	G0000336		22,000
Jefferson County Public Health	G0100179		25,705
Total			**85,205**
Total Remedial Action Grants Fiscal Year 2007		**$39,644,310**	**$26,396,498**

Coordinated Prevention Grants

Local governments use Coordinated Prevention Grants (CPG) to fund projects that reduce waste, protect human health, and prevent pollution by addressing the improper management or disposal of solid and hazardous wastes. Local solid waste planning authorities and jurisdictional health departments or districts apply for grants in the fall of odd numbered years. An applicant may receive CPG funding only for a proposed project showing a defined, quantifiable outcome.

Coordinated Prevention Grants achieve environmental outcomes:

- CPG projects protect human health by preventing improper storage or disposal of hazardous wastes that could pollute homes, public or commercial buildings, and Washington's ground water. In 2006-07, CPG supported programs that ensured proper disposal or recycling of 15,000 tons of business and residential hazardous waste.
- CPG projects fund local Solid Waste Enforcement programs such as -- inspecting solid waste facilities and enforcing facility operations regulations. The grants supported local oversight of 665 solid waste facilities and 3,168 inspections; responses to 12,258 illegal dumping and illegal storage complaints, and 26,933 customer/general technical assistance actions.
- CPG support for local recycling programs drove Washington's high recycling rate. CPG funding played a pivotal role in financing the local programs that now recycle or reuse 2.2 million tons of materials from residential sources. In 2006 -07, CPG-funded local programs collected 154,377 tons of organic material and recyclables.
- CPG funding for local recycling and composting programs reduced greenhouse gas emissions by 116,112 metric tons of carbon equivalent. Recycling reduces the use of source materials in production processes. The amount of energy saved through CPG efforts was the equivalent of 430,879 barrels of oil, or the removal of 36,596 passenger cars from the roadway.* *(We used the US Environmental Protection Agency's WARM model to calculate emissions, and energy flow reductions, based on alternatives to landfilling).
- CPG-funded projects that provided alternatives to burning row-crop stubble, yard debris, and household trash. Decreased burning meant decreased health risks from smoke and ashes.

Projects that the Local Toxics Control Account typically funds include:

Organics: Local governments help communities reduce the waste of organic materials. Many use LTCA funding to build regional composting facilities, set up commercial and residential food waste collection programs, and offer yard waste chipping options. They partner with businesses to arrange discounts on mulching lawnmowers; they offer education about home composting and about planting native species in landscapes, all reducing organic wastes.

Green Building: Local governments encourage builders to use "green" building methods in new and remodeling planning and construction. They educate builders about energy-saving design, sustainable materials, and resource-saving practices. They publicly recognize firms who "build green." They sponsor demonstration buildings and model development, and they support infrastructure for the reuse of building materials.

Waste Reduction and Recycling: Local governments provide residential and commercial recycling collection services, and maintain safe recycling drop-off locations. Some offer on-site waste audits and technical help to businesses. They conduct household hazardous waste education programs and special collection events. These activities, help raise Washington's recycling rate, reduce greenhouse gas emissions, and reduce human health risks.

Hazardous Waste: Local governments help business operators and residents identify and properly dispose of hazardous wastes (they build and maintain hazardous waste collection facilities, and they conduct special collection events). The governments help small business operators and residents reduce hazardous waste exposures, showing how to use less toxic products, and coming up with solutions to problem wastes such as electronics and mercury.

Solid and Hazardous Waste Planning: Local governments collaborate with peer officials, solid waste advisory committees, and the community, to plan and employ systems that manage municipal wastes --to reduce solid and hazardous wastes, and to promote/adopt key initiatives in the statewide "Beyond Waste Plan."

Solid Waste Enforcement: Local governments enforce the solid waste laws and ordinances. They permit and inspect facilities. They respond to complaints about illegal dumping or hazardous waste storage; and they issue citations to entities that ignore those safe guards.

Green building is about optimizing the ecology of the built environment

The Coordinated Prevention Grant program has two grant cycles each biennium—the regular cycle and the off-set cycle. During the regular cycle, local governments can obtain a proportional allocation of CPG funds. During the off-set cycle, local governments compete for unrequested or unspent funds from the previous cycle, or for an award of funds from a special legislative proviso. The CPG off-set cycle began January 1, 2007 and ended December 31, 2008.

This 2007 off-set cycle totaled a $4,461,608 allocation (including a $4 million special legislative appropriation to implement the state Beyond Waste Plan). Ecology awarded 56 grants to Washington counties, cities, and health agencies during the off-set cycle.

Category of grants awarded:

Category	2007 Off-set cycle
Organics (agricultural, yard, and food waste)	1,728,089
Green Building (energy efficient, low-toxicity)	92,750
Residential Waste Reduction/Recycling	523,307
Commercial Waste Reduction/Recycling	445,370
Solid Waste Enforcement	233,500
Moderate Risk Waste Collection/Disposal	1,423,592
Total	**$4,641,608**

Figure 15: Coordinated Prevention Grant Program Awards-Grant Cycle 2007-2008

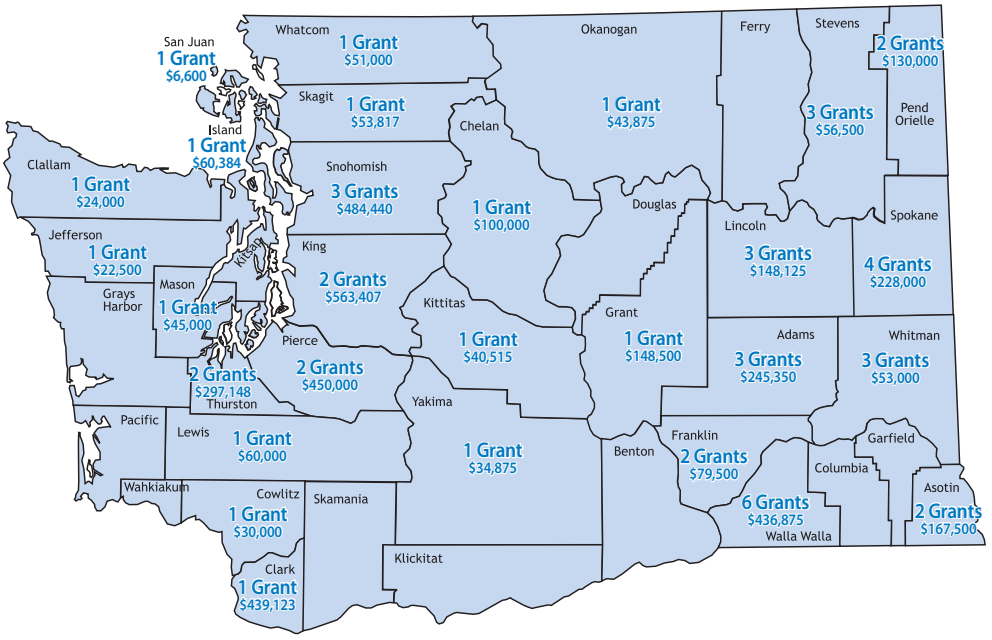


Table Number 9: Coordinated Prevention Program Grants-Fiscal Year 2007

County	Recipient	Grant Number	Total Project Cost	Local Toxics Control Account Amount
*All of the amendments that were written were done in FY 08				
Adams	Adams County Public Works	G0700227	133,333	100,000
Adams	Adams County Public Works	G0700228	160,000	120,000
Adams	City of Washtucna	G0700233	33,800	25,350
Asotin	Asotin County Regional Landfill	G0700188	40,000	30,000
Asotin	Asotin County Regional Landfill	G0700232	183,333	137,500
Chelan	Chelan County Public Works	G0700150	133,333	100,000
Clallam	City of Port Angeles	G0700148	32,000	24,000
Clark	Clark County	G0700180	585,497	439,123
Cowlitz	City of Kelso	G0700181	40,000	30,000
Ferry	Ferry County Waste Management	G0700211	60,000	45,000
Franklin	Franklin County Solid Waste	G0700189	60,000	45,000
Franklin	Franklin County Solid Waste	G0700226	46,000	34,500
Grant	City of Royal	G0700241	19,099	14,324
Island	Island County Public Works	G0700178	80,512	60,384
Jefferson	Jefferson County Health Department	G0700169	30,000	22,500
King	Seattle Public Utilities	G0700141	417,876	313,407
King	King County Solid Waste	G0700155	333,333	250,000
Kitsap	Kitsap County Public Works	G0700144	200,000	150,000
Kitsap	Kitsap County Health District	G0700177	107,667	80,750
Kittitas	Kittitas County Solid Waste	G0700152	54,020	40,515
Lewis	Lewis Co Dept. of Public Works	G0700183	80,000	60,000
Lincoln	Lincoln County Public Works	G0700214	140,000	105,000
Lincoln	Lincoln County Public Works	G0700215	40,000	30,000
Lincoln	Lincoln County Public Works	G0700216	17,500	13,125
Mason	City of Shelton	G0700170	60,000	45,000
Okanogan	Okanogan County Department of Public Works	G0700151	58,500	43,875
Pend Oreille	Pend Oreille County Public Works	G0700217	40,000	30,000
Pend Oreille	Pend Oreille County Public Works	G0700240	133,333	100,000
Pierce	City of Tacoma	G0700182	500,000	375,000
Pierce	Tacoma Pierce County Health Department	G0700257	100,000	75,000
San Juan	San Juan Public Works	G0700142	8,800	6,600
Skagit	Skagit County Public Works	G0700179	38,423	28,817
Skagit	City of Sedro Woolley	G0700185	33,333	25,000
Snohomish	Snohomish County Solid Waste Management	G0700140	525,920	394,440
Snohomish	City of Marysville	G0700156	40,000	30,000
Snohomish	City of Everett	G0700172	80,000	60,000
Spokane	Spokane Regional Solid Waste	G0700187	200,000	150,000
Spokane	Spokane Regional Health District	G0700213	32,000	24,000
Spokane	Spokane Regional Health District	G0700230	40,000	30,000
Spokane	Spokane Regional Health District	G0700231	32,000	24,000
Stevens	Stevens County Dept. of Public Works	G0700186	33,333	25,000
Stevens	Stevens County Dept. of Public Works	G0700209	12,000	9,000
Stevens	Stevens County Dept. of Public Works	G0700210	30,000	22,500
Thurston	Thurston County Public Works	G0700147	226,223	169,667
Thurston	Thurston County Water & Waste Management	G0700171	169,975	127,481
Walla Walla	Walla Walla County - Yard Waste Project	G0700159	10,500	7,875
Walla Walla	Walla Walla County -Green Waste Transfer	G0700160	300,000	225,000
Walla Walla	Walla Walla County -Plan Update	G0700161	12,000	9,000
Walla Walla	Walla Walla County - Freon Remover	G0700162	30,000	22,500
Walla Walla	Walla Walla County - Mercury	G0700163	20,000	15,000
Walla Walla	Walla Walla County - Food Waste	G0700164	210,000	157,500
Whatcom	Whatcom County Public Works	G0700139	68,000	51,000
Whitman	Whitman County Public Works	G0700218	30,667	23,000
Whitman	Whitman County Public Works	G0700229	26,667	20,000
Whitman	Whitman County Public Works	G0700239	13,333	10,000
Yakima	Yakima County	G0700168	46,500	34,875
Total Coordinated Program Prevention Grants-Fiscal Year 2007			**$6,188,811**	**$4,641,608**

This house at 26th Avenue in West Seattle is part of a deconstruction pilot project by Seattle Public Utilities (G0700141) to measure the costs and benefits of salvaging and recycling used building materials. During the deconstruction the different layers of the structure are removed and source separated into reusable and recyclable materials. The resulting frame is then separated and denailed by Earthwise and the ReStore for use as "new" lumber.

City of Federal Way (G0600202) conducts recycling collection events in the spring and fall each year. Pictured here, some of the 307 tons of materials collected at their events held in 2006 and 2007.

Snohomish County (G0700140) supported the **Pharmaceutical Take Back Program** known as PH:ARM (Pharmaceuticals from Households: A Return Mechanism). Pictured here are Brent Olsen (a pharmacist), and Alice Chapman (King County) screening pharmaceuticals from the Group Health collection bins.

Public Participation Grants Overview

The Public Participation Grant (PPG) Program provides citizen groups and not-for-profit organizations with funding support to participate in the decision-making process for formal cleanup projects, or to motivate people to change their behavior and to take action to improve the environment and protect their health. The projects create awareness of the causes and costs, and of methods to prevent pollution.

Public Participation Grants are funded from one percent of each of the Local and State Toxics Control Accounts. To qualify for a PPG, applicants must propose a vigorous, appropriate project that will help their target audiences take responsibility for environmental improvement and protection. The applications are accepted only once each biennium, and each competes against all other applicants for project funding.

Ecology offered PPG funds to 31 applicant projects at the beginning of the previous fiscal year. In Fiscal Year 2007, we wrote one new agreement and ten formal amendments, obligating an additional $154,715 to PPG projects statewide. All PPG projects for the 2005-2007 biennium were completed in Fiscal Year 2007.

Fourteen of the grant projects promoted public participation in a Hazardous Substance Release Site cleanup process. These grant projects inform and encourage citizen involvement in Ecology's decision-making points throughout the formal cleanup process.

Seventeen grants helped fund pollution prevention projects and events. These grant projects educate people about how their choices impact our environment, and they teach other options (behavioral changes) to conserve resources and prevent polluting habits. These grant projects tackle a wide range of pollution prevention categories including:

- Toxics reduction in the home and the environment.
- Puget Sound protection and restoration.
- Waste Reduction, Reuse, and Recycling.
- Green Building educational outreach.
- Electronic products take-back outreach.
- Organics waste composting education.

Public Participation Grants - Samples of Fiscal Year 2006-2007 Projects

Beyond Waste Goal: Reducing Small-volume Hazardous Materials and Wastes: To eliminate the risks associated with products containing hazardous substances.

- **Washington Toxics Coalition** – Provide the educational tools to increase awareness of the dangers of pesticides and hazardous household cleaning products and know that there are options to using these products. Expand the Pesticide Free Zone campaign, improve the Toxics Hotline, and broaden their website services. (Grant # G0600001)
- **Walla Walla Resource Conservation Committee** – Educate the public on ways to reduce, reuse, and recycle; and sponsor electronics (computer) recycling events in Walla Walla. (Grant # G0600004)
- **RE Sources for Sustainable Communities** – Provide education and outreach about computers as hazardous wastes; and establish a computer recycling program at the Bellingham RE Store. (Grant # G0600005)
- **Automotive Recyclers** – Provide vehicle recyclers statewide with free comprehensive cross-media hazardous waste, stormwater, and air emissions management inspections and technical assistance in order to reduce the release of hazardous substances. (Grant # G0600006)
- **Spokane Neighborhood Action Programs** – Increase the knowledge and practice of the "Living Green Program" among all residents through educating the communities with workshops, classes, and at-home parties, and training educators. (Grant # G0600008)
- **Puget Soundkeeper Alliance** – Through the involvement of the counties' EnviroStars program, promote reduction and proper management of hazardous wastes through outreach to marinas in Puget Sound. (Grant # G0600013)
- **Eco Solutions** – Provide education and outreach about the effects of toxic lawn and garden chemicals and emissions on human health and the environment in Kitsap County. (Grant # G0600305)

Public Participation Grants - Samples of Fiscal Year 2006-2007 Projects continued...

Beyond Waste Goal: Making Green Building Practices Mainstream – To eliminate construction and demolition waste, conserve and protect materials and resources, and reduce the use of hazardous materials and therefore exposure to toxins.

- **Economic Development Council of Snohomish County for Sustainable Development Task Force** – Educate communities, builders, developers and governing bodies about the benefits of sustainable building and assist in the development of a plan that promotes sustainable planning, design and construction. (Grant # G0600127)
- **Olympia Master Builders** – Promote construction using resource-efficient building practices. Educate builders on how to reduce construction waste, use energy-efficient building materials, and encourage participation in the Built Green program. (Grant # G0600132)

Beyond Waste Goal: Current Solid Waste System Issues – Projects related to strengthening the existing solid waste management system.

- **Olympic Environmental Council** – Community involvement in the cleanup of two landfills related to the Rayonier Mill cleanup site. (Grant # G0600011) (Also listed under site cleanup grants for the Rayonier Mill site.) The landfill component of the grant work is related to the Beyond Waste initiatives.)
- **The Columbia Gorge Ecology Institute** – Promote solid waste education, community sustainability, and natural resource stewardship by implementing "The SECRETS" program in classrooms. (Grant # G0600016)
- **Methow Recycles** – Expand participation in recycling with Methow Recycles by educating businesses and residents about their recycling options and offer new avenues for recycling. (Grant # G0600047)
- **South Sound Services** – Effectively reach the senior and disabled populations who are not reached by current waste reduction and recycling education efforts. (Grant # G0600334)

Other Sustainability-Focused Pollution Prevention and Education Projects

- **Northwest Renewable Energy Festival** – Establish a Sustainability Resource Center that provides free information, education, and workshops. Hold an annual festival which demonstrates emerging technologies to help reduce waste and conserve resources. (Grant # G0600002)
- **Environmental Information Cooperative** – Train educators in special stream pollution identification and pollution prevention, and incorporate new knowledge into classroom curriculum, expanding participating schools to 6 schools and 17 classes. (Grant # G0600007)
- **WA Childcare Resource & Referral Network** – Provide outreach and education to childcare providers on the Safe Soil Program related to the hazardous outfall materials from the Tacoma Smelter. (Grant # G0700091)
- **Far West Agribusiness Association** – Increase recycling of pesticide containers through education and outreach to the commercial pesticide users. (Grant # G0600280)

Citizen Involvement in Hazardous Waste Site Cleanups

- **The Lands Council** – Education and outreach to low-income families (Eastern European, Asian, and Tribal communities) and the general public about possible health risk factors associated with exposure to contaminants while recreating on beaches and fishing waters of the Spokane River. (Grant # G0600003)
- **Lake Roosevelt Forum** – Provide meetings, workshops, conferences and tours for citizens surrounding Lake Roosevelt to increase their understanding of the remedial investigation and feasibility study being conducted by USEPA. (Grant # G0600009)
- **People for Puget Sound** – Continue to educate the neighborhoods about the Duwamish River on the progress of the river's cleanup, and encourage residents' involvement. (Grant # G0600010)
- **Olympic Environmental Council** – Continue to educate the residents of Port Angeles about the cleanup process of the Rayonier Mill site and two associated landfills, and encourage their involvement in voicing community values to be incorporated into the final cleanup decisions. (Grant # G0600011)
- **WA Physicians for Social Responsibility** – Provide the educational tools that explain the human and environmental history of Hanford and the challenge of cleaning up its burden of radioactive waste, and encourage citizens to become participants in decisions about the Hanford cleanup. (Grant # G0600014)

- **Citizens for a Healthy Bay Protect the post**-Superfund health of Commencement Bay, surrounding waters and habitat through education, hands-on citizen and school involvement, and by initiating sustainable practices. (Grant # G0600015)
- **Pacif c Rivers Protection League** – Provide information about the Hanford Tank cleanup activities with interested organizations and schools to encourage public interest and support. Will take a traveling road show to schools and will develop new learning packages for school districts. (Grant # G0600052)
- **Brackett's Landing Foundation** – Continue to monitor cleanup progress at the UNOCAL site. Educate the community about the status and progress of the cleanup. (Grant # G0600097)
- **Georgetown Community Council** – Provide informational meetings and workshops for the community about the cleanup process of the Phillip Services Corporation site. (Grant # G0600110)
- **Columbia Riverkeeper** – Educate and motivate the public to become active participants in the Hanford cleanup process. Focus will be on risk assessments for the River Corridor and the 200 area, appropriate cleanup for the 300 area, waste sites assured to have comprehensive assessments on waste streams, and tank waste EIS is tracked to assure protection of groundwater and the Columbia River. (Grant # G0600148)
- **Skykomish Environmental Coalition** – Continue to provide information to the community and encourage involvement in decision-making processes to clean up the old BNSF refueling and maintenance site in Skykomish. Excavating the river and Levee Area and will begin the actual cleanup of the site. (Grant # G0600269)
- **Heart of America** – Ensure public values are heard and incorporated into the decision-making process for the cleanup of the Hanford site. (Grant # G0600269)
- **Center for Justice** – Engage the community in the Spokane River cleanup process by using the media to focus attention on the river cleanup. (Grant # G0600285)
- **Bellingham Bay Foundation** – Provide education and outreach on the cleanup of Whatcom Waterway. (Grant # G0600370)

Public Participation Grants Fiscal Year 2007 Funding	Local Toxics Control Account FY 2007		St State Toxics Control Account FY 2007		Total
WA Child Resource & Referral [#G07000091]	8,000	+	0	=	8,000
2006 PPG Amendments	11,715	+	135,000	=	146,715
2007 PPG subtotals	19,715	+	135,000	=	154,715
On-going PPG 06-07	770,000	+	332,606	=	1,102,606
Total 2006-07 PPG	**$ 789,715**	**+**	**$ 467,606**	**=**	**$1,257,321**

Statewide Oil Response Equipment Caching

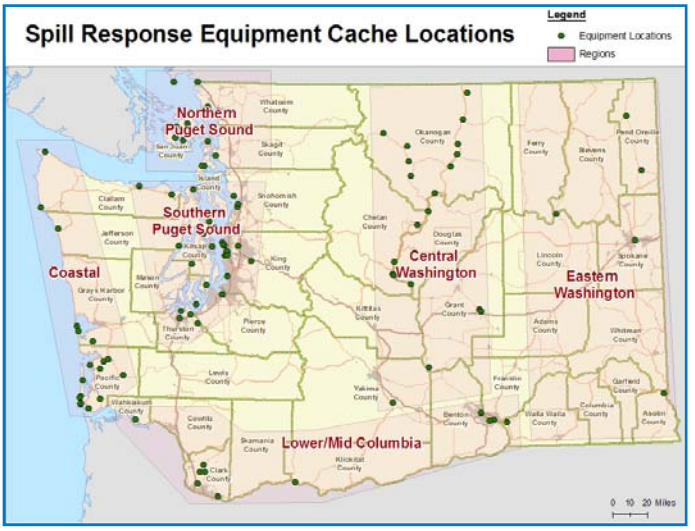
During the 2006 legislative session, the Spill Prevention, Preparedness and Response Program received a $1,450,000 Local Toxics Control Account appropriation to provide oil spill response equipment grants to local governments and tribes throughout Washington. The equipment was provided to local governments who were at risk of significant spills and who could demonstrate their ability to deploy the equipment in order to contain an oil spill. The equipment consisted of oil containment booms, adsorbent material, boom anchoring systems, protective clothing and decontamination supplies packaged inside a trailer. Local governments who were awarded grants also received training on how to safely use the equipment.

The benefit of statewide equipment caching is getting oil spill response equipment to a spill scene faster. Because of their location, local governments and tribes around the state can typically respond to spills faster than state or federal responders or contractors. The result of quicker spill response provides several benefits, including:

- Quicker containment of oil on water.
- Reduced environmental impacts.
- More efficient cleanup operations.
- Lower cleanup costs.
- Reduced impact to local communities.

Since we began placing the oil spill equipment, it has been deployed over 40 times by local communities--resulting in saving over $1 million in cleanup costs and untold damage to the environment. Additionally, the program has trained over 1,000 first responders around the state to rapidly and safely respond to oil spills.

Figure 16: Spill Response Equipment Cache Locations



Using oil containment boom to prevent the spread of oil spill at Moses Lake

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