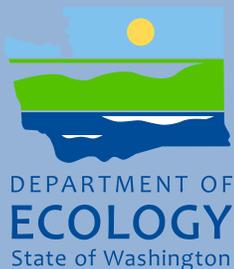


# Hazardous Waste and Toxics Reduction Program Plan

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## Publication and Contact Information

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# Program Overview

The Hazardous Waste and Toxics Reduction (HWTR) Program envisions a society where waste is viewed as inefficient and where most wastes and toxic substances have been eliminated. To achieve this vision, HWTR set goals to foster sustainability, prevent pollution, and ensure safe waste management of the millions of pounds of hazardous substances used and disposed of each year by businesses and households in Washington State.

## Program Mission

*Foster sustainability, prevent pollution, and promote safe waste management.*

## Environmental Threats

Reducing toxic threats is one of Ecology's priority initiatives. There are risks in using and storing—not just disposing of—hazardous chemicals. Some chemicals (such as cleaning products or yard chemicals) can pose an immediate health threat during use, while others pose a risk as products break down, or when they are disposed. Some chemicals build up gradually in our bodies and the environment—for example, persistent, bio-accumulative toxins (PBTs), and heavy metals.

When hazardous chemicals and products are no longer usable, they become hazardous wastes, or dangerous wastes as they are known in Washington. Washington law uses the term dangerous waste. Federal law uses the term hazardous waste. Washington's definition of dangerous waste includes some wastes that are not included in the federal definition.

When dangerous or hazardous wastes are mismanaged, they get into water and soil where they may harm human health and the environment, or cause costly cleanup sites. While Washington has had over 6,400 toxic sites cleaned up or reported cleaned up in the state, nearly 300 new sites are reported each year. The costs of cleaning up toxic sites range from tens of thousands to millions of dollars per site. When responsible parties aren't able to pay for cleanups, the burden often falls to taxpayers.

Around 1,200 businesses and facilities statewide produce most of the dangerous waste—over 100 million pounds of *recurrent* dangerous waste each year. Recurrent wastes are planned, predictable by-products of industrial processes. To ensure safe dangerous waste management at these sites, HWTR conducts inspections and provides compliance and pollution prevention technical assistance. We also work with local governments to ensure safe handling of dangerous waste produced by thousands of smaller businesses—known as Small Quantity Generators—in Washington. Safe dangerous waste management is essential to protect human health and the environment, but avoiding the use of toxic chemicals in the first place is the smartest, cheapest, and healthiest approach.

The risk from toxic chemicals is not only from leaking drums at an industrial site. Each of us affects the environment, our own health, and the health of others when we buy and use products that contain toxic chemicals. We find hazardous chemicals in our air, water, soil, and in our bodies—in part because they are ingredients found in the products we use in our homes, yards, and offices.

While reducing the use of toxic chemicals and ensuring safe management of dangerous waste are our two highest priorities, Ecology also recognizes the continuing economic challenges facing the state. Many businesses have had to cut positions focused on environmental issues and need help now more than ever. Similarly, our program has had to cut several positions and streamline our work efforts. Still, our focus remains on helping the public and businesses make informed choices about the use of toxic chemicals and their ultimate safe disposal.

# Highlighted Actions to Meet HWTR Mission and Priorities

## Focus on Compliance

While we work to prevent tomorrow's toxic threats, we strive to manage today's dangerous waste safely.

Routine inspections are a critical regulatory line of defense between the millions of pounds of dangerous waste produced in Washington and environmental contamination. Mismanagement of hazardous waste:

- Harms people and wildlife.
- Allows toxic chemicals to contaminate our water, soil, and air.
- Pollutes stormwater runoff.
- Creates expensive cleanups.

Formal state dangerous waste inspections at larger, regulated businesses and facilities are critical to environmental health. These businesses handle the bulk of the state's toxic chemicals. Inspections can be unannounced or scheduled.

During the 09-11 biennium, HWTR staff performed over 500 compliance inspections at facilities that generate or manage dangerous waste. These inspections resolved nearly 500 serious environmental threats. Such threats have the potential to pollute our environment through leaks or spills from unsafe storage methods or containers.

The inspections also revealed how well facilities complied with state and federal regulations. Unfortunately, we found serious environmental violations at almost 60 percent of regulated businesses we inspected in 09-11. This is one of the highest rates in 20 years. With a stronger field presence ten years ago, dangerous waste inspectors found serious environmental threats at 27 percent of businesses. Why the increase? An Environmental Protection Agency (EPA) study of Washington businesses showed a 20 percent increase in environmental threats when more than three years passed between inspections. Not surprisingly, our low year for number of inspections was 2007 – with a peak in significant violations three years later, in 2010. New funding for four Puget Sound-area compliance inspectors should help improve this current trend.

When technical assistance and voluntary compliance fail, Ecology uses formal enforcement to halt significant violations. HWTR officials issued 12 penalties in the 09-11 biennium. This is on par with the program's historic average of 6-8 penalties issued each year. When monetary penalties are received, they are deposited into the State Toxics Control Account where they fund programs across several state agencies.

## Local Source Control Program

Businesses of all types and sizes produce and use a variety of toxic chemicals. Even small amounts of mismanaged toxic chemicals can create contaminated sites and pollute stormwater. Many smaller businesses had never had an environmental inspection or technical assistance visit until Ecology created the [Local Source Control Program](#).

In 2008, Ecology established performance contracts with 12 Puget Sound counties (in addition to Spokane County). These contracts provide for Local Source Control Specialists to conduct technical assistance visits at small businesses. These technical assistance visits help small businesses comply with dangerous waste and stormwater control laws.

By the end of the 09-11 biennium, Local Source Control Specialists visited over 6,300 small businesses. This service helped them better manage their stormwater and dangerous wastes. Almost half of these visits found and addressed minor dangerous waste, stormwater, or spill violations. In the 11-13 biennium, the program will add additional local government partners and exceed 10,000 total site visits.

## Reducing Risk through Technical Assistance to Businesses

Face-to-face visits result in voluntary compliance rates of 90 percent or higher. As a result of technical assistance, hundreds of businesses in Washington have saved money and increased their competitive advantage by reducing their use of toxic chemicals, ensuring better compliance with state dangerous waste laws.

The keys to breaking the cycle of ongoing cleanup expenses are to use fewer toxic chemicals and safely manage those hazardous substances for which no substitute is available. Facilities that produce more dangerous wastes tend to run a higher risk of mismanaging that waste. Mismanaged wastes can contaminate the environment and may eventually require cleanup.

During the 09-11 biennium, HWTR staff conducted over 1,100 business assistance visits. We provided business-specific advice on how to:

- Reduce the use of hazardous materials.
- Avoid generating waste.
- Manage dangerous waste safely.

We focused on improving operations and maintenance in industries with the highest rates of waste generation and non-compliance. We showed their staff how to:

- Achieve energy savings.
- Conserve water.
- Prevent storm water contamination.
- Use fewer toxic chemicals.

*“We can transition to a society where waste is viewed as inefficient, and where most wastes and toxic substances have been eliminated. This will contribute to economic, social, and environmental vitality.”*

For example, Crown Beverage Packaging, Inc. is a can manufacturing facility in Olympia. In 1991, they were a large quantity generator of dangerous waste. By working with Ecology, Crown lowered their use of hazardous substances and generation of dangerous waste. They did this while keeping relatively constant production levels. In their most recent pollution prevention plan, Crown reduced dangerous waste generation by 70 percent and water consumption by 2.5 million gallons per year. A recent energy audit expects to net Crown over \$160,000 per year in savings.

Ecology is also working with businesses to reduce the use of PBT chemicals and heavy metals such as lead, mercury, and cadmium. By the end of the 11-13 biennium, our [Toxic Metals Prevention Project](#) expects to perform 300 site visits resulting in over 150,000 pounds of reductions in lead, mercury, cadmium, and chromium from Washington businesses.

## Safer Chemicals

There is increasing concern about toxic chemicals in consumer products at the state level. The effects of toxic chemical exposure to human health, the environment, and the economy are enormous—and largely avoidable through pollution prevention. People expect that products sold are safe and will not adversely

affect human health or the environment. While a chemical-by-chemical approach is important, Ecology also participates in national efforts to promote safer chemicals. A number of Ecology projects supporting safer chemicals began in 09-11, including:

- The [Toxics in Packaging Clearinghouse](#), which focuses on regulating toxic metals in packaging. Ecology is working with other states to monitor compliance with restrictions on these substances. The goal is to ensure they do not end up in consumer products packaging.
- Identification of the Quick Screen method to conduct safer chemical assessments by businesses and individuals. The method helps identify the highest-risk chemicals, supports the Children's Safe Product Act, and enables use by those with less time, resources, and expertise.
- A multi-state effort to reform the federal chemical management law (the [1976 Toxic Substances Control Act](#)). This includes developing states' principles on national chemical policy reform.
- A roadmap for advancing [green chemistry](#) as an economic driver in Washington State.
- Developing rules ([Better Brakes Law](#)) resulting in auto brake friction materials that eliminate or reduce copper, asbestiform fibers, cadmium, lead, and mercury. Currently these toxic substances are being washed off roads into streams, rivers, and Puget Sound.

## Pollution Prevention Planning

Pollution prevention reduces all types of waste, and conserves water, energy, and other resources. Since 1990, businesses that generate more than 2,640 pounds of dangerous waste per year, or are required to report as part of the national Toxic Release Inventory (TRI), must submit plans for voluntarily reducing their toxic substance use and dangerous waste generation.

Pollution Prevention Planning helps businesses reduce costs and avoid risk while protecting the environment. Over the past 20 years, these businesses have reduced their waste by more than 50 percent, and since 2005, reported \$45 million in pollution prevention savings. The actual total is probably much higher, since businesses are not required to report cost savings.

## Permitting and Corrective Action

Ecology issues permits to specially-designed dangerous waste treatment, storage, and disposal (TSD) facilities. The state's three commercial TSD facilities began permit renewals in the 09-11 biennium. These commercial TSDs handle millions of pounds of dangerous waste generated by other businesses or facilities in Washington. Ecology also oversees closure and necessary cleanup at these facilities. TSD facilities, mostly located near Puget Sound, are often contaminated and require some form of cleanup. This cleanup is known as corrective action.

Corrective actions are proceeding at 39 priority sites because of their significance as designated by EPA. Ecology expects to have these 39 cleanups finished or in maintenance mode by 2020. We completed an overall average of 75 percent of the work at these sites by the close of the 09-11 biennium. The full cleanup process takes 10-12 years to complete.

Human exposures are under control at 90 percent of these facilities. Contaminated groundwater is under control at 77 percent of the facilities. This exceeds EPA's national goals for 2011 of 65 and 55 percent, respectively. Cleanups are expensive, but we can recover most costs from the property owners. Once clean, these properties provide opportunities for habitat restoration, economic development, and public recreation.

## Access to Hazardous Substance and Waste Information

HWTR’s data systems gather, maintain, and report hazardous substance and dangerous waste information. We retrieve and report the data to individuals and businesses, emergency responders, and local government decision makers. Our Web site, printed materials, telephone information line, and program newsletter, *Shoptalk*, provide the most current hazardous substance and dangerous waste information. These resources help businesses and the public make informed decisions on the use and safe management of chemicals in Washington. During 09-11, we responded to over 700 information requests from citizens and businesses through the Toxic Free Tips information service. Our HWTR program Web sites logged more than 500,000 visits.

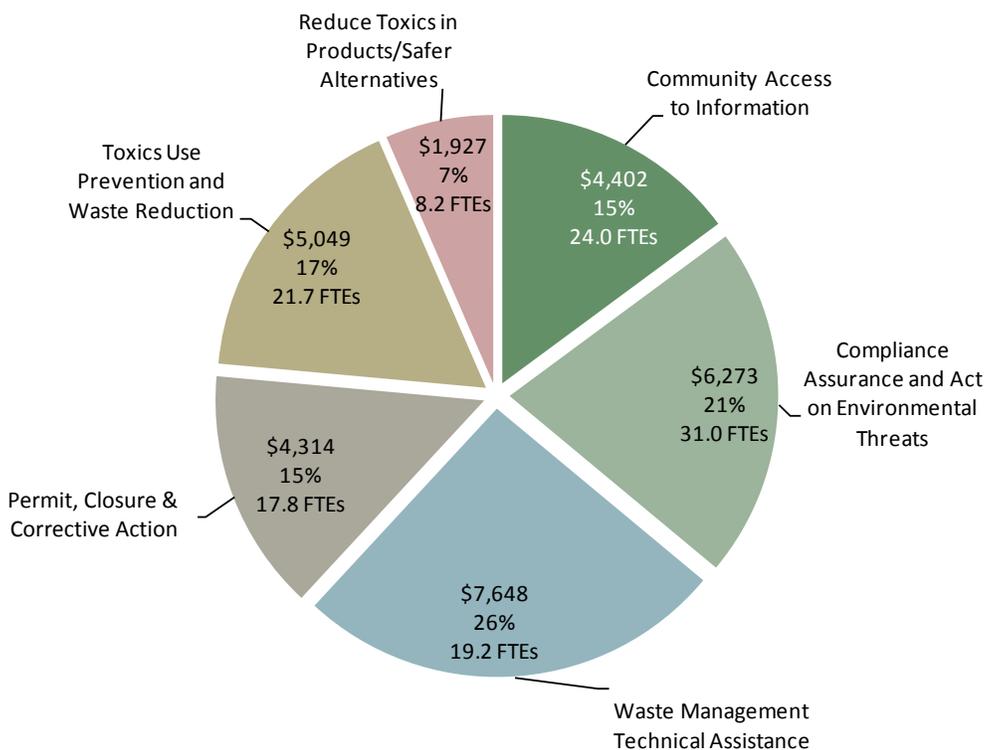
## Program Activities

The HWTR Program coordinates five priority activities to address cleanup and management of existing dangerous waste and prevent generation of future waste. The program uses a full array of skilled staff, laws, technical assistance, resources, voluntary projects, and measurements to track and report progress.

The HWTR Program budget comes from several fund sources. Budget amounts reflect full program effort, including section and program management. The “A022 Waste Management Technical Assistance” activity includes \$3.6 million planned as payments to local governments through the *Urban Waters* and *Local Source Control* initiatives.

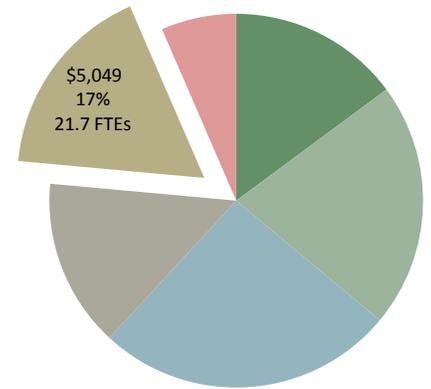
**Total 11-13 Operating Budget = \$29,613,348**

**Figure 1: HWTR Program Budget by Priorities/Activities** (thousands of dollars)



## Reduce the generation of hazardous waste and the use of toxic substances through technical assistance.

The state Hazardous Waste Reduction Act calls for the reduction of hazardous waste generation and the use of toxic substances and requires certain businesses to prepare plans for voluntary reduction. Ecology staff provide assistance through innovative programs for source and waste generation reduction, including more than 480 toxics-related technical assistance visits per year. Ecology also focuses on improvements in industries that have the highest rate of waste generation and non-compliance to help them achieve energy savings, water conservation, and reduced hazardous waste production.



### *Expected Results*

Toxics in products and the initial generation of dangerous waste is reduced resulting in less need for site cleanup, reduced public exposure, and helping save businesses money. This is accomplished through:

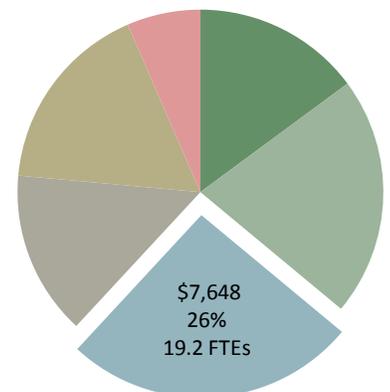
- Reducing dangerous waste generation by four percent each year (approximately four million pounds), resulting in cleanup and disposal cost savings for businesses, reduced public exposure, and fewer site cleanups.
- Receiving and reviewing 100 percent of pollution prevention (P2) plans (approximately 450) each year from businesses and facilities.
- Increasing the number of P2 opportunities implemented by businesses and reported to the National P2 Roundtable.
- Visiting or assisting 100 percent of pollution prevention planners using or producing waste containing lead, mercury, cadmium, or chromium.
- Documenting 150,000 pounds in lead, mercury, cadmium, and chromium reductions from businesses reporting through the Toxic Release Inventory, TurboWaste data system, or P2 Planning, or other sources if quantifiable.
- Conducting two to four detailed technical assistance projects each year.
- Conducting 20 energy assessments through an EPA grant.
- Prototyping the Global Reporting Initiative (GRI) as a P2 plan equivalent.

### *Performance Measures*

- Pounds of dangerous waste generated.

## Increase safe hazardous waste management.

Ecology provides education and technical assistance to thousands of businesses on safe hazardous waste management. Even though formal enforcement work is essential to maintaining compliance with hazardous waste regulations, workshops and technical assistance visits can also help bring facilities into regulatory compliance using much fewer resources. Ecology contracts with local governments to hire staff to explain hazardous waste requirements to small businesses that otherwise would go uninspected. Safe management of hazardous waste protects the public and the environment, and allows the state to avoid significant cleanup costs.



### ***Expected Results***

Dangerous waste is safely managed, the public is protected, and businesses comply with state hazardous waste laws. This is accomplished through:

- Conducting 520 compliance-related technical assistance visits.
- Helping businesses determine how to safely manage their dangerous wastes and reduce the use of toxic chemicals.
- Creating a Web-based dangerous waste workshop module for business technical assistance.
- Developing policy guidance for hospitals, used paint recycling, and auto shred residue.

### ***Performance Measures***

- Number of toxics-related technical assistance visits.
- Number of Ecology funded small business technical assistance visits conducted by local government.

## **Increase compliance and act on environmental threats from hazardous waste.**

Mismanaged dangerous wastes and poor compliance can harm people and contaminate soil and water. Ecology conducts yearly formal compliance enforcement inspections at large and medium quantity generators and hazardous waste management facilities to ensure compliance with state and federal regulations. Approximately 1,200 large and medium quantity generators produce most of the dangerous waste in Washington State—over 100 million pounds each year. A credible, formal enforcement capability is essential to preserving the effectiveness of technical assistance and informal enforcement efforts. While staff do formal enforcement infrequently, repeated refusal or inability of a facility to correct violations and come into compliance with the regulations will escalate to formal enforcement actions.

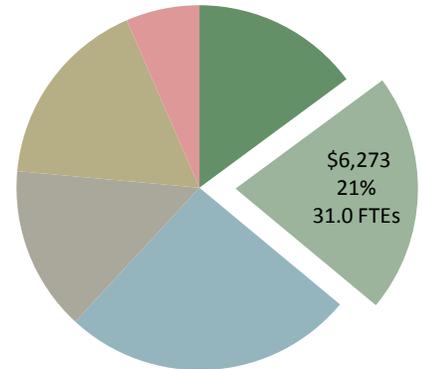
### ***Expected Results***

Large and medium quantity generators and dangerous waste management facilities are in compliance with state and federal regulations. This is accomplished through:

- Conducting 345 compliance inspections in fiscal year 2012 and 410 compliance inspections in fiscal year 2013.
- Responding to and closing out 100 percent of dangerous waste related complaints (approximately 120-180 complaints per year).
- Utilizing streamlined enforcement and settlement approaches as opportunities arise.
- Issuing timely enforcement actions resulting in a deterrent to businesses and changed behavior.

### ***Performance Measures***

- Number of significant toxics-related environmental threats resolved.
- Percent chance of finding a significant environmental threat during a compliance inspection.



## **Prevent hazardous waste pollution through permitting, closure, and corrective action.**

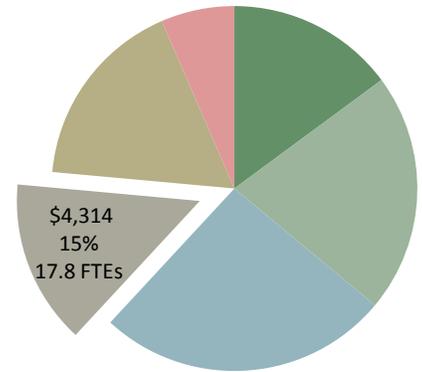
TSD's treat, store, or dispose of large volumes of dangerous waste. They must obtain a permit to ensure their design, construction, maintenance, and operating procedures protect public health and the environment. Washington currently has 14 active TSD's that are either in "interim status" or have a final permit.

Because TSD's handle such a large volume of dangerous waste – over 65 million pounds per year – they are inspected annually. TSD's are required to have closure plans to effectively deal with the end of their waste management activities. Environmental contamination found at any time before closure requires a corrective action cleanup plan. Ecology is working on 22 high-priority corrective action cleanup sites right now.

**Expected Results**

Facilities that treat, store, or dispose of dangerous wastes are constructed and operated to prevent soil, water, or air contamination. This is accomplished through:

- Timely issuing three high priority draft operating permits for facilities that treat, store, or dispose of dangerous wastes.
- Continuing to meet or exceed EPA's 2012 cleanup goals for protecting human health, controlling migration of contaminated groundwater, and sites reaching “remedy construction complete.”
- Acting on high priority permit modifications from facilities.
- Ensuring proper financial assurance requirements are in place at used oil processors and recyclers.



**Performance Measure**

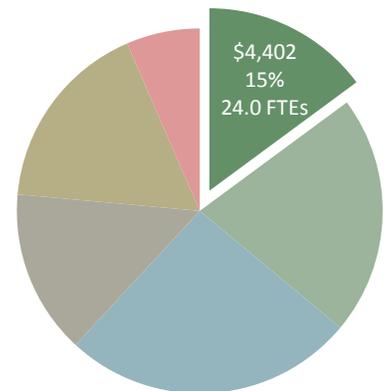
- Percent progress toward completed corrective action.

**Improve community access to hazardous substance and waste information.**

Ecology uses automated data systems to:

- Track compliance and technical assistance visits.
- Measure pollution prevention and compliance progress.
- Track amounts of dangerous waste generated each year and its proper transport, treatment, and/or disposal.
- Identify toxic chemicals released and stored by businesses.
- Track information on facilities that prepare pollution prevention plans and pay fees.

These data systems provide Ecology, the public, and local governments with accurate information about the type, location, and source of hazardous substances that affect them. According to federal and state community right-to-know laws, Ecology also responds to public inquiries about toxic chemicals and provides a [Web site](#) for this purpose.



**Expected Results**

Dangerous waste and chemical data (type, location, volume, etc.) is readily available to emergency responders, and local governments. Citizens and decision makers have access to dangerous waste and toxic chemical data in their communities. This is accomplished through:

- Developing and distributing online the ["Chemicals in Washington" report](#).
- Responding to 100 quarterly information requests from citizens and businesses through the Toxic Free Tips phone line and [email](#).
- Increasing the [Shoptalk](#) electronic distribution list to 5,000 by July 1, 2013.
- Creating or updating 30 business publications each year and posting them to the Web for electronic distribution.

- Collecting and analyzing annual dangerous waste and “tier two” reports from facilities producing hazardous waste and storing dangerous chemicals.
- Establishing and implementing a marketing strategy for sharing [pollution prevention success stories](#).

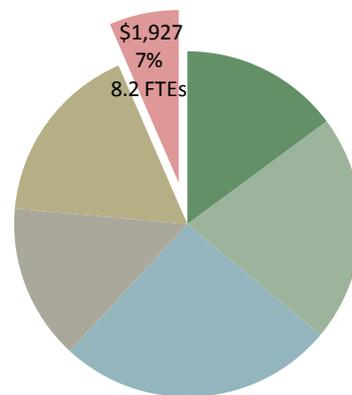
***Performance Measure***

- Number of visits to HWTR program Web sites.

**Reduce Toxic Chemicals in Products and Promote Safer Alternatives.**

Toxic chemicals in products are polluting our environment and have the potential to harm humans. Reducing toxic chemicals in products over time will lower risks to people and the environment. To make significant progress toward achieving this goal requires several strategies:

- Identifying chemicals of concern in consumer products and strengthening the ability to gather data on the presence of these chemicals in products and the environment;
- Improving tools and authorities to promote safer alternatives to identified chemicals;
- Promoting green chemistry;
- Promoting environmentally preferred purchasing; and
- Improving education, outreach, and communication.



Reducing toxic chemical threats is the smartest, cheapest, and healthiest approach to protecting people and the environment.

***Expected Results***

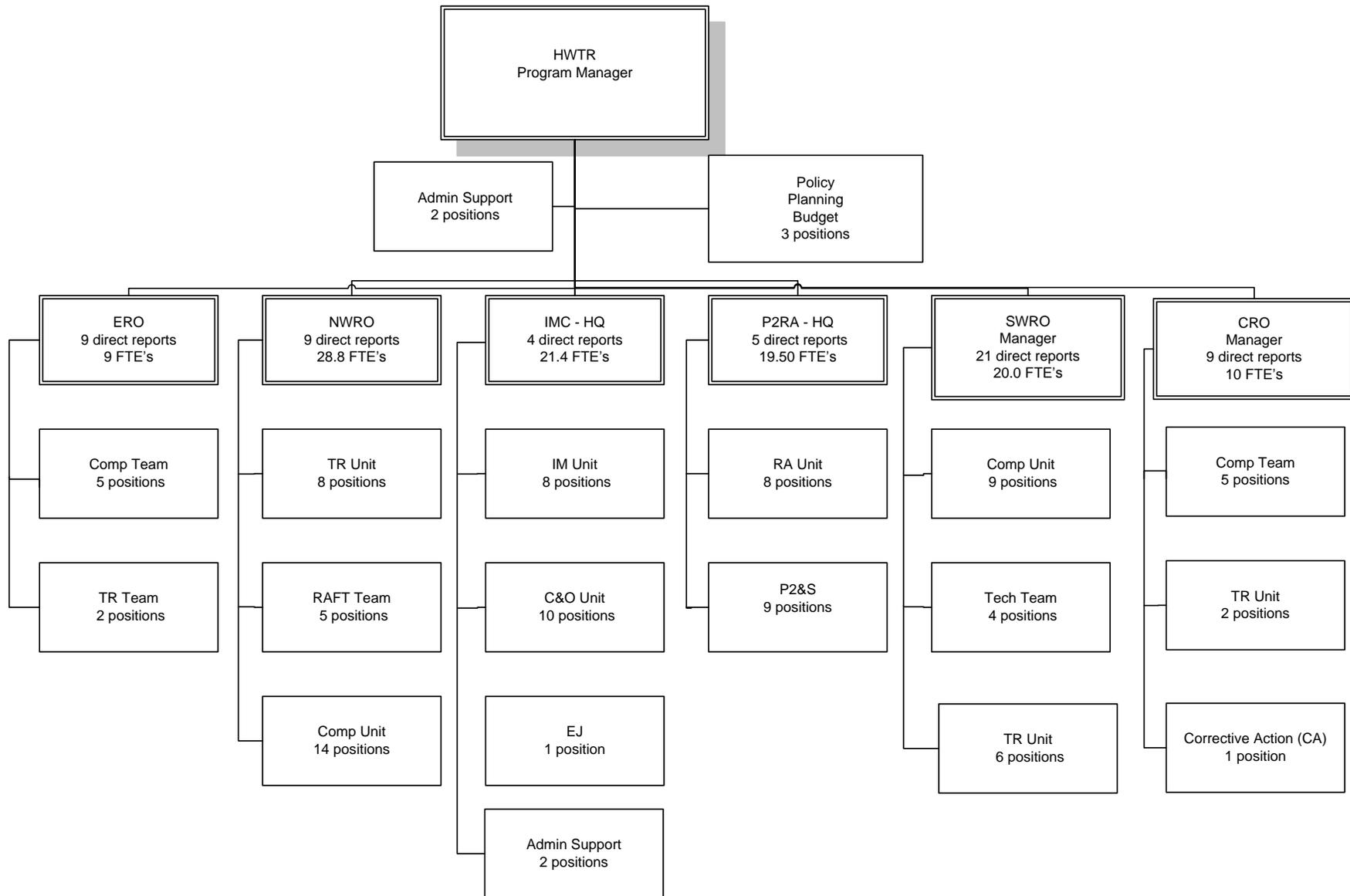
Toxic chemicals in products are reduced over time to lower health risks to people and the environment. This is accomplished through:

- Forty million pounds of electronics containing toxic substances collected through the [E-Cycle Washington](#) Program.
- Expanding product stewardship program to include paint, carpets, and pharmaceuticals.
- Collection and capture of an additional 4,000 pounds of mercury.
- Collection, evaluation, and information shared on the presence of chemicals of high concern for children in children’s products.
- Assurance that state principles for chemical policy are incorporated in the federal Toxics Substances Control Act (TSCA) reform.
- Development of protocols, in coordination with other states, for identifying safer alternatives for toxic chemicals of concern in products and manufacturing.
- Development of a chemical alternative assessment guidance document.
- Development of a green chemistry “road map” for Washington.
- Amendments to the Children’s Safe Product Act passed to require manufacturers to use the protocol to assess safer alternatives to toxic chemicals of concern.
- State and local governments improve purchasing practices of environmentally preferred products.

***Performance Measures***

- Pounds of hazardous materials reduced.
- Pounds of mercury collected and/or captured.

## HWTR Program Organizational Chart November 2011

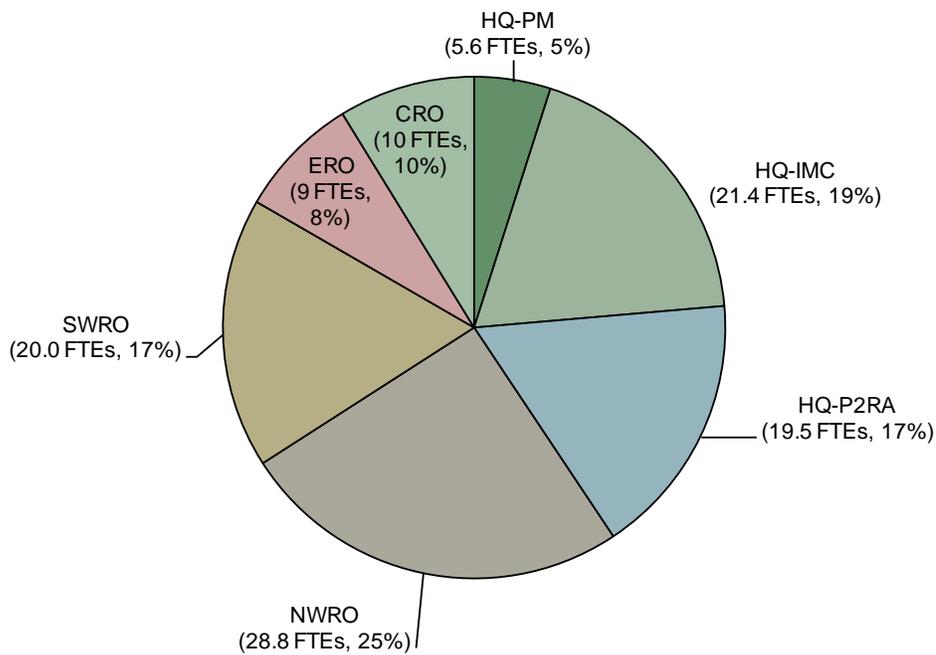


# Program Organization

The HWTR Program at a glance:

- Approximately 114 direct FTEs.
- About 60 percent are located in four regions (Northwest, Southwest, Eastern, and Central).
- Six sections (two at Headquarters and one in each region).
- See page 11 for program organizational chart.

**Figure 2: HWTR Program Resources by Location (114 FTEs total)**




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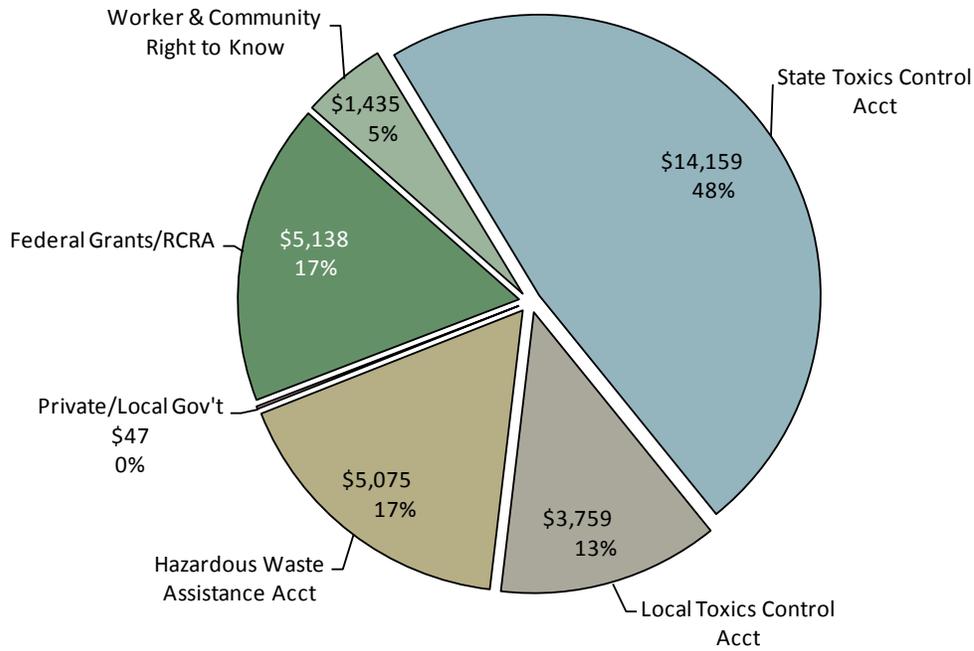
▪ Headquarters	46.5 FTEs, 41% of staff
▪ Regional offices	67.8 FTEs, 59% of staff

The HWTR Program conducts most policy and regulation development, program planning, and data management activities at headquarters. Most implementation activities, such as inspections, permits, enforcement, and cleanup review occur in the regional offices.

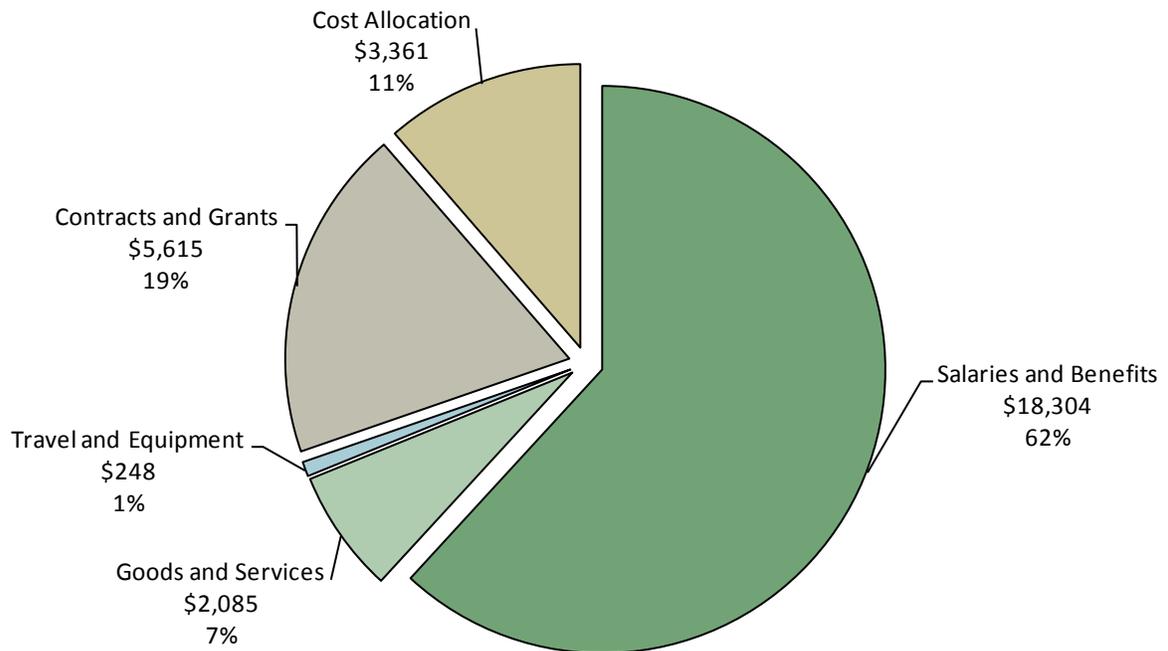
HWTR also houses agencywide activities, including Environmental Justice and coordination of the Performance Partnership Agreement with EPA.

# Program Budget

**Figure 3: HWTR Program Operating Budget by Funding Source** (thousands of dollars)



**Figure 4: HWTR Program Operating Budget by Object** (thousands of dollars)



# Principal Authorities used by the HWTR Program

## State Laws

- Hazardous Waste Management Act – Revised Code of Washington (RCW) 70.105 (1976)
- Solid Waste Act (Waste Reduction and Recycling) – RCW 70.95C (1980)
- Hazardous Substance Information Act – RCW 70.102 (1985)
- Hazardous Waste Cleanup (MTCA) – RCW 70.105D (1989)
- Worker and Community Right-to-Know Act – RCW 49.70 (1986)
- Hazardous Waste Reduction Act – RCW 70.95
- Hazardous Waste Fees – RCW 70.95E
- Technical Assistance Officers – RCW 43.12A
- Fertilizer Regulation Act – RCW 15.54

## Federal Laws

- Resource Conservation and Recovery Act (1980)
- Emergency Planning and Community Right-to-Know Act (1986)

## State Regulations

- Dangerous Waste Regulations – Washington Administrative Code (WAC) 173-303 (2009)
- Hazardous Waste Fees – WAC 173-305 (1992)
- Pollution Prevention Plans – WAC 173-307 (1991)
- Hazardous Chemical Emergency Response Planning and Community Right-to-Know Reporting – WAC 118-40 (1988)

## Acronym List

CA	Corrective Action	LSC	Local Source Control
CRO	Central Regional Office	NWRO	Northwest Regional Office
EPA	Environmental Protection Agency	P2	Pollution Prevention
EPCRA	Emergency Planning & Community Right to Know Act	P2RA	Pollution Prevention & Regulatory Assistance
ERO	Eastern Regional Office	P3	Pollution Prevention Planning
FTE	Full Time Equivalent	PBT	Persistent, Bioaccumulative, Toxic
HQ	Headquarters	RCW	Revised Code of Washington
HW	Hazardous Waste	SWRO	Southwest Regional Office
HWTR	Hazardous Waste & Toxics Reduction Program	TRI	Toxics Release Inventory
IMC	Information Management & Communication	TSD	Treatment, Storage, and Disposal
		WAC	Washington Administrative Code