WASHINGTON STATE DEPARTMENT OF ECOLOGY

Chemicals in Washington State Summary Report 2002

Toxics Release Inventory and Tier Two - Emergency and Hazardous Chemical Inventory

Department of Ecology
Hazardous Waste and Toxics Reduction Program
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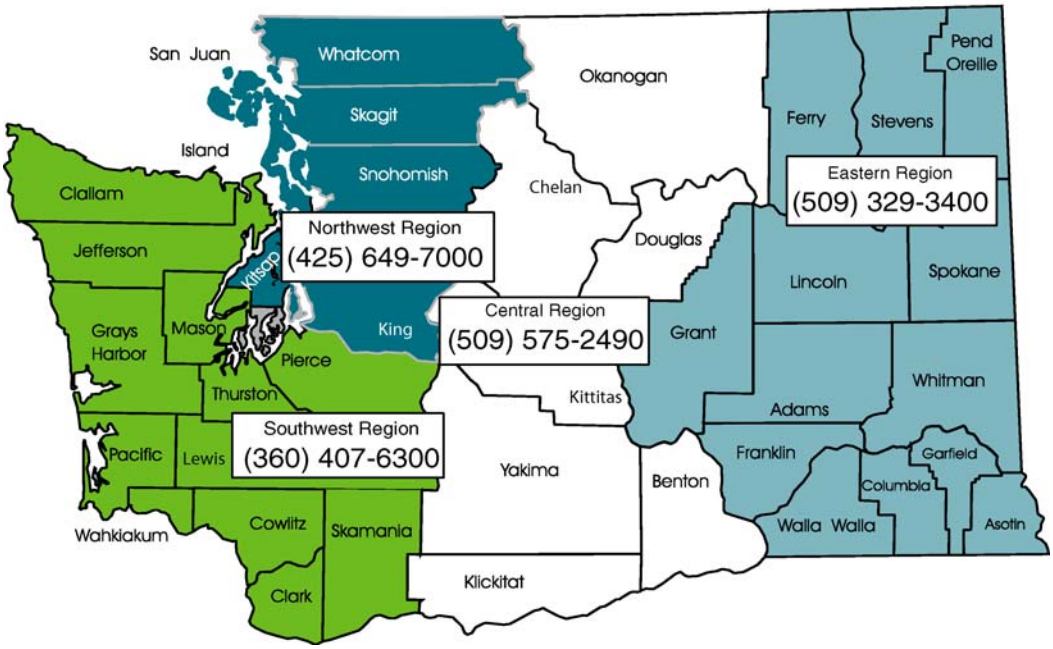

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WASHINGTON STATE
DEPARTMENT OF
ECOLOGY

Chemicals in Washington State Summary Report 2002

Toxics Release Inventory and Tier Two - Emergency and Hazardous Chemical Inventory

A Special Acknowledgement to: The EPCRA Team (Idell Hansen and Sadie Whitener) and HWTR Management

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Executive Summary

EPCRA contains five sections that deal with the various reporting requirements of businesses. A facility may be subject to one or all of the sections depending on the type of chemicals it uses and the quantities stored or released. This summary focuses the two annual EPCRA reporting requirements: Tier Two - Emergency & Hazardous Chemical Inventory reporting (Section 312) and Toxics Release Inventory reporting (Section 313) for 2002.

Statewide Summary of Tier Two - Emergency and Hazardous Chemical Inventory Reporting in Washington State, 2002

Nearly 3,500 facilities in the state of Washington reported storage of one or more hazardous chemicals at reported levels during 2002. Under Emergency Planning and Community Right-to-Know Act Section 312, Tier Two reporting requirements, the reportable threshold for all hazardous substances was established at 10,000 pounds stored at any one time and much lower thresholds for extremely hazardous substances.

In late February 1998, federal reporting thresholds for retail gas stations were changed to 75,000 gallons for gasoline and 100,000 gallons for diesel. Since then, in Washington, the number of reporting facilities has dropped from nearly 4,000 sites to about 3,500 sites, which decreased the volume of diesel fuels and gasoline reported. Still, two of the three most commonly reported hazardous chemicals were diesel fuel and gasoline.

Top Three Hazardous Substances Reported in Storage		
	Chemical	Times Reported
1	Diesel Fuel	1235
2	Gasoline	788
3	Propane	520

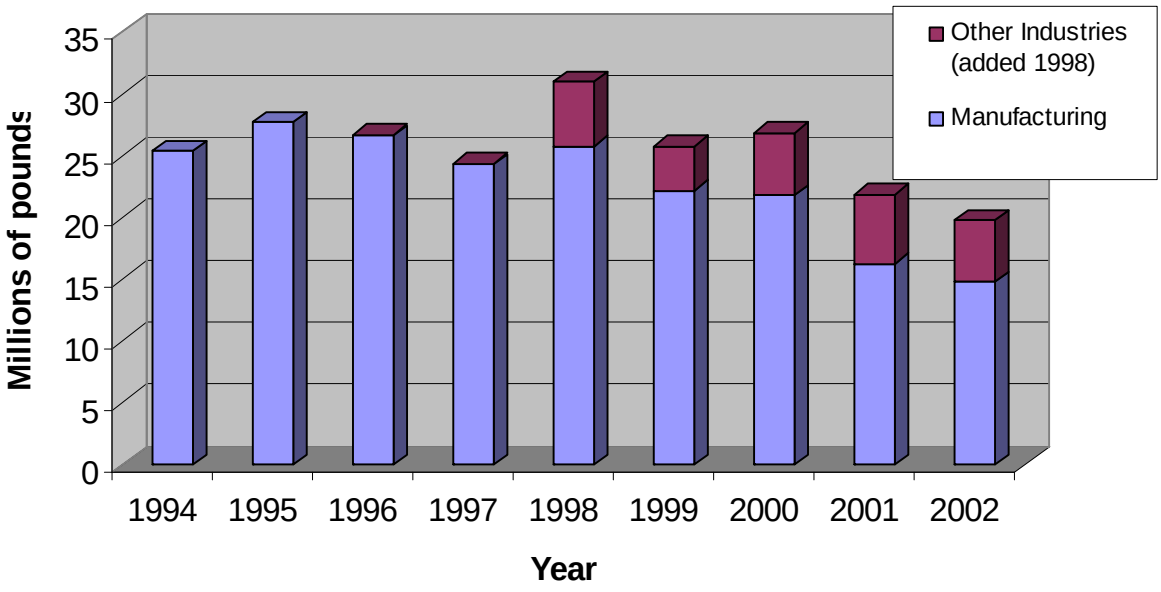
Federally designated "Extremely Hazardous Substances" (EHS) have significantly lower thresholds for reporting due to their acute risk to employees, the public and the environment. The most commonly reported EHSs were sulfuric acid, ammonia, and chlorine.

Top Three Extremely Hazardous Substances Reported in Storage		
	Chemical	Times Reported
1	Sulfuric Acid	1137
2	Ammonia	479
3	Chlorine	268

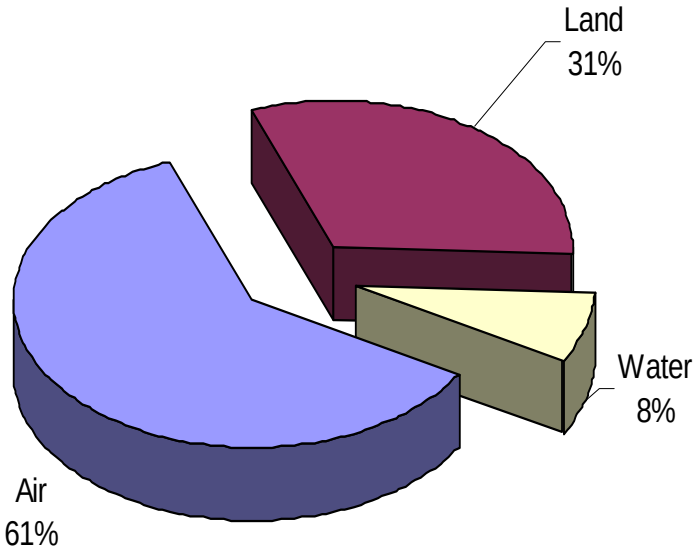
Statewide Summary of the Toxics Release Inventory (TRI) in Washington State, 2002

In the year 2002, 19.7 million pounds of toxic chemicals were reported released to the air, land and water in Washington State. This was a decrease of 2.5 million pounds from reported releases in 2001.

Since 1995, total releases of all reported chemicals by manufacturing sectors have decreased by over 46%.



Releases to Air, Water and Land, 2002



Top Releases

Top Three Industries Reporting Releases

Industry	Releases[mp]

Paper & Allied Products, decreased their total reported releases by about 400,000 pounds from 2001.

mp = millions of pounds

Top Three Facilities Reporting Releases

Facility	Releases[mp]
	4.6
Generation/Mining	
2 Weyerhaeuser Co., Longview	2.2
3 Boise Cascade Paper Division, Wallula	1.1

mp = millions of pounds

These three facilities represent 40 % of all releases reported.

Top Three Chemical Releases

Chemical	Releases[mp]
1 Methanol	3.0
2 Barium Compounds	1.9
3 Manganese Compounds	1.8

mp = millions of pounds

Methanol had the highest amount of reported releases - about the same as in 2001.

Top Three Carcinogen Reporting Releases

Carcinogen	Releases[mp]
1 Styrene	0.99
2 Lead	0.94
3 Acetaldehyde	0.60

mp = millions of pounds

Releases of carcinogens (known or suspected cancer-causing chemicals) increased by about 1 million pounds from 2001 due to a one-time release of lead at U.S. DOE Hanford.

Top Three Counties Reporting Releases

Counties	Releases[mp]
1 Lewis	4.6
2 Cowlitz	2.8
3 Benton	1.9

mp = millions of pounds

Transalta Centralia Generation/Mining accounted for almost all of Lewis County's amount.

TRI PBT Reporting

By federal rule, certain persistent, bioaccumulative, toxic (PBT) chemicals have lower thresholds for reporting under TRI. These thresholds for chemical use are 10 pounds for chemicals like mercury, 100 pounds for chemicals like polycyclic aromatic compounds and lead or 0.1 grams for the dioxin and dioxin-like compounds category. The greatest percentage of PBT chemicals reported was in the lead and lead compounds. Thirty-nine grams of the dioxin and dioxin-like compounds were also reported as released.

Top Three PBT Chemicals

Chemical	Releases[p]
1 Lead and Lead Compounds	1,198,558
2 Polycyclic Aromatic Compounds	17,363
3 Mercury and Mercury Compounds	750

p = pounds

Releases of Polycyclic Aromatic Compounds have decreased by 60,000 pounds since 2000.

Uses of Hazardous Chemical Inventory (Tier Two) and Toxics Release Inventory (TRI) Data

The Emergency and Hazardous Chemical Inventory (Tier Two) data is used for emergency planning activities. Local emergency planning committees (LEPCs) use the information for emergency preparedness, disaster planning, and counter-terrorism planning. Local fire departments use the information for incident responses at or near reporting facilities.

The Department of Ecology (Ecology) uses TRI data as one of several environmental indicators for the state. The data also serve as a valuable tool for monitoring the progress of pollution-prevention efforts and for measuring the effectiveness of pollution-prevention programs underway in Washington State.

For More Information

Additional information on Tier Two and TRI is available on the Community Right-to-Know website at *www.ecy.wa.gov/programs/hwtr/epcra*. This includes the Toxics Release Inventory Display System (TRIDS), a graphic model for viewing TRI data. Ecology developed TRIDS under a grant from EPA. It is available for downloading (copying) from the Community Right-to-Know website.

Introduction

Congress enacted the Emergency Planning and Community Right-to-Know Act (EPCRA) into federal law on October 17, 1986 in order to help facilities and communities in the United States prevent a catastrophe such as those which occurred in Bhopal, India and Institute, Virginia in the mid-eighties from happening. The Emergency Planning and Community Right-to-Know Act (EPCRA) is also known as Title III of the Superfund Amendments and Reauthorization Act (SARA Title III).

EPCRA helps communities deal safely and effectively with hazardous chemicals. The law includes a number of requirements for businesses and government. It is intended to improve emergency planning for hazardous chemicals at the local level. EPCRA has a number of provisions, but its primary objectives are to:

- Enhance emergency response capabilities for chemical incidents;
- Expand emergency planning for hazardous chemical incidents;
- Identify storage, use and release of hazardous chemicals in communities; and
- Promote communication between facilities that handle hazardous chemicals, the community and local planners.

Tier Two – Emergency and Hazardous Chemical Inventory Reporting

Any facility in Washington State that stores a certain amount of a hazardous chemical must report this once a year. Under Section 312, the facility must file a Tier Two -Emergency and Hazardous Chemical Inventory report by March 1st, for any hazardous substances present in amounts at or above the chemical threshold level at any time during the previous calendar year. The Tier Two reports are filed with Ecology, on behalf of the State Emergency Response Commission (SERC). The reports are also filed with the Local Emergency Planning Committee (LEPC) and local fire department. The information required on the Tier Two reports include facility identification, chemical name, health hazards, codes representing maximum and average amounts on-site, and storage and location descriptions. Ecology enters this information into a tracking system for sharing with the public, LEPCs, fire departments, other government agencies and interested parties.

In addition to tracking the hazardous chemicals, Tier Two data includes the number of facilities storing Extremely Hazardous Substances (EHS). Approximately 350 chemical compounds classified as EHS chemicals are listed by the Environmental Protection Agency (EPA). Tier Two tells us what chemicals are stored in our communities. LEPCs and local fire departments use the information for emergency preparedness, planning and response to incidents at or near reporting facilities.

Toxic Chemical Release Inventory Reporting

Toxic Chemical Release Reporting is tracked through an annual summary called the Toxics Release Inventory (TRI). The TRI tracks the amount of toxic chemicals released into the air, land and water by certain facilities. Over 600 chemical compounds and/or chemical categories listed under Section 313 of EPCRA are reported under the TRI.

TRI reports are filed every year with EPA and the Department of Ecology. Forms submitted by facilities are due on July 1st, for the preceding calendar year's releases. For 2002 reporting, the due date for filing was July 1, 2003. After completing data entry and data quality checks, EPA and Ecology compile a TRI database. Each agency publishes an annual summary report. EPA reports from a national perspective, while Ecology focuses on Washington State.

Ecology uses TRI data as one of several environmental indicators for the state. The data also serve as a valuable tool for monitoring the progress of pollution-prevention efforts and for measuring the effectiveness of pollution-prevention programs underway in Washington. Under a grant from EPA, Ecology developed the Toxics Release Inventory Display System (TRIDS), a graphic model for viewing TRI data. This display program is available for downloading (copying) on Ecology's Website at www.ecy.wa.gov/epcra/index_trids.html.

Tier Two – Emergency & Hazardous Chemical Inventory Reporting

Tier Two reporting is this country's response to toxic chemical releases in Bhopal, India and Institute, Virginia in the mid-eighties. Thousands of people were killed in Bhopal because of an industrial accident that sent a deadly cloud of toxic gas over the city.

Washington Administrative Code Chapter 118-40 was established in 1987. This regulation established Washington's State Emergency Response Commission (SERC), the 48 Local Emergency Planning Committees (LEPCs), and adopted the federal Community Right-to-Know reporting thresholds and requirements. Ecology is a member of SERC and has additional responsibilities under this regulation. Under WAC Chapter 118-40, Ecology is designated to receive EPCRA reports on behalf of the SERC. Ecology's Community Right-to-Know Unit tracks facilities' compliance history and manages the chemical data submitted by businesses in accordance with this regulation. One of SERC's primary goals is to assemble and disseminate information that will help the citizens, government, and industry better prepare for emergency response.

Facilities that are required to report their stored chemicals send copies of their chemical inventories to the SERC, their local fire department, and their LEPC. This data is used to prepare emergencies, disaster planning, counter-terrorism planning, and response to incidents at or near reporting facilities.

Facilities covered under the federal Community Right-to-Know laws are required by Section 312 of EPCRA to submit a Tier Two report each March 1st. This report is an inventory of the hazardous substances or chemicals stored on-site during the previous year. Businesses are required to report their inventories if quantities of hazardous substances exceed the federal reporting thresholds. Reporting thresholds are 10,000 pounds of a hazardous substance at any one time, and 500 pounds or less of an Extremely Hazardous Substance depending on the chemical. The report lists maximum quantities, average quantities, number of days on-site, storage methods and storage locations for hazardous chemicals and extremely hazardous substances.

Tier Two Reporting Facilities

The data summarized in this report was received in 2003 and represents chemicals on site during the calendar year 2002. Figure 1 on page 10, shows that 3,481 facilities stored hazardous chemicals during 2002. These facilities reported 14,806 chemicals in more than 24,978 storage locations at their business sites. More than 3400 extremely

hazardous chemicals were reported. The number of facilities reporting had shown annual increases through the 1998-reporting year. This trend was due to outreach efforts and increased awareness of reporting requirements. Beginning with the 1998 reporting year, most retail gas stations were no longer required to report due to changes in reporting requirements for gasoline and diesel. While many gas stations reported anyway for 1998 and 1999, there has been a significant decrease from this sector. Each year, some facilities no longer report when they reduce their inventories of chemicals below reporting thresholds while several new businesses join the reporting community each year. Increased outreach efforts, awareness and enforcement activities have helped to increase the number of reporting facilities.

Figure 1: **Number of Tier Two Reporting Facilities**

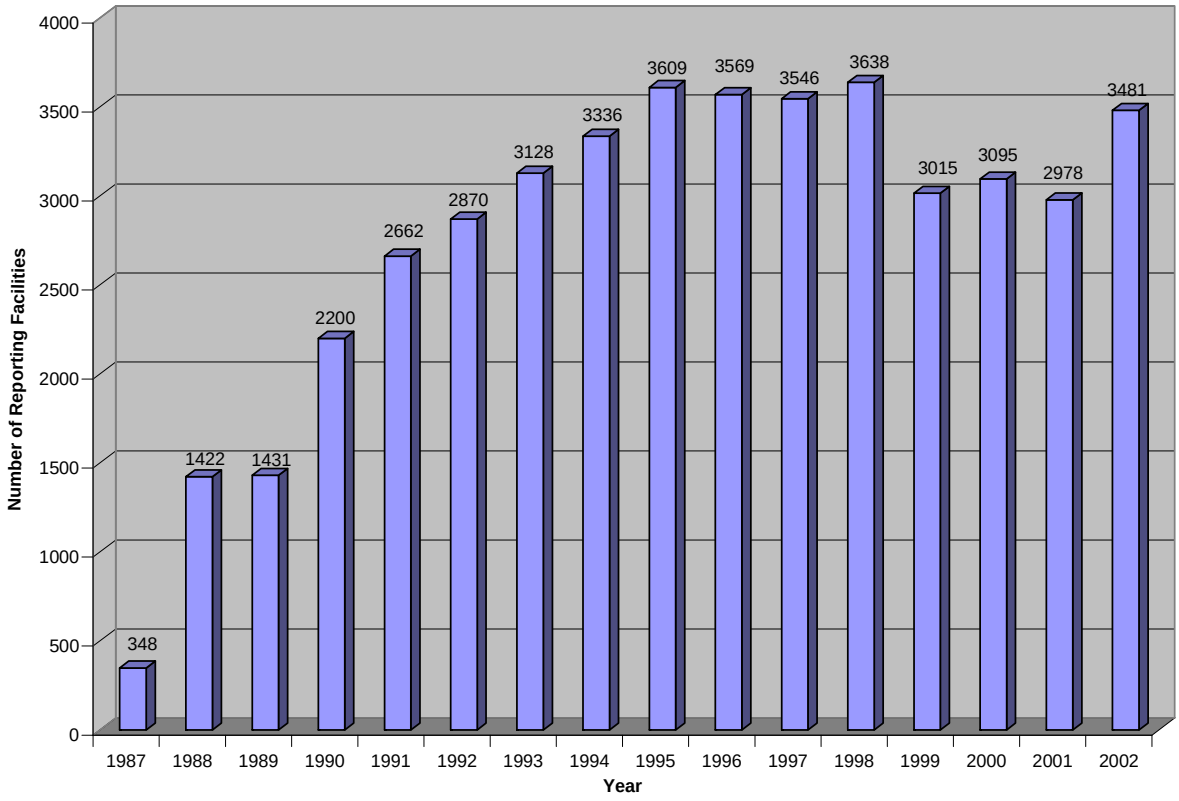
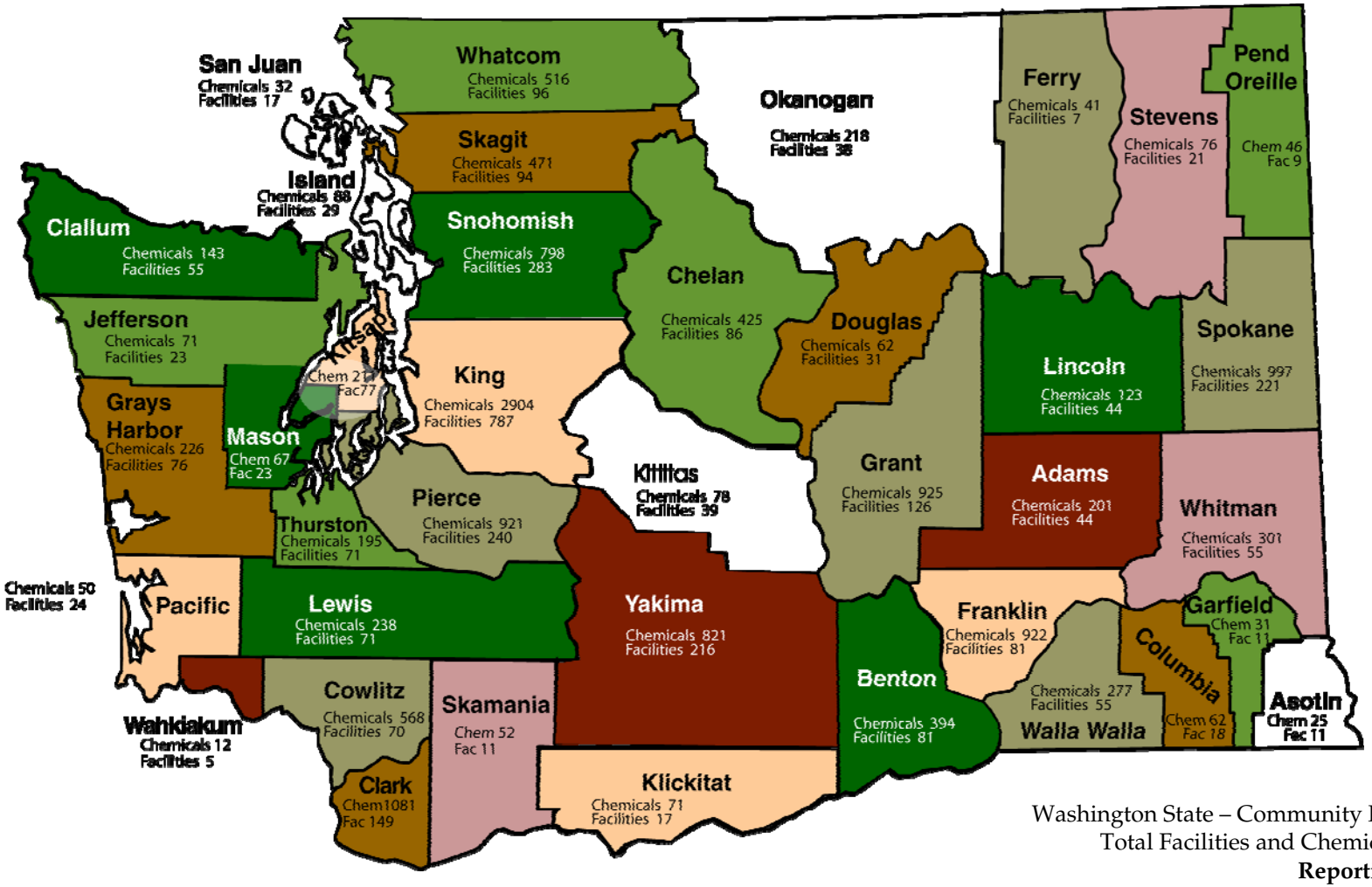
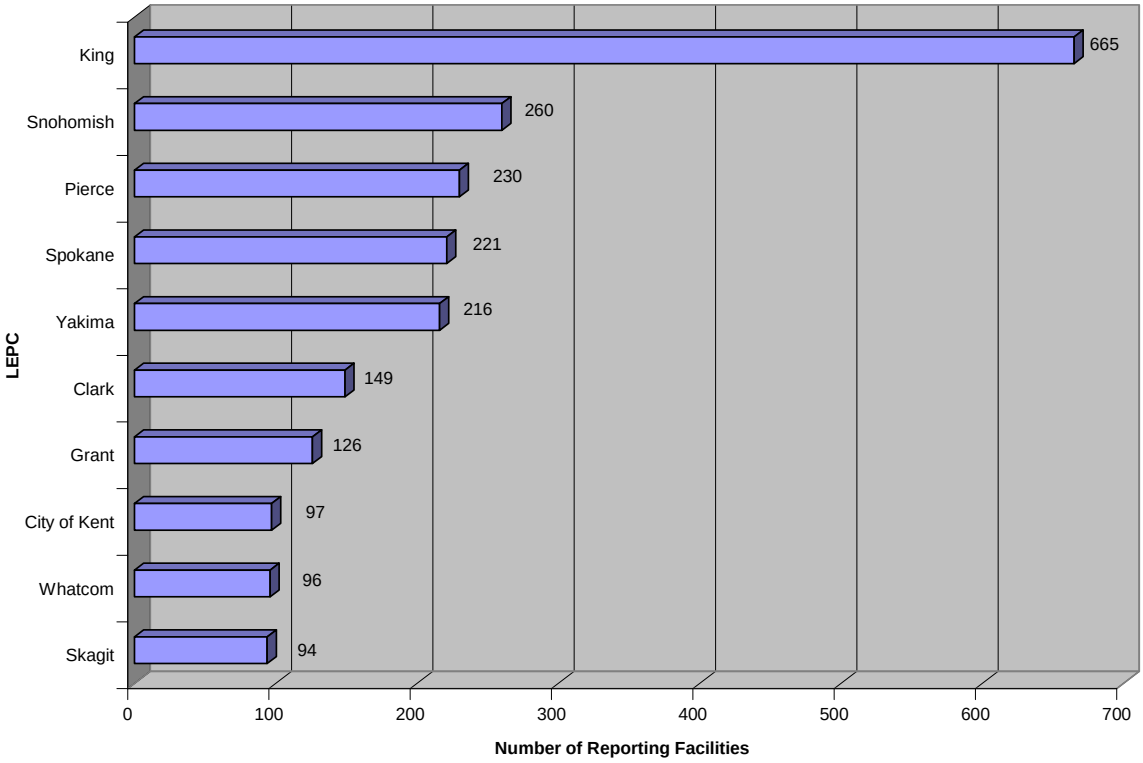


Figure 2: Total Facilities and Chemicals by County



Washington State – Community Right-to-Know
Total Facilities and Chemicals by County
Reporting Year: 2002

Figure 3: **Top Ten LEPCs with Most Reporting Facilities**



Reports by LEPC

EPCRA requires the Governor to establish a State Emergency Response Commission (SERC). The SERC in turn is required to designate and oversee emergency planning districts to facilitate preparation and implementation of emergency planning activities. Washington State is divided into 48 districts or Local Emergency Planning Committees (LEPC). LEPCs are comprised of representatives of local government, emergency response officials, industry, environmental and citizen groups, and other interested parties. Each county in the state has an LEPC. In addition, several cities have an LEPC separate from the county. Each LEPC is responsible for developing a local hazardous materials response plan, for managing a system for maintaining the hazardous materials information reported to them by businesses that report under EPCRA, and processing requests from the general public for information about communities' hazardous materials.

There are 48 LEPCs in Washington State. Most of these share the same jurisdictional area as counties, but a few cities serve as their own LEPC. Figure 2 displays the total facilities and chemicals by county. Figure 3 above, displays the 10 LEPCs which have the most facilities within their jurisdiction that filed reports for reporting year 2002. Figure 4 below, is similar, but shows the top ten LEPCs in terms of the numbers of total chemicals reported as being stored on-site.

Figure 4: Top Ten LEPCs with Most Chemicals Reported

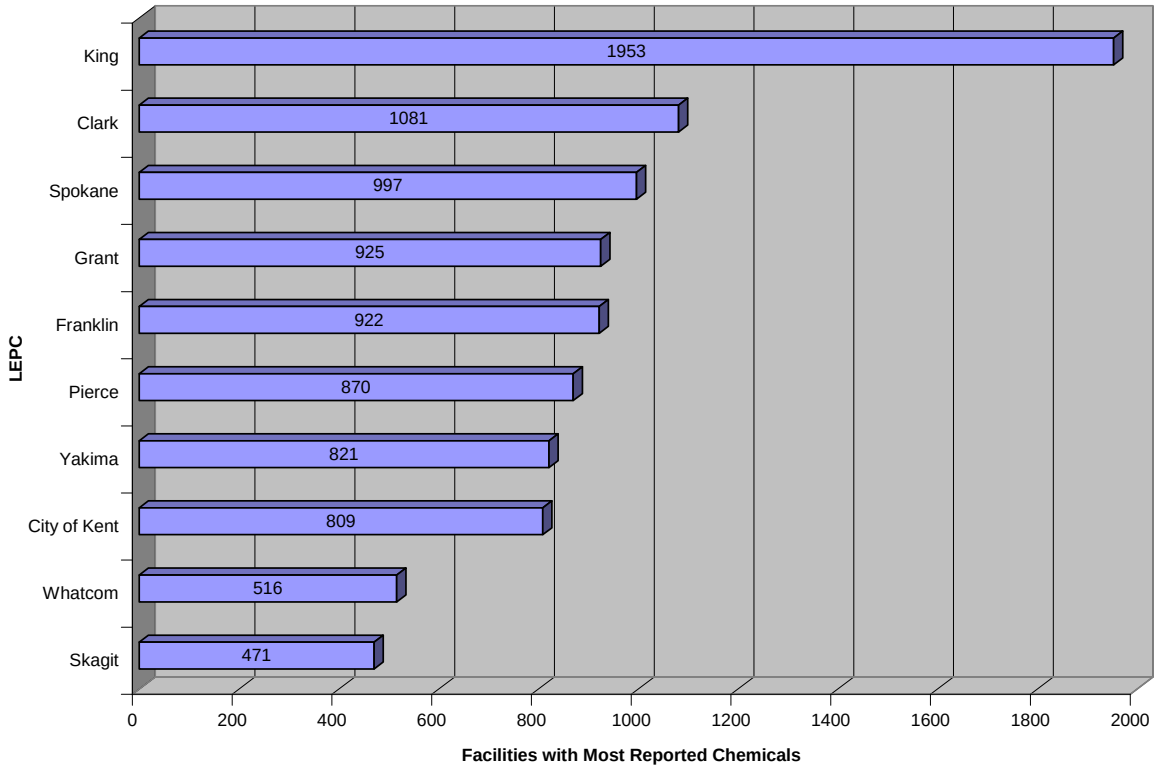
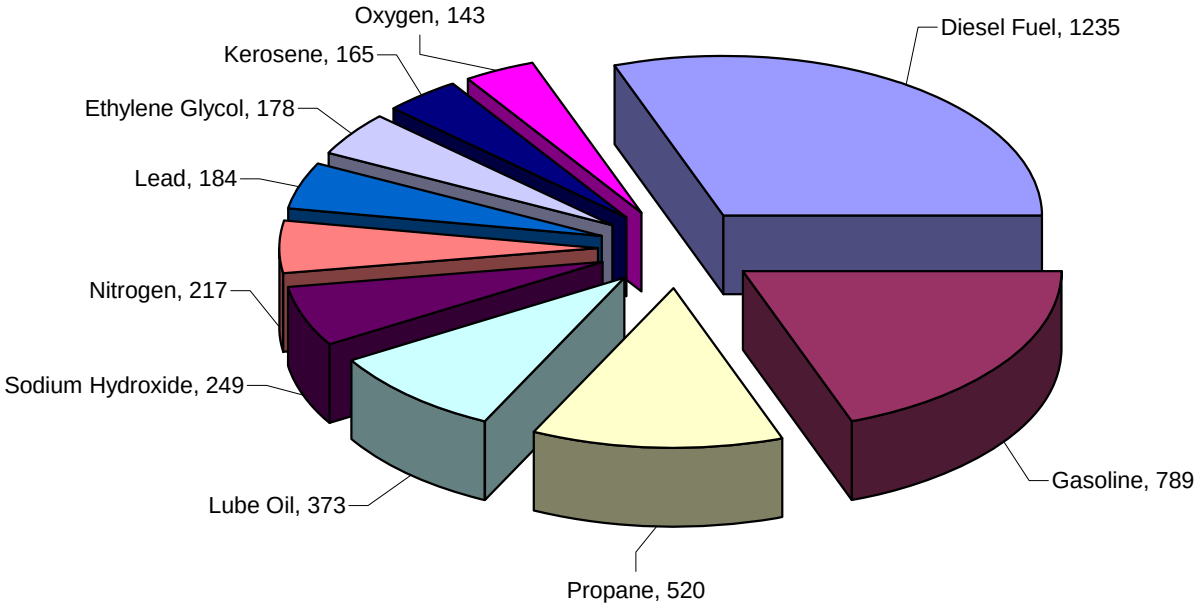


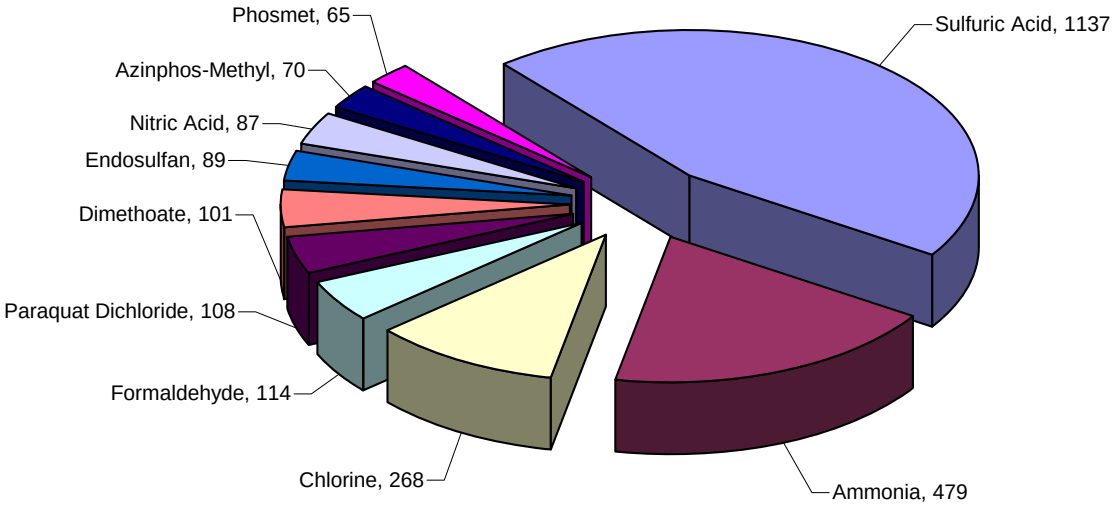
Figure 5: Top Ten Most Frequently Reported Hazardous Substances



Most Frequently Reported Hazardous Substances

The 10 most frequently reported chemicals are displayed in Figure 5 above. As a sub-set of these hazardous chemicals, Figure 6 below, displays the 10 most frequently reported extremely hazardous substances (EHS). EHSs present a higher risk to the public and the environment, and therefore have much lower reporting thresholds. The value of making information on these chemicals available becomes apparent when one thinks of the risks faced by employees and emergency responders.

Figure 6: Top Ten Most Frequently Reported EHSs



Appendix 2 on page 49, contains a complete listing of the number of reporting facilities and the number of chemicals reported by LEPC. More information on Tier Two reporting requirements can be found at *www.ecy.wa.gov/programs/hwtr/epcra*.

Information on these chemicals can be found at *www.toxnet.nlm.nih.gov*.

The Toxics Release Inventory

The Toxics Release Inventory (TRI) is an annual summary that tracks the amount of toxic chemicals released or transferred by certain types of facilities. Facilities in specific industry categories that exceed reporting thresholds for numbers of employees and chemical use must comply with TRI reporting requirements (Appendix 1, page 43). A separate form is required for each chemical which meets reporting thresholds. A facility may file one form or many forms depending on its chemical use. The five-page "Form R" chemical report is required for most reports. Facilities that produce less than 500 pounds of "total waste" (see Appendix 1) are permitted to use the abbreviated Certification Form A. Appendix 4 on page 55, lists Form A reporters in Washington State for 2002.

TRI Data Limitations

It is important to remember that a release of a TRI chemical does not indicate a violation of federal, state or local environmental laws. These facilities operate under environmental regulatory permits. TRI information includes data on permitted releases and transfers of certain chemicals. It does not indicate the rate or concentration of chemicals released, nor can it demonstrate the geographic boundaries of the chemical release. Therefore, exposures or risks to the public cannot be determined by using TRI data alone. EPA discusses the limitations of TRI data in the brochure, *Factors to Consider When Using TRI Data*, (*www.epa.gov/tri/2002_tri_brochure.pdf*).

At Ecology, the Industrial Section regulates air, water, and hazardous waste management activities at pulp and paper mills and aluminum smelters. The section also regulates water and hazardous waste management activities at oil refineries. Most of these facilities report under the TRI. However, many of the elements and compounds included in the TRI report are not directly regulated under current environmental regulations. Over the next several years, recent federal air and water regulations should result in decreased emissions of some compounds reported in the TRI for these industries. Decreases in these compounds may not **immediately appear in the TRI** because of differences in reporting requirements.

In spite of its limitations, the TRI data continues to be useful for addressing potential risks to a community and the environment when evaluated together with other information. The TRI information is collected and analyzed according to political

boundaries such as states and counties. Of course, natural earth processes cross over such artificial boundaries. Surface water movement and weather patterns affect the impact chemical releases have on the soil, water and air. The way the winds blow and waters flow will influence the impact of chemicals on the environment independent of political boundaries.

TRI Releases by Environmental Media

For the 2002 reporting year, 360 facilities in Washington State reported under TRI reporting requirements (Form R, Form A or both). This is an increase of 11 facilities from 2001. Of these 360 facilities, 330 facilities one or more five-page Toxic Release Inventory Report "Form Rs" (see Appendix 6, page 61). Sixty-six filed one or more two-page TRI Certification "Form As" (see Appendix 4, page 55, facilities may file both form Rs and Form As). Forty-two of these 360 reporting facilities had not reported for the previous calendar year. Figure 7 on page 16 shows the location of reporting facilities throughout Washington State.

Figure 7: **Washington State TRI Reporters by General Location, 2002**

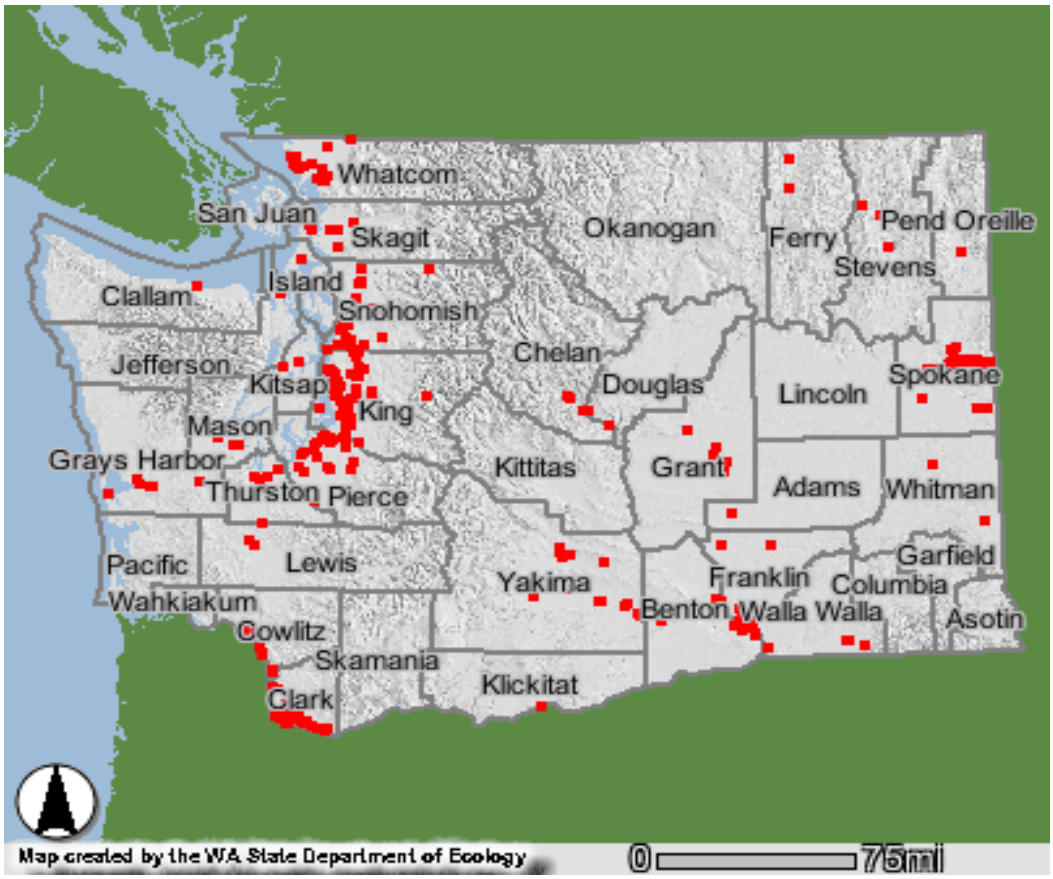
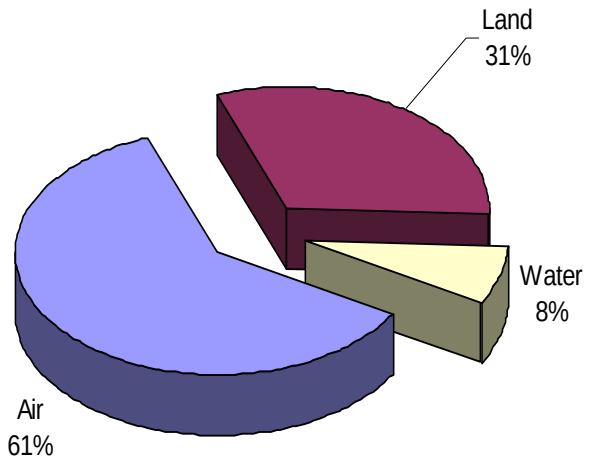


Figure 8: **Washington State TRI by Environmental Media - All Industries, 2002**



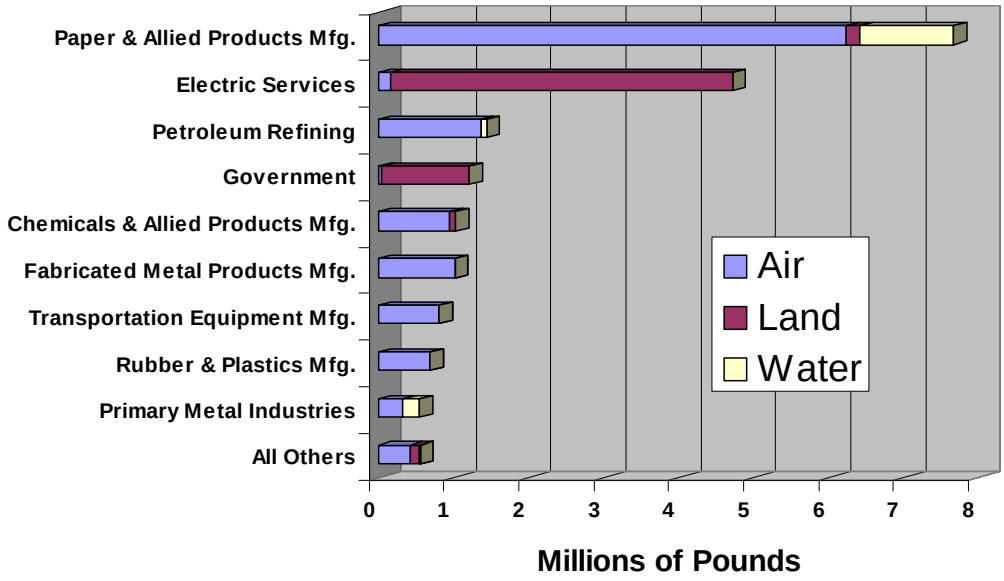
For the 2002 reporting year, the facilities reported a total of 19,720,380 pounds of toxic chemicals released to air, water and land. Air releases comprised 61% of all releases (12,028,437 pounds). Water releases made up 8% (1,560,405 pounds) and land releases accounted for 31% (6,131,538 pounds). No underground injection releases were reported.

TRI Releases by Industry

Three of the industry categories required to report under the TRI were responsible for about 70% of the releases in the state (see Figure 9 below). These are paper and allied products manufacturing, electric services and petroleum refining.

The 10 highest industry categories (Figure 9) reported 97% of the state's total releases. All other classifications combined reported releases of about 560,000 pounds or 3% of the Washington State total.

Figure 9. Washington State TRI by Industry, 2002



Paper & Allied Products

With 7.7 million pounds of reported releases, the paper and allied products manufacturing category accounted for nearly 40% of the releases reported in the state. Sixteen different facilities reported in this category in 2002. The amount released in this industry category decreased by 400,000 pounds from 2001. This decrease has been attributed to new technology for removing methanol from air stacks and improved measurement of other chemicals. Reported releases in this industry have decreased by about 5 million pounds (primarily methanol) since 1994.

Major chemicals reported by the paper and allied products industry include methanol, hydrochloric acid, ammonia, and nitrate compounds.

Electric Services-Burning Coal or Oil for Commercial Electricity Generation

The electric services industry reported the second highest amount of TRI chemicals released in 2002, a total of 4.7 million pounds, about 24% of the state's total. Four facilities reported in this industry category. One facility, the Transalta Centralia Generation & Mining reported releases of 4.6 million pounds. These releases are primarily hydrogen fluoride, sulfuric acid and hydrochloric acid releases to air and barium, manganese and vanadium compounds releases to land.

Petroleum Refining

The petroleum refining industry reported releases of 1.4 million pounds, or 7% of the state's total. This is a decrease of about 700,000 pounds from the 2.1 million pounds reported released in 2001. There were nine facilities reporting in this category. Major chemicals reported by this industry are sulfuric acid and carbonyl sulfide. For reporting year 2002, releases in the petroleum refining industry were about 500,000 pounds greater than they were in 1994.

Top Reporting Facilities for Total Releases

For the 2002-reporting year, the top 20 reporting facilities for total releases on-site are listed in Table 1 below. Transalta Centralia Generation & Mining was the facility reporting the highest total releases of 4.6 million pounds. The second highest releases were reported by Weyerhaeuser Co., Longview, 2.2 million pounds. The third highest reporting facility for total releases was Boise Cascade Paper Division in Wallula, 1.1 million pounds. Six of the top 10 ranked facilities are in the paper and allied products manufacturing category. The top 20 reporting facilities for releases represent 16.6 million pounds of the state's 19.7 million pound total or about 84%.

Table 1. Washington State TRI Releases Top 20 Reporting Facilities, 2002

Facility	City	County	Air	Land	Water	Total	Prior Year Releases
Transalta Centralia Generation / Mining	Centralia	Lewis	72,991	4,569,482	432	4,642,905	4,922,988
Weyerhaeuser Company	Longview	Cowlitz	2,125,794	0	89,521	2,215,315	2,343,692
Boise Cascade Paper Division	Wallula	Walla Walla	943,236	48,224	100,320	1,091,780	1,016,506
Simpson Tacoma Kraft Co.	Tacoma	Pierce	925,684	0	74,068	999,752	793,737
U.S. DOE Hanford Site	Richland	Benton	5	935,643	0	935,648	11,485
Fort James Camas L.L.C.	Camas	Clark	809,384	27,670	58,640	895,694	1,170,441
Agrium U.S. Inc, KFO Kennewick	Kennewick	Benton	688,255	29,510	14,515	732,280	790,170
Kimberly-Clark Worldwide Inc.	Everett	Snohomish	395,163	0	304,670	699,833	1,003,042
Tesoro Refining & Marketing Co.	Anacortes	Skagit	693,104	1,408	1,527	696,039	1,214,924
Port Townsend Paper Corp.	Pt. Townsend	Jefferson	482,897	104,443	36,686	624,026	547,191
Longview Fibre Co.	Longview	Cowlitz	395,610	0	115,229	510,839	661,173
Lasco Bathware Inc	Yelm	Thurston	354,400	0	0	354,400	461,440
Boeing Commercial Airplane Grp.	Everett	Snohomish	334,879	0	86	334,965	436,732
Puget Sound Refinery	Anacortes	Skagit	313,358	416	6,542	320,316	357,506
Rexam Beverage Can Co.	Kent	King	289,440	0	0	289,440	305,710
Crown Cork & Seal Co. (USA)	Olympia	Thurston	280,000	0	0	280,000	288,000
Intalco Aluminum Corp.	Ferndale	Whatcom	258,924	0	0	258,924	91,907
Conocophillips Ferndale Refinery	Ferndale	Whatcom	223,612	1,291	33,800	258,703	243,135
Ball Metal Beverage Container Corp.	Kent	King	250,161	0	0	250,161	257,114
Sandvik Special Metals Corp.	Kennewick	Benton	170	0	216,000	216,170	431,170

Individual Facilities Showing Changes in Total Releases in 2002 from 2001

A facility may show changes in its reported amounts from year to year for a variety of reasons. In many cases, implementing pollution prevention planning options may result in a decrease in releases. TRI reporters in Washington participate in the state's Pollution Prevention Planning requirements, (*www.ecy.wa.gov/biblio/0204034.html*). Changes in measurements of releases at a facility or changes in methods for estimating releases may also result in changes. Economic factors like those affecting the aluminum industry may also impact releases.

Tesero Refining and Marketing, Anacortes, showed the greatest decrease in total releases from 2001, 519,000 pounds. Kimberly-Clark Worldwide Corporation, Everett also reported decreases of more than 300,000 pounds. Four other facilities reported decreases of more than 200,000 pounds: Transalta Centralia Generation/Mining, Fort James Camas, LLC., Emerald Services Inc., Tacoma and Sandvik Specialty Metals Corporation, Kennewick. Seven facilities reported decreases between 100,000 and 200,000 pounds. One hundred twenty-six of the state's 311 Form R reporting facilities reported decreases for 2002 as compared to 2001.

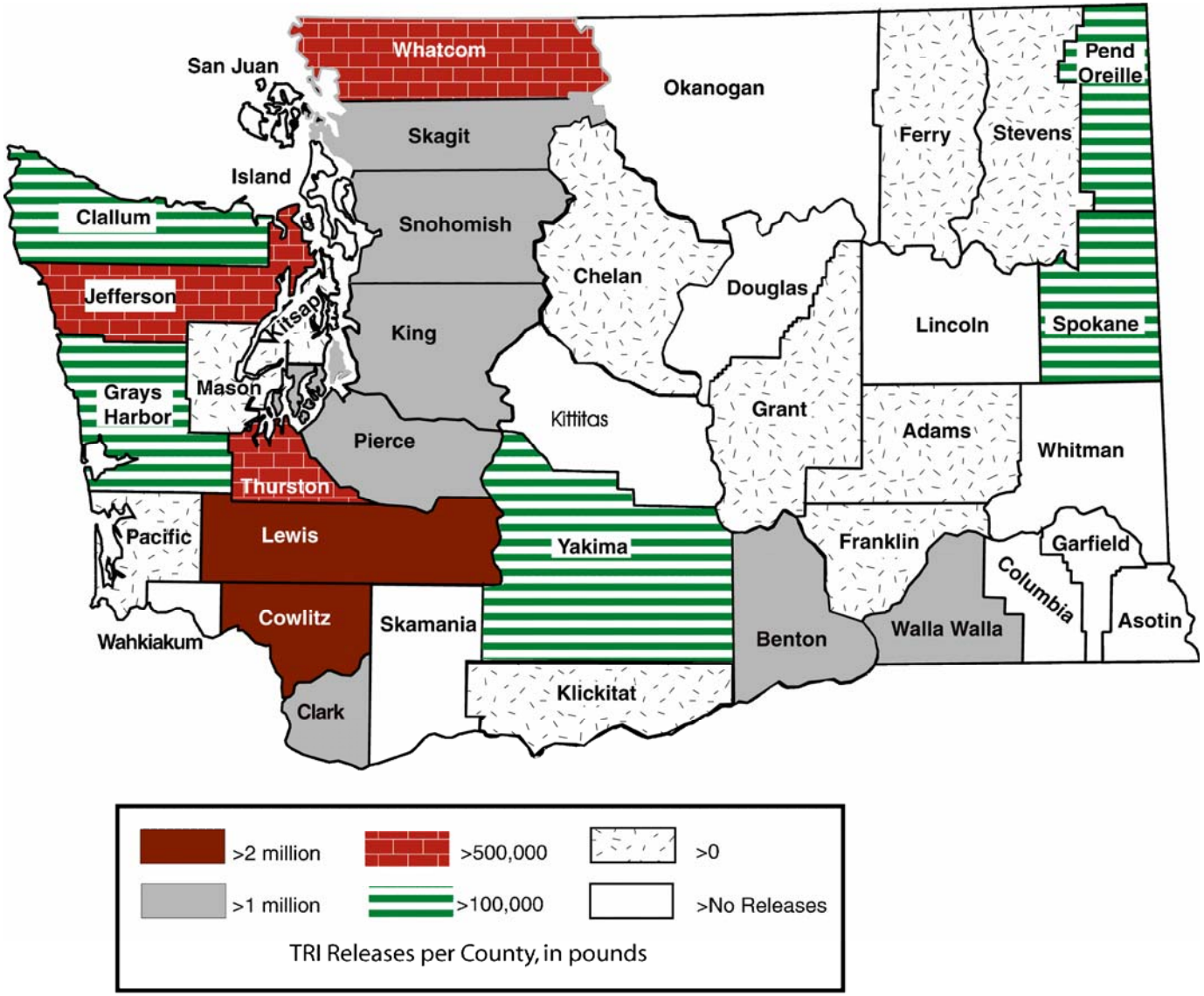
The facility showing the greatest increase in total pounds released from 2001 to 2002 was the U.S. Department of Energy, Hanford. They reported an increase of 924,000 pounds. This release to land of lead was a one-time release resulting from landfilling of lead materials. The second highest increase in total pounds Simpson Tacoma Kraft Company in Tacoma (206,000 pounds). The third highest increase in total pounds was Italco Aluminum Corporation in Ferndale (167,017 pounds).

Three other companies also showed an increase in reported releases of more than 75,000 pounds for 2002 compared to 2001: Port Townsend Paper, and Boise Cascade, Wallula. In all, eighty-four of the state's 323 Form R reporting facilities show increases in reported releases from 2001 to 2002.

TRI Releases by County

Of Washington's 39 counties, 30 had facilities that reported under TRI (see Appendix 6). Reporters in Lewis and Cowlitz County acknowledged releases that totaled over two million pounds (see Figure 10, page 21). Benton County had between 1.5 and 2.0 million pounds of reported releases and six other counties (Clark, King, Pierce, Skagit, Walla Walla and Snohomish), each totaled between 1 and 1.5 million pounds released per county. The releases in these nine counties accounted for 86% of all TRI releases statewide.

Figure 10: **Washington State TRI by County, 2002**



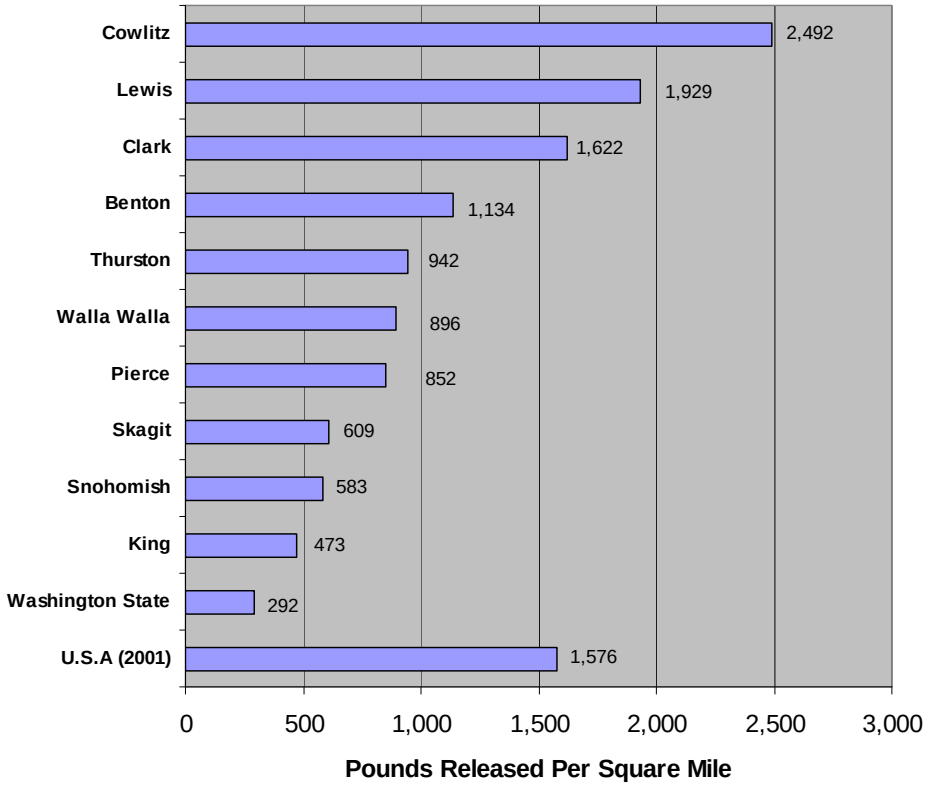
Lewis County reported the largest amount of chemicals released in the state in 2002. The 4.6 million pounds accounted for 23% of the state total. Seven facilities reported in Lewis County. All but 1,400 pounds of the releases were reported by Transalta Centralia Generation/Mining. Cowlitz County ranked second with 2.8 million pounds. Thirteen facilities reported in Cowlitz County including Weyerhaeuser Company, Longview (2.2 million pounds) and Longview Fibre (510,000 pounds).

Counties Ranked-Pounds per Square Mile

County rankings relating TRI releases per square mile appear in Figure 11 below. A county may rank higher on releases per area, but lower on the overall county rankings because of its relatively smaller size, even though its releases were also a relatively small number.

Cowlitz County ranked first with 2,492 pounds per square mile. Cowlitz County has a relatively small area and ranked second in the counties in total releases. These two factors give it a high number for pounds per area. Lewis County ranked second with 1,929 pounds per square mile. Clark County was third with 1,622 pounds per square mile. Benton, Thurston, and Walla Walla counties placed fourth, fifth and sixth respectively. Statewide releases averaged 292 pounds per square mile, below the 336 pounds per square mile in 2001. Nationally, reported releases per square mile averaged 1,576 for the 2001 reporting year (the most recent year for which national data is available).

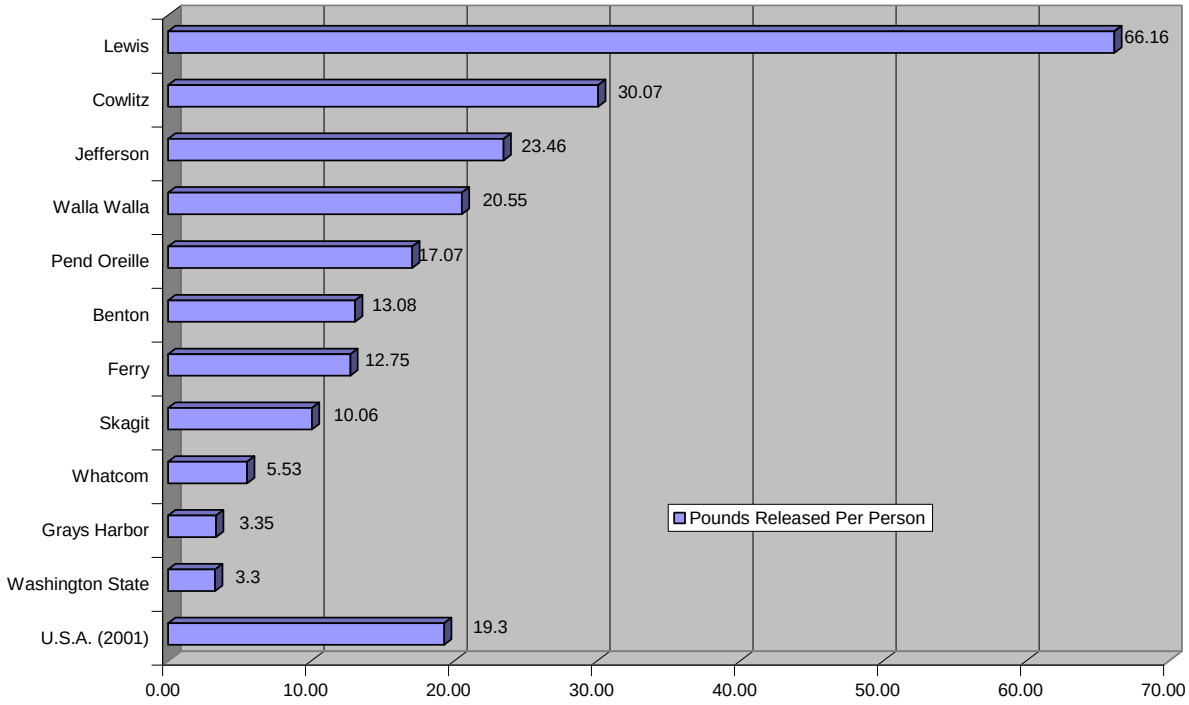
Figure 11: Washington TRI Top Counties, Pounds Per Square Mile, 2002



Counties Ranked-Pounds by Population

Lewis County was first for TRI releases ranked by estimated 2002 population in pounds per person - 66 pounds per person (see Figure 12, below). Cowlitz County reported 30 pounds of chemical releases per person. Jefferson County reported 23 pounds per person. Walla Walla, Pend Oreille, and Benton counties ranked fourth through sixth with 21.0, 17.0 and 13.0 pounds per person reported respectively. Statewide, releases averaged 3.3 pounds per person. Nationally, the average release of reported chemicals was 19.3 pounds per person for 2001. Of course, this does not mean that each person was exposed to these "pounds" of chemicals.

Figure 12: **Washington TRI Top Counties, Pounds per Person, 2002**



Counties that appear high on this list often have fairly high release amounts and average populations (Lewis) or moderate releases with very small populations (Ferry). Counties like Snohomish and King, with very large populations, do not show up in the ranking of top ten counties even though they had high total release amounts.

TRI Releases by Water Body

Releases of TRI chemicals to water in Washington State have ranked high nationally both in total chemicals and releases of known or suspected cancer-causing chemicals. Water releases of all chemicals in the state were 1.56 million pounds in 2002. This is a decrease of about 500,000 pounds from 2001. Water releases have decreased by almost 1/2 from about 3.5 million pounds in 1995.

Sandvik Special Metals in Benton County and Kimberly-Clark Worldwide, Inc. in Everett both reported that their water releases had decreased by over 200,000 pounds from 2001.

Chemicals classified by the Occupational Health and Safety Administration (OSHA) as known or suspected carcinogens (*www.epa.gov/tri/chemical /oshacarc.htm*) totaled 29,000 pounds of the water releases, decreasing by 50,000 pounds from 2001.

The Columbia River was the water body with the greatest reported amounts of carcinogens released (15,000 pounds). The Columbia River was also reported as receiving the highest amount of total water releases (579,000 pounds). The water body with the second highest reported releases was Everett Harbor. Figure 13 below shows water releases by water body.

Figure 13: Washington State TRI by Water Body, 2002

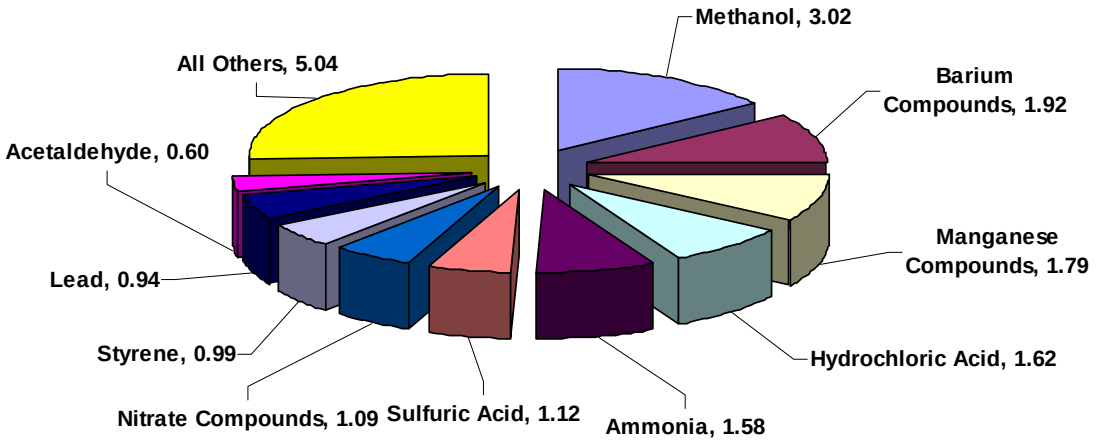
Water Body	Other Chemicals	Carcinogens
Columbia River	579,140	15,188
Everett Harbor	301,899	2,771
Pend Oreille River	201,400	11
Strait of Juan De Fuca	91,291	474
Bellingham Bay	84,000	
Grays Harbor	81,700	876
Strait of Georgia	69,792	49
Commencement Bay of Puget Sound	67,622	6,446
Port Townsend Bay	35,405	1,281
Fidalgo Bay	7,923	147
All Others	11,009	1,994

TRI Releases by Chemical

One hundred five of the approximately 600 chemicals or chemical categories reported under TRI, were reported by one or more facilities in Washington State (see Appendix 3 and Appendix 6).

The top 10 chemicals in amount of releases cover almost 75% of all chemical releases reported in the state (Figure 14, page 25). In descending order, the top 4 chemicals reported were methanol, barium compounds, manganese compounds and hydrochloric acid.

Figure 14: Washington State TRI by Chemical, 2002



Millions of Pounds Released

Methanol

Methanol is generated through chemical reactions and occurs naturally in the breakdown of wood fibers. The pulping process releases this chemical from the wood fibers. The primary reporters of methanol operate in the paper and allied products industry category. Methanol is a flammable solvent and was the most reported chemical for 2002. In the environment, methanol contributes to the formation of smog.

Methanol releases in 2002 were 3.0 million pounds, about 500,000 pounds less than the amount that was reported for 2001. Twenty-seven facilities reported releases of methanol in 2002. Weyerhaeuser Company, Longview, reported 1.0 million pounds, about 200,000 pounds less than in 2001. Fort James Camas LLC reported 650,000 pounds and two other facilities reported more than 200,000 pounds of releases: Simpson Tacoma Kraft and Longview Fibre Company.

Barium Compounds

Barium is a metallic substance that occurs in nature as an ion. Barium compounds are moderately toxic to mammals. Barium compounds were the second most reported chemical in 2001. A total of 1.9 million pounds was reported released to the environment by the six facilities reporting this chemical. These 1.9 million pounds are a decrease of about 450,000 pounds from 2001. Of this amount, all but 5,600 pounds were reported released to land by Transalta Centralia Generation/Mining as part of their mining process.

Manganese Compounds

Manganese is an essential nutrient for living organisms. Too much manganese causes neurological and other toxic effects. Manganese compounds were the third most reported chemical in 2002. A total of 1.8 million pounds were reported released to the environment by 17 facilities reporting this chemical. This represents an increase of about 600,000 pounds from 2001. Of this amount, all but 360,000 pounds were reported released to land by Transalta Centralia Generation/Mining as part of their mining process.

Hydrochloric Acid

Hydrochloric acid is highly corrosive. In the environment, it may contribute to acid rain and is toxic to aquatic life. Hydrochloric acid was the fourth highest reported chemical in 2002. Many manufacturing operations use this acid. Some plants in the pulp and paper industry emit hydrochloric acid produced during the combustion of wood wastes.

EPA modified the reporting for hydrochloric and sulfuric acids in 1994. Aerosols are the only form of these chemicals that are reportable under TRI. Acid aerosols include mists, vapors, gas and other airborne forms of any particle size.

Seventeen facilities reported releases of 1.6 million pounds of hydrochloric acid for 2002, about the same amount that was reported for 2001. The paper and allied products industry category accounted for the greatest releases: Boise Cascade Paper Division, Wallula (586,000 pounds); Kimberly-Clark Corporation (355,000 pounds); Port Townsend Paper Company (273,000 pounds) and Simpson Tacoma Kraft Company (252,000 pounds).

Carcinogens

Carcinogens are chemicals listed as known or suspected cancer-causing agents by OSHA. Reported releases of carcinogens (noted in Appendix 3 on page 51) were 3.8 million pounds in Washington State in 2002, an increase from 2.8 million pounds in 2001. U.S. Department of Energy, Hanford reported a one-time release of lead compounds to an on-site landfill. Excluding this report, releases of carcinogens are basically unchanged from 2001 and down from a high of 4.6 million pounds in 1995.

Two hundred twenty-seven facilities filed a report for one or more known or suspected carcinogens. Of all carcinogens reported, lead or lead compounds were reported by the greatest number of facilities (147).

Styrene was the carcinogen with the highest amount of reported releases (991,000 pounds). Lasco Bathware Inc., Yelm, reported releasing 354,000 pounds of styrene to the air, a decrease of about 125,000 pounds from 2001. Lead was second with reported amounts of release with 939,000 pounds and acetaldehyde was third with 598,000 pounds.

Washington TRI PBT Reporting, 2002

First developed in December 2000, Ecology's PBT Strategy envisions continually reducing risks to human health and Washington's environment from exposures to PBTs, by the year 2020. Key actions for reducing and, where possible, eliminating the use and production of these chemicals include:

- Reduce and, where possible, phase-out existing sources of PBTs.
- Clean up PBTs from historical sources.
- Prevent new sources of PBTs.
- Build partnerships to promote efforts to reduce and eliminate PBTs and coordinate with other jurisdictional programs.
- Ensure regulatory and non-regulatory approaches address cross-media (air, land, and water) effects.
- Improve public awareness and understanding of PBT problems and solutions.
- Improve and promote the development of information needed to make informed decisions on measures to reduce PBTs.

State and federal regulatory programs have been in place for several years and have significantly reduced the uses, releases, and environmental concentrations of several PBTs. However, the present system is oriented toward implementing single-medium (air, land, or water-based) statutes that do not fully address the potential for the cross-media effects that PBTs present. The current, single-medium focus has produced a system that emphasizes treatment of pollution, rather than preventing pollution through process/product changes. Unfortunately, this contributes to PBT contamination because low levels of PBTs can escape detection and/or end-of-pipe treatment, and then can persist in the environment where they are able to accumulate in human and animal tissues to potentially harmful levels.

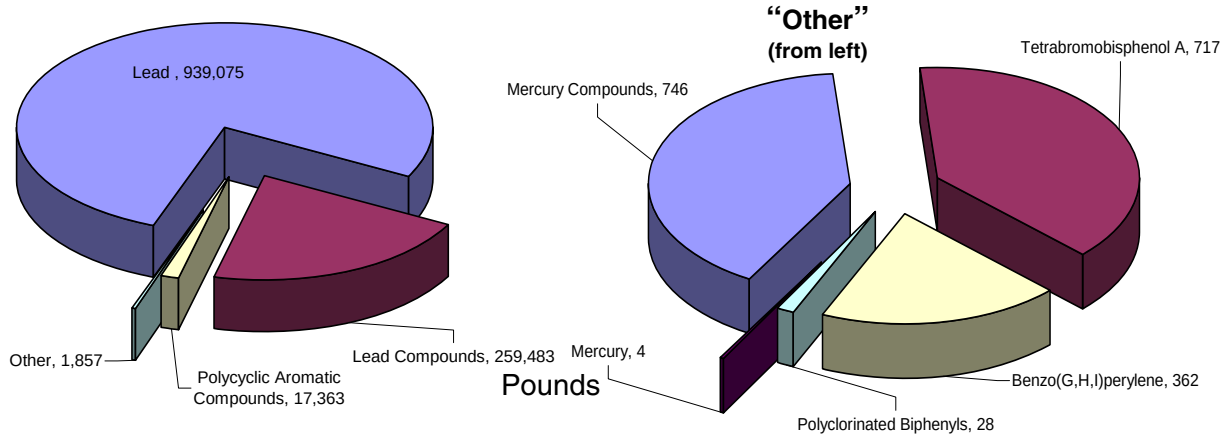
EPA changed the reporting thresholds for the chemical dioxin and other persistent, bioaccumulative toxins (PBTs) to its TRI list of chemicals. PBTs are of concern in the environment because:

- They **persist** in the environment for a long time without breaking down;
- They build up in the tissues of humans, fish and animals ("**bioaccumulative**");
- They have **toxic** effects (cancer and other health problems) on living organisms.

Many of these substances are man-made and have only been in the environment for a short period of human history. Substances like lead and mercury that occur naturally in the environment can create health and environmental problems when they are concentrated and refined. Because these chemicals are often produced or used in very small quantities, only relatively small amounts have shown up in the TRI reportable chemicals over time (52,304 pounds in 1999 and 51,983 pounds in 1998). To better track these PBT chemicals in the environment, EPA reduced the usage thresholds for reporting these chemicals (Table 6, page 61. As a result of these lowered reporting thresholds, there has been an increase in the

number of facilities reporting these chemicals. Figure 15 shows the most reported PBT chemicals for 2002. Of these, 98% were in the lead or lead compounds category. Other PBT chemicals reported were: polycyclic aromatic compounds, benzo(g,h,i)perylene, hexachlorbenzene, mercury and mercury compounds, polychlorinated bihphenyls, Tetrabrobisphenol A, and dioxin and dioxin-like compounds.

Figure 15: Washington PBT Releases, 2002 (except Dioxin Category)



Lead and Lead Compounds

The 2002 reporting year was the second year of reporting for lead and lead compounds with PBT reporting thresholds of 100 pounds manufactured, processed, or used, except for lead or lead compounds in certain alloys. Lead remains in the environment for long periods of time and is toxic to humans, especially children.

Lead or lead compounds were reported by 158 facilities in Washington State for 2002. For many companies, lead or lead compounds were the only TRI chemical they reported. U.S. Department of Energy, Hanford reported land releases of 935,648 pounds. This represents the disposal to an on-site landfill of lead shielding, a one-time release rather than a recurrent waste stream.

More than 2,500 pounds of lead compound releases were reported by 4 facilities: Transalta Centralia Generation/Mining (157,823 pounds), the Range Facility for Fort Lewis (78,700 pounds), the Yakima Training Center Range (14,090 pounds) and Kimberly-Clark Worldwide, Inc. (2,527 pounds). Nearly all of the lead and lead compound releases reported were to land.

Polycyclic Aromatic Compounds

The polycyclic aromatic compounds (PACs) or polycyclic aromatic hydrocarbons (PAHs) are usually found in the soot after organic materials (like plant or animal materials) are burned. It may also be found in creosote. The PACs have a reporting threshold of 100 pounds when they are manufactured, processed or otherwise used. For example, burning oil fuels can produce or "manufacture" PACs. The polycyclic aromatic compounds are classified as known or suspected carcinogens.

For reporting year 2002, 17,363 pounds of polycyclic aromatic compounds were reported released to the air, land and water. Thirty-five companies reported these chemicals. Releases have decreased from 19,578 pounds in 2001 and 88,613 reported in 2000. Most of the reported releases were to air (17,002 pounds). The company reporting the highest amount of PACs was Intalco Aluminum Corporation, Ferndale.

Under TRI, benzo(g,h,i)perylene is reported separately from the other PAC compounds. This chemical is produced at the same time other PACs are produced in the burning of fossil fuels. It has a reporting threshold of 10 pounds, manufactured, processed or otherwise used. Twenty-one companies reported releases of benzo(g,h,i)perylene (total 362 pounds). The Goldendale Aluminum Company reported releases of 160 pounds.

Mercury and Mercury Compounds

Mercury is used in batteries, switches, and thermometers. It is also used in dental fillings and in pharmaceuticals. Mercury compounds are found in some fossil fuels. For example, coal contains naturally occurring mercury, and when burned, it releases mercury compounds into the atmosphere. Organic forms of mercury have been linked to neurological disorders in infants exposed in prenatal development. Other neurological effects of mercury exposure have been observed in children and adults. At high levels of exposure, disorders of the nervous system such as tremors and changes in vision and hearing have been observed. Exposure to vapors can result in other systemic health effects. The Department of Ecology selected mercury as the first PBT chemical subject to an action plan that will include steps the agency will take to reduce mercury in the environment. For more information visit our website at *www.ecy.wa.gov/programs/eap/pbt/pbtfaq.html*

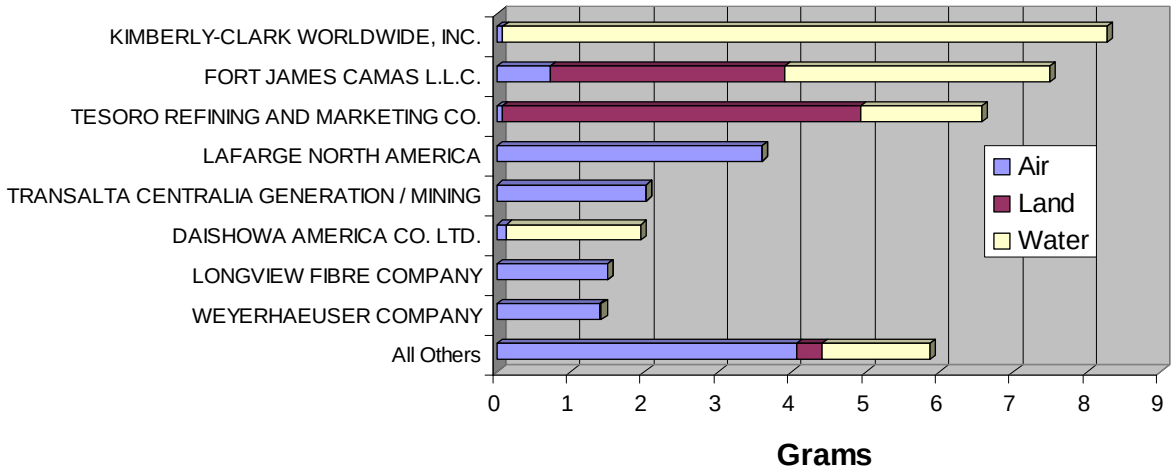
For the reporting year 2002, twenty companies reported mercury (4 pounds) or mercury compounds (746 pounds). This included 427 pounds reported by Transalta Centralia Generation/Mining of which 265 pounds were released to air during the burning of coal for electric power generation.

Dioxin and Dioxin-like Compounds

Dioxin has no commercial use. It is found in the environment, in the products and emissions of chemical plants manufacturing chlorinated phenols and in the ash and emission of municipal waste incinerators. Other sources are pulp and paper manufacturing, especially chlorine bleaching plants, and burning of organic compounds. Dioxin is categorized as a known human carcinogen. Dioxin may also cause other developmental disorders. There are 17 dioxin and dioxin-like compounds in this category. These differ in toxicity. The Form R allows reporting facilities to report the distribution of the 17 compounds by percentage. Using those percentages, one can calculate the "toxicity equivalency" relative to the most toxic compound, 2,3,7,8-TCDD. When determining the toxicity of any particular dioxin-like compounds category, the actual toxicity may be overestimated if the entire amount is treated as TCDD.

The threshold for reporting dioxin and dioxin-like compounds is 0.1 grams manufactured, processed or otherwise used. This is the only TRI chemical that is reported in grams. The companies reporting for dioxin and dioxin-like compounds are listed in Appendix 5 on page 59. A total of 38.7 grams (compared to 86.2 grams reported in 2001) were reported (37 to air, 28 to water and 21 to land). Figure 16 below, shows the top facilities reporting dioxin for 2002.

Figure 16: TRI Dioxin Releases, 2002 (in grams)



TRI Off-site Transfers, 2002

Transfers reported under TRI include chemicals transferred to publicly owned treatment works (POTWs, commonly know as sewage treatment plants), and chemicals transferred to a facility located geographically or physically separate from the reporting facility. These chemical transfers may be for treatment, energy recovery, recycling or disposal (Figure 17, below). Transfers are not included in "on site" release totals. Total transfers for 2002 were 18.6 million pounds. Table 2 on page 31 shows the top twenty facilities reporting off-site transfers for 2002.

Figure 17: Washington State TRI Transfers by Type, 2002 (in pounds)

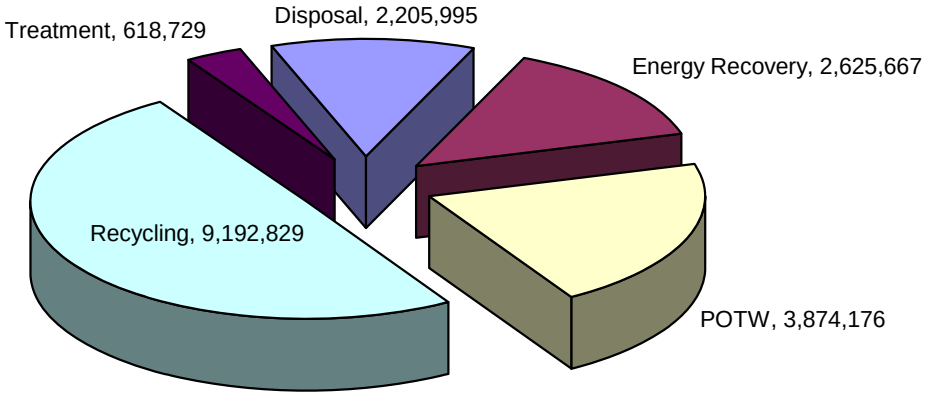


Table 2: Washington State TRI Transfers Top 20 Reporting Facilities (in pounds)

Facility	City	County	Disposal	Energy Recovery	POTW	Recycling	Treatment	Total
NUCOR Steel Seattle Inc.	Seattle	King				4,746,663		4,746,663
Emerald Services, Inc.	Tacoma	Pierce	8,279	2,303,665		143,348	476	2,455,768
Framatome ANP, Inc.	Richland	Benton	3,532		1,359,044			1,362,576
SEH-America Inc.	Vancouver	Clark			938,000		6,145	944,145
Darigold – Sunnyside	Sunnyside	Yakima			910,653			910,653
BCAG – Auburn	Auburn	King	61,868	15,324	190,196	341,613	15,161	624,162
Agrium Kennewick Fertilizer Operations	Kennewick	Benton	461,760					461,760
Jorgensen Forge Corp.	Tukwila	King	394,585					394,585
BCAG – Frederickson	Puyallup	Pierce	4,431	1,800	12	256,018	130,061	392,322
Burlington Environmental Inc.	Kent	King	11,089		52	287,296		298,437
Toray Composites (America)	Tacoma	Pierce		64,200		220,500		284,700
Longview Fibre Company	Longview	Cowlitz	261,226					261,226
Boeing Commercial Airplane Group	Everett	Snohomish	40,688	36,040	33,214	118,037	16,999	244,978
Nelson Irrigation Corp.	Walla Walla	Walla Walla	330			233,978		234,308
Safety-Kleen Systems (709201)	Lynnwood	Snohomish				226,314		226,314
Ace Galvanizing Inc.	Seattle	King	119			221,216		221,335
Wafertech LLC	Camas	Clark	144,789		61,591		3,265	209,645
Transalta Centralia Generation/Mining	Centralia	Lewis	190,600					190,600
Hallmark Refining Corp.	Mount Vernon	Skagit				186,370		186,370
Safety-Kleen Systems (118301)	Spokane	Spokane				177,150		177,150

Transfers to Publicly Owned Treatment Works (POTWs)

In 2002, transfers to publicly owned treatment works (POTWs or sewage treatment plants) were 3.8 million pounds, compared to 3.7 million pounds reported in 2001. Nitrate compounds continue to be the most reported chemical transferred to POTWs. Nitrate compounds may cause cardiovascular or blood toxicity health effects. Framatone ANP Richland, Inc., in Richland reported 1.3 million pounds of nitrate compounds transferred to the POTW. SEH America in Vancouver reported POTW transfers of 938,000 pounds of nitrate compounds. Three other companies reported POTW transfers of over 100,000 pounds of nitrate compounds: Darigold Inc., in Sunnyside (868,000 pounds); Boeing Commercial Airplane Group Auburn (190,000 pounds); and Advanced Silicon Materials LLC, in Moses Lake (117,000 pounds). These five chemical reports account for 89% of POTW transfers.

Chemicals sent to a sanitary sewer may be treated by a variety of methods and those chemicals not removed by the treatment methods are typically discharged into surface waters quite often settling into the sediments. POTWs typically treat incoming chemicals with bacteria. Biological processes may change the chemicals into less toxic compounds before they eventually enter surface water. It is difficult to determine how much of a chemical in the surface water is from a reporting facility. In turn, industrial discharges into sewers are regulated and permitted by the local POTW.

Effluent limits from POTWs are monitored and regulated by permits issued by Ecology.

Transfers to Other Off-site Locations

Chemicals reported as transferred to other locations for treatment, storage, disposal, recycling or energy recovery totaled 14.6 million pounds in 2002 for all reporting facilities. This represents a decrease of 2.6 million pounds from 2001. Facilities reporting the highest amount being transferred off-site were: Nucor Steel Corp in Seattle, sending 4.7 million pounds to off-site recycling; Emerald Services in Tacoma, sending 2.3 million pounds to off-site energy recovery; and Agrim Kennewick Fertilizer ANP in Richland, sending 461,000 pounds to off-site disposal.

For more information on transfers of hazardous waste in Washington see the "Hazardous Waste Annual Report Summary for 2001 Reported Data" at *www.ecy.wa.gov/biblio/0304024.html.*

TRI Pollution Prevention Act Reporting

The federal Pollution Prevention Act of 1990 requires facilities to report all waste processed or disposed. These data elements include the amount of chemicals reported under TRI as generated as waste or recycled and used for energy recovery, or treated both on and off the facility premises (see Table 3, page 33). Facilities must report for the current and prior year and provide projected totals for the next two years. Estimates for 2003 and 2004 indicate that the total waste processed or disposed by those facilities required to report will decrease in 2003 and then increase slightly in 2004. The

estimated decrease of about 7 million pounds (between 2002 and 2003) results from an estimate that on-site treatment will decrease. Total waste was reported to have increased by 5 million pounds from 2001 to 2002. The greatest increase was in the on-site treatment category which increased from 66 million pounds to 71 million pounds. Other categories showing increases from 2001 to 2002 were on-site recycling and on-site energy recovery.

Table 3: Pollution Prevention Act Reporting, 2002

	2001	2002	2003 (projected)	2004 (projected)
Releases & Disposal	22,827,942	20,981,412	21,421,697	20,685,314
On-site Energy Recovery	14,916,601	15,244,840	14,916,601	15,970,408
Off-site Energy Recovery	3,176,802	2,694,120	2,782,523	3,046,352
On-site Recycling	11,868,029	13,974,891	14,017,313	14,466,791
Off-site Recycling	9,141,017	9,206,026	8,896,857	9,081,157
On-site Treatment	66,045,480	70,926,617	64,056,185	64,605,325
Off-site Treatment	4,176,252	4,241,119	4,170,058	4,141,859
Total waste	132,152,122	137,269,024	130,261,234	131,997,205
One-time releases		1,028,806		

One-time releases, such as remediation and spills were 1,028,086 pounds in 2002. This includes 935,000 pounds of lead reported by U.S. Department of Energy, Hanford (see Lead and Lead Compounds, page 28).

Trends in TRI Releases and Transfers

Changes in TRI reporting requirements over time can make year-to-year comparisons of TRI data difficult. Even when using normalized values, a single chemical at one facility can greatly impact the results. To be entirely accurate, it's best to look at those chemicals that have been reported by particular facilities for all years. There are some facilities that have reduced or changed their chemical use so much that they no longer report. Excluding them from comparative totals would not give credit for reductions in those cases. Comparisons are most accurate when addressing a particular chemical over time. At that level, the original reports will show what has happened at a particular facility. However, the general trends in releases and transfers adjusted for changes in reporting can provide us with valuable information on changes in releases and transfers overall.

TRI releases to Washington's environment decreased in 2002 by 2.5 million pounds since 2001 and 5.4 million pounds when compared to 2000. Most of this decrease is accounted for by reduced aluminum production and changes in the paper and allied products manufacturing industries.

Figure 18 on page 34 shows the trends in TRI releases where all chemicals reported are included. The general trend over time has been for releases to decline. Releases in the manufacturing sector are at the lowest level since reporting began in 1987. Since 1995, releases of all chemicals by manufacturing facilities (not adjusted for reporting changes) have decreased by 13 million pounds (46 %).

Reported releases in the industry sectors that first reported under TRI in 1998 reached their highest point in 2001, 5.6 million pounds. In 2002, releases in those industry sectors decreased to 4.9 million pounds, about 700,000 pounds less than in 2001. Most of the increase was due to Transalta Centralia Generation/Mining.

Figure 18: Washington State TRI Releases, 1994-2002

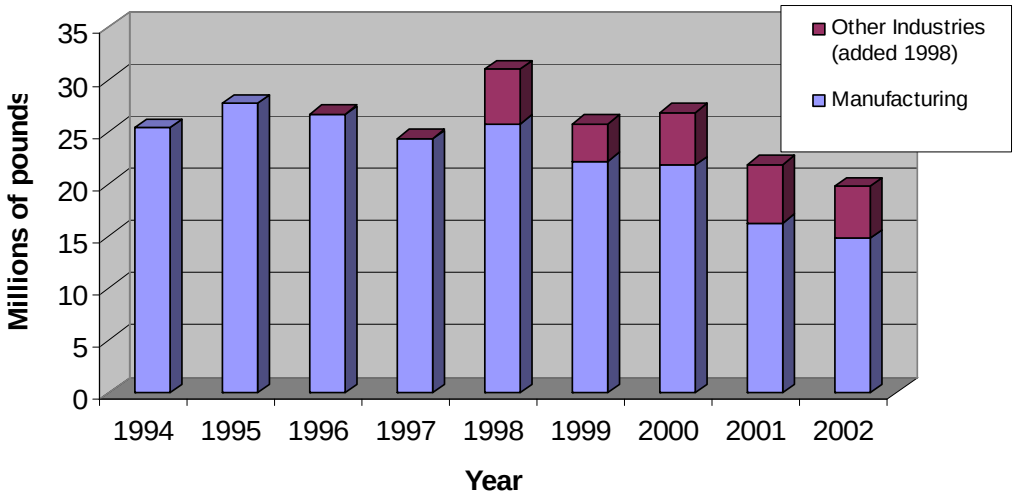
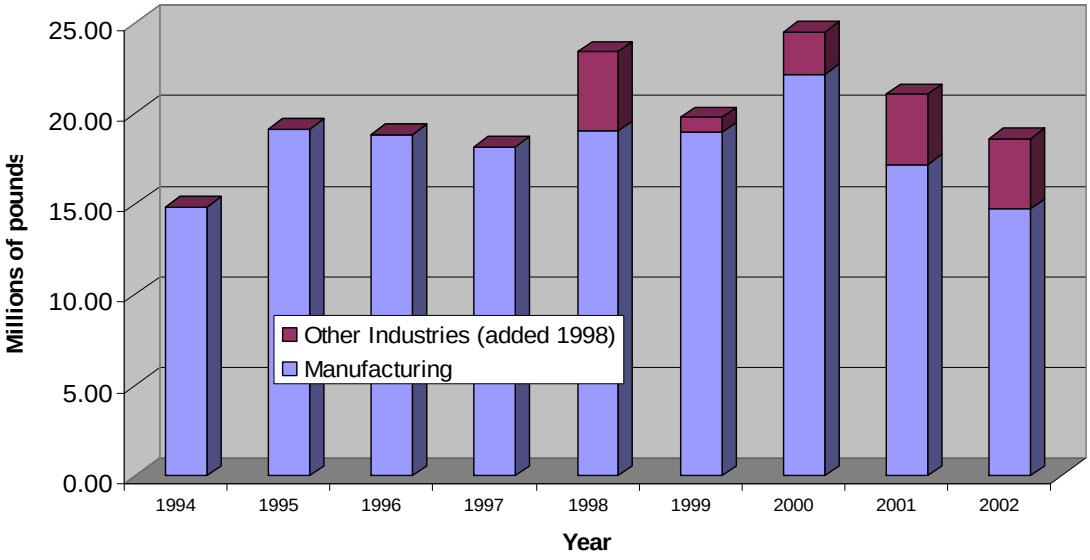


Figure 19 below, shows changes in reporting for off-site transfers since 1994. The Pollution Prevention Act of 1990 significantly expanded reporting for off-site transfers for recycling, energy recovery and treatment. The addition of reporting of nitrate compounds has resulted in an increase in reported transfers particularly to POTWs. The addition of the new industries in 1998 resulted in an increase in reported off-site transfers. The 2002 totals show that off-site transfers are at their lowest level since 1990, and are down 1.5 million pounds or from 2001 and 6.8 million pounds (25%) since 2000.

Figure 19: Washington State TRI Transfers, 1994-2002



Uses of Chemical Data

Tier Two Data

Tier Two data is of particular value because it reflects chemical storage by facilities in the state of Washington. This information is critical to the SERC, LEPCs and local fire departments. The SERC assembles this information to help the citizens, government, and industry work toward a safer, cleaner state. LEPCs and local fire stations use the information sent by each facility to better prepare for a possible incident or natural disaster in the community.

TRI Data

Until EPCRA became law (in 1986), most national and local environmental laws looked at only one element of the environment at a time. Single-media reporting laws, like the Clean Air Act and the Clean Water Act, do not account for the shifting of a waste "stream" or releases between media. The comparison between them has been difficult because of conflicting reporting rules, measurement methods, chemical lists, reporting periods, and inconsistent industry exemptions and/or requirements. For these same reasons, it has been hard to build a comprehensive picture of the cumulative releases from a single facility, let alone multiple facilities in a local area. The TRI has helped the public and government to better track and understand comprehensive toxic releases at specific sites and over broader areas of inters

Some uses of TRI data are summarized in a recent publication by EPA, "How are the Toxics Release Inventory Data Used?—government, industry, academic and citizen use". (*www.epa.gov/tri/guide_docs/2003_datausepaper.pdf*)

Risk Screening Environmental Indicators

With TRI, it is easier for a given facility's host community (and others) to see the 'total' amounts of these toxic releases into one area /community. Communities who utilize TRI data are in a better position to build a more complete picture of the cumulative releases around them. TRI data also generate many questions with the public.
Some of the most common questions include:

- Are the releases harmful to the community (human and/or environmental)?
- Who keeps track of all these releases in relation to human and environmental health?

- Are these releases acceptable to the host community?
- If these releases continue, will they harm the community's long-term health and sustainability, including economic viability?
- Who bear's the brunt of these releases?
- What are the cumulative effects of chemical releases?

A fundamental link to these questions is how to relate the TRI releases to assess exposure and environmental risk. The pounds of TRI releases of a chemical like methanol may represent a risk that is more or less than of a chemical with much smaller release amounts. Given its limitations, the TRI data cannot be used to directly assess exposure and environmental risk. The complete process of determining the risk of a particular chemical in a specific situation requires a process called risk assessment. The question of determining the risk associated with a particular chemical release is a complex process that falls beyond the scope of TRI data and this report. However, EPA has developed a software model that ranks relative risk based ranking from the TRI data. While it cannot provide a detailed quantitative risk assessment, the Risk-Screen Environmental Indicators (RSEI) model can provide relative hazard and risk-related rankings for chemicals, industries, facilities and communities.

The data summarized here was provided by Dr. Steven M. Hassur in "Summary of TRI Reporting Year 2000 Results by State/U.S. Territory: Risk-screening Environmental Indicators Report for Washington." The source of the data is EPA's Office of Pollution Prevention and Toxics' RSEI model (the most current public version RSEI 2.1 in July 2003) which covers TRI reporting years 1988 to 2000. The model uses releases reported under the TRI, the relative toxicity of the chemicals to people outside the workplace, routes of exposure by air, water and fish consumption and the population characteristics. This software is free and available at: *www.epa.gov/opptintr/rsei/index.html.*

In the example in Table 4, comparisons are made by chemical for the State of Washington, based on reporting year 2000 TRI data, the most current year available in the model. Zinc compounds, nitrate compounds, methanol and ammonia rank at the top of the list for reported release amounts. When the TRI pounds are multiplied by their respective toxicity weight, the ranking changes so Manganese compounds are ranked highest in risk. When using RSEI, the top 4 chemicals by release amount drop off the top chemicals list. The rankings change again when the relative hazard scores are multiplied by the estimate of the exposed population creating a "unitless measure proportional to the potential risk-related impact" within the selected area, in this case, the state of Washington.[1]

[1] Hassur, Steven M, "Summary of TRI Reporting Year 2000 Results by State/U.S. Territory: Risk-screening Environmental Indicators Report for Washington."

***Table 4*. Washington State TRI Relative Risk Ranking by Chemical, Top 9 Chemicals, 2000 Reporting Year**

TRI Pounds	Hazard Score	Risk-related score
Zinc compounds	Manganese compounds	Polycyclic aromatic compounds
Nitrate compounds	Polycyclic aromatic compounds	Mercury compounds
Methanol	Chromium compounds	Diethanolamine
Ammonia	Lead compounds	Chlorine
Barium compounds	Nickel	Sulfuric acid
Copper	Nickel compounds	Chromium
Carbonyl sulfide	Sulfuric acid	Quinoline
Hydrochloric acid	Copper	Carbonyl sulfide
Poly cyclic aromatic compounds	Chlorine	Nickel

Some caveats regarding the use of RSEI include:

1. RSEI is a screening-level approach for comparison of chemical releases and other waste management activities. It does not evaluate risk to individuals and is not a substitute for risk assessment, a much more complicated process.
2. The RSEI model uses chronic human toxicity associated with long-term, low-level exposures. It does not model acute (one-time event) human toxicity or environmental toxicity.
3. The risk of some chemicals particularly metals like chromium may be overestimated because the risk is assumed to be released at the valence of the highest chronic toxicity. Metal compounds are assumed to have the same toxicity weight as the parent metal.

Other limitations and caveats of the model are summarized at: *www.epa.gov/oppt/rsei*.

RSEI provides users of TRI data an additional tool to use in understanding the impact of chemicals in a community. From the RSEI website (*www.epa.gov/oppt/rsei*), some of the ways RSEI has been used include:

- Examining trends for measuring change
- Conducting risk-related targeting
- Support community-based projects
- Investigating environmental justice issues.

Environmental Justice

Research shows that in general, low-income populations and communities of color are exposed to greater concentrations and quantities of toxic chemicals via pollution. This is commonly recognized as environmental injustice, inequity, or racism. One reason (of many) for this disproportionate impact is the close proximity low-income residents to polluting facilities and contaminated sites.

In particular, Ecology, and the Washington State Department of Health, under the Legislature's direction conducted a 1995 "Study on Environmental Equity in Washington State." This study can be read or downloaded via the Internet at: *www.ecy.wa.gov/biblio/95413.html*. Toxic Release Inventory data was crucial in the development of this study.

A similar report "*Final Report of the Committee on Environmental Justice.*" was more recently published by the Washington State Board of Health, looking at the relationship of access to health care for communities of color and/or low income. Access the report at: *www.sboh.wa.gov/Pubs/docs/EJReport_2001.pdf*.

Some - but certainly not all - of the state's polluting facilities are represented in this report because they handle (and often release) significant quantities of toxic wastes, and thus report under the "Toxic Release Inventory" (TRI). Although the TRI focuses on "industrial" facilities, there are many other types of facilities that contribute to urban and rural pollution that are not reflected in this report. Smaller and non-industrial businesses are one broad category of potential polluters that are not reflected in the TRI. And, let's not forget - like most polluting facilities, our cars, some of our purchases, and some of our home-based activities are also responsible for local pollution. Our personal pollution may be less regulated, but it too can contribute to combined adverse impacts on the local environment and public health.

The greater combined, or "cumulative" impact of local pollution – regardless of source, is of understandable and particular concern to those who live (or work) closest to the pollution. Often, it is residents with lower incomes and/or those who live in communities of color that are most exposed to local pollution. They are also less likely to have the resources to move away from or aggressively address these pollutants. Many don't want to move away; they value their communities and would prefer to stay. They would like to work with local facilities and other resources to reduce the pollution and associated risks. They are interested in increased local public awareness and health and they look to a more sustainable local environment, within which they can live their lives without increased fear and/or actual long-term health risks from local pollution. Cumulative impacts are also of concern to Ecology and state and local public health agencies. Efforts to better coordinate between pollution and the public health-risk issues among a number of state and local interests and agencies are increasing.

The Department of Ecology recognizes that environmental justice/equity is an important goal. In 1994, the agency defined environmental equity as "… the proportionate and equitable distribution of environmental benefits and risks among diverse economic and cultural communities. It ensures that policies, activities, and the responses of government entities do not differentially impact diverse social and economic groups. Environmental equity promotes a safe and healthy environment for all people." What does this mean?

The Department of Ecology is actively working to:

1. Ensure our work and services are fairly allocated across the state;
2. Better engage local communities to participate in public involvement opportunities that relate to environmental management. The "Community Right-to-Know" effort (and this report) is one of many ways to support this. It's about bringing the broader community (businesses, residents, schools, community organizations, local health and zoning officials, labor and more) closer together with common and timely information about the community's local environment, including pollution;
3. Coordinate with the Environmental Protection Agency, state and local public health officials, and other environmental-based public agencies on environmental justice efforts, to develop, share, and consolidate resources. More information about EPA's environmental justice activities, work, and resources can be seen via the Internet at: *www.epa.gov/oswer/ej/index.html*. Another key resource for EPA and state environmental agencies like the Department of Ecology is the National Environmental Justice Advisory Council at: *www.epa.gov/compliance/environmentaljustice/nejac.*
4. Translate more documents (into Spanish, Korean, Vietnamese, Chinese, and most recently, Russian – and other languages are possible) where appropriate to increase effective communication with locally impacted communities that include significant populations with limited English proficiency;
5. Equitably award grants for cleanup, permits, public involvement, and environmental management projects, etc. Ecology makes an effort to ensure that communities in need are aware of these resources and are encouraged and assisted to apply.

For more information about the Department's work regarding environmental justice, and its relationship to Community Right-to-Know and the Toxic Release Inventory, please contact John Ridgway, within the Hazardous Waste and Toxics Reduction Program, at (360) 407-6713. John's Internet address is: *jrid461@ecy.wa.gov*.

Beyond Waste Project

The Beyond Waste Project was created on behalf of the Department of Ecology's Hazardous Waste and Toxics Reduction Program and the Solid Waste and Financial Assistance Program. The project's goal is to update strategic plans for properly handling both hazardous and solid waste. Moving "beyond waste" is a transition to a society that views wastes as inefficient use of resources and believes that waste can be eliminated. Moving beyond waste will take many years. The Beyond Waste plans will offer new ways of thinking about wastes and toxic substances. The goals of implementing the two plans will be:

- To influence significant reduction of wastes and toxic substances used;

- To shift toward a system where resources are used more efficiently, and excess materials are reused as resources.
- To support efforts in Washington state to make sure businesses' needs are met, while protecting the environment; and
- To incorporate sustainability principles into waste-related decisions.

If we set a goal to move "beyond waste," how will we know if we are moving toward our goal? This requires environmental indicators or measurements. The TRI has been used as an environmental indicator for many years and provides a trend line. TRI is also a value indicator because it provides data that includes all media. The Beyond Waste Project will develop other indicators throughout the Beyond Waste Project, and will continue to use TRI as an important indicator.

More information on the Beyond Waste Project can be found at *www.ecy.wa.gov/beyondwaste*.

New and Pending EPCRA Developments

Form R Changes for 2003 Reporting Year

To help clarify the differences between types of surface impoundments, landfills and underground injection and other releases, the following changes were made to the TRI reporting Form R for the 2003 reporting year:

- For on-site land releases, surface impoundments have been divided into Resource Conservation and Recovery Act (RCRA) Subtitle C surface impoundments and other surface impoundments. RCRA Subtitle Surface Impoundments are those that require a hazardous waste disposal site permit.
- In Section 8 of the Form R, the amount previously reported under "Quantity Released" which included on-site releases and off-site transfer for disposal, has been separated into four categories:
    1. On-site disposal to Class I Underground Injection Wells, RCRA Subtitle C landfills and other landfills,
    2. Total other on-site disposal or other releases,
    3. Total off-site disposal to Underground Injection Wells, RCRA Subtitle C landfills and other landfills, and
    4. Total other off-site disposal or other releases.

Standard Industrial Classification System Conversion to North American Industry Classification System

On April 9, 1997, the federal Office of Management and Budget (OMB) published a Federal Register Notice of final decision to adopt the North American Industry Classification System (NAICS) for the United States (62 FR 17288). NAICS is a new industry classification system that will replace the Standard Industrial Classification (SIC) system. The SIC system has traditionally been used by government agencies for collecting statistical data about specific industries and for other administrative and regulatory purposes.

Under TRI, industries that are classified in specified SIC codes are subject to Toxics Release Inventory (TRI) reporting. EPA is now proposing to shift to the NAICS codes that correspond to the SIC codes representing industries that are currently subject to the TRI reporting requirements. For the first year after the rule is adopted, facilities subject to TRI reporting requirements may be required to report both SIC and NAICS codes. In following years, facilities that are subject to TRI reporting requirements would be required to report their NAICS codes only. The final rule for this process has not yet been published.

The value of this shift is expected to provide better industry-specific TRI data and analysis. A down-side to this will be difficulty comparing prior year TRI data for trend analysis.

TRI Stakeholder Process for Burden Reduction Options

EPA initiated a Stakeholder Dialogue process in September 2002, to identify improvements to the Toxics Release Inventory (TRI) and to develop opportunities to reduce the burden on reporting facilities. A primary goal of this effort by EPA is to reduce burden associated with TRI reporting while at the same time continuing to provide valuable information to the public and the government consistent with the goals and statutory requirements of the TRI program.

EPA presented a number of burden reduction options in the issue paper, *Phase II Stakeholder Dialogue White Paper* (*www.epa.gov/tri/phase2/phase_2.htm#intro*). Each option included was intended to encourage thoughtful comment that develops a meaningful burden reduction initiative that is technically, practically, and legally feasible.

EPA's comment period for the stakeholder process ended February 4, 2004. EPA is in the process of evaluating those comments. Among the options presented for consideration were:

- Higher reporting thresholds for small businesses;
- Higher reporting thresholds for a category of facilities or class of chemicals with small reportable amounts;
- Expanded eligibility requirements for the Form A Certification Statement, through either a higher alternate reporting threshold, a higher annual reportable amount threshold, and/or a revised definition of the annual reportable amount threshold. This option could be combined with an enhanced Form A that provides range estimates for a subset of the full release and other waste management information included on the Form R;
- A new short form, for facilities that are able to certify that they have had no significant change in releases and other waste management quantities relative to a designated baseline year;
- Use of range reporting for Section 8 of the Form R.

EPA is also engaged in an effort to improve the Toxics Release Inventory - Made Easy (TRI-ME) software, and is soliciting comments on specific enhancements that would reduce the burden of TRI reporting. Finally, EPA is soliciting suggestions for any other options that could reduce burden, while continuing to provide the public with valuable information. For more information about EPA's Stakeholder Process for Burden Reduction Options, see *www/epa.gov/tri*.

Appendix 1

Reporting Requirements and Glossary of Terms

Releases to Air

Releases to air are reported as either non-point or "fugitive" or point or "stack" emissions. Fugitive emissions are releases that are not conveyed through stacks, vents, pipes or any other confined air stream. Examples include leakage from valves, pump seals, flanges, compressors, open-ended lines, evaporative losses from surface impoundments and production lines, and releases from building ventilation systems. Stack or point air emissions are releases to air which are conveyed through stacks, vents, ducts, pipes or other confined air streams, and include storage tank emissions and air releases from control equipment. These releases can include spills or other "unintended" releases.

Releases to Land

Releases to land occur on or near the property boundary of the reporting facility. Releases to land include disposal of wastes in a landfill, land treatment /application farming in which a waste is applied onto or incorporated into soil, and surface impoundment which is an uncovered holding area used to evaporate and/or settle waste materials.

Releases to Water

Releases to water include releases to streams, lakes, or other bodies of water.

Standard Industrial Classifications

The SIC code numbers and names listed on page 44 are the general industrial categories. A 2-digit number represents the general categories of industrial activities. Each facility will have one or more 4-digit number(s) that more specifically describes its manufacturing process.

Table 5. Standard Industrial Classification Codes

SIC Code	Name		SIC Code	Name
10	Metal & Coal Mining		33	Primary Metal Products
12	Metal & Coal Mining		34	Fabricated Metal Products
20	Food & Kindred Products		35	Industrial, Commercial Machinery & Computers
21	Tobacco Manufacturers		36	Electronic Equipment & Components
22	Textile Mill Products		37	Transportation Equipment
23	Apparel & Other Textiles		38	Instruments & Related Products
24	Lumber & Wood Products		39	Misc. Manufacturing Industries
25	Furniture & Fixtures		4911	Electric Generating Plants (combusting coal or oil)
26	Paper & Allied Products		4931	Electric Generating Plants (combusting coal or oil)
27	Printing & Publishing		4939	Electric Generating Plants (combusting coal or oil)
28	Chemicals & Allied Products		4953	Hazardous Waste & Treatment Firms
29	Petroleum Refining		5169	Chemical Wholesale Distributors
30	Rubber & Misc. Plastic Products		5169	Wholesale Bulk Petroleum Distributors
31	Leather & Leather Products		7389	Solvent Recyclers
32	Stone, Clay and Glass Products			

Transfers to Public Owned Waste Water Treatment Works (POTW)

A POTW is a waste water treatment facility that is owned by a state or local municipality. It's also commonly known as a sanitary sewage treatment plant. Waste waters reported as transported to POTWs are transferred through pipes or sewers. Most chemicals contained in the waste water are treated at the POTW through a variety of methods. In general, chemicals are likely to be removed to some extent. Those chemicals not removed by treatment are released by the POTW to surface waters.

Thresholds

These are amounts of chemicals that trigger reporting requirements. If a facility annually manufacturers or processes any listed toxic chemical, the threshold quantity is 25,000 pounds. If a facility "otherwise uses" any listed chemical, in any way other than incorporating it into a product, the threshold quantity is 10,000 pounds. PBT chemicals have a significantly lower threshold for reporting. See Table 6 below.

Table 6. PBT Reporting Thresholds

Chemical Name or Category	Reporting Threshold (2000 reporting year)
Aldrin	100 lbs.
Benzo(g,h,I)perylene	10 lbs.
Chlordane	10 lbs.
Dioxin and dioxin-like compounds	0.1 grams
Heptachlor	10 lbs.
Hexachlorobenzene	10 lbs
Isodrin	10 lbs.
Methoxychlor	100 lbs.
Octachlorostyrene	10 lbs.
Pendimethalin	100 lbs.
Pentachlorobenzene	10 lbs.
Polycyclic aromatic compounds category	100 lbs.
Polychlorinated biphenyl (PCBs)	10 lbs.
Tetrabromobisphenol A	100 lbs.
Toxaphene	10 lbs.
Trifluralin	100 lbs.
Mercury	10 lbs.
Mercury compounds	10 lbs.
Lead	100 lbs.
Lead compounds	100 lbs.

Toxics Release Inventory Chemical List

EPA adopted a list of some 600 chemicals which facilities must report under Section 313 of EPCRA. With the Governor's authority, a chemical may be added to the list if it is known to cause or can reasonably be anticipated to cause significant adverse acute health hazards outside a facility as a result of continuous or frequently recurring releases.

In addition, chemicals may be added by EPA if they cause or may be reasonably anticipated to cause cancer or birth defects or serious or irreversible reproductive dysfunctions, neurological disorders, heritable genetic or other chronic health effects. A chemical that causes or may cause a significant adverse effect on the environment may also be included. EPA may also delete chemicals from the list if there is not sufficient evidence to establish that the chemical meets any of the criteria.

Off-site Transfers

An off-site transfer is the transfer of wastes to a facility that is geographically or physical separate from the manufacturing site. Chemicals are reported as either transfers for treatment, disposal, recycling, and energy recovery or "other" means.

Off-site Transfers for Disposal

Disposal of toxic chemicals usually means either release to land (as in a permitted landfill) or underground injection at the off-site location.

Energy Recovery

Energy recovery is the combustion process in industrial furnaces or boilers that generate heat or electricity for use at the location. Non-combustible chemicals like metals and halons should not be reported under this category. Treatment or destruction by incineration is not energy recovery.

Recycling

Recycling means the recovery or regeneration of chemicals by a variety of methods including solvent recovery, metals recovery or acid regeneration. Once they have been recovered, the chemicals may be returned to the originating facility or made available for commerce.

Treatment

Treatment of toxic chemicals may include biological treatment, neutralization, incineration or physical separation. Treatment usually results in varying degrees of destruction of the chemical. Treatment may prepare the chemicals for disposal.

Underground Injection

Underground injection is the disposal of fluids by burial of the fluids in a Class I or V well, according to federal regulations.

Total Waste

The sum of Section 8, Column B on Form R or the total of releases, on- and off-site recycling, on- and off-site energy recovery, and on- and off-site treatment for the current reporting year. Where this total is 500 pounds or less and total chemical use is less than one million pounds, a facility may use the abbreviated Form A or certification Form to report.

Acronyms

Ecology – Washington State Department of Ecology

EHS – extremely hazardous substance, 40 CFR Part 355.30

EPA – U.S. Environmental Protection Agency

EPCRA - Emergency Planning and Community Right-to-Know Act of 1986

Form R- Five page individual chemical report filed under EPCRA Section 313, the Toxics Release Inventory

Form A – Two page individual chemical report filed under EPCRA Section 313, the Toxics Release Inventory

LEPC – Local Emergency Planning Committee

OSHA – U.S. Occupational Safety and Health Administration

POTW- Publicly owned treatment works

RCRA-Resource Conservation and Recovery Act

RSEI - Risk Screening Environmental Indicators (EPA software program)

SARA Title III – Superfund Amendments and Reauthorization Act Title III, another name for EPCRA

SERC- State Emergency Response Commission

Tier Two - Emergency Planning and Hazardous Chemical Inventory Reports filed under **EPCRA** Section 312

TRI – Toxic or Toxics Release Inventory, EPCRA 313 and data collected under EPCRA 313

TRIDS – Toxics Release Inventory Display System (Washington State software application)

Appendix 2

Tier Two Reporting, 2002

County	Number of Reporting Facilities	Number of Chemicals Reported	Number of EHS Reporting Facilities	Number of EHS Chemicals Reported
Adams	44	201	29	72
Asotin	11	25	4	5
Benton	81	394	56	106
Chelan	86	425	59	139
Clallam	55	143	21	24
Clark	149	1081	75	190
Columbia	18	62	11	23
Cowlitz	70	568	46	82
Douglas	31	62	21	25
Ferry	7	41	1	6
Franklin	81	922	46	221
Garfield	11	31	4	8
Grant	126	925	71	274
Grays Harbor	76	226	25	33
Island	29	88	8	9
Jefferson	23	71	10	11
King	665	1953	273	484
City Of Auburn	24	141	5	22
City Of Kent	97	809	35	143
Skykomish	1	1	1	1
Total King County	787	2904	456	659
Kitsap	77	211	45	55
Kittitas	39	78	22	25
Klickitat	17	71	10	11
Lewis	71	238	37	53
Lincoln	44	123	31	46
Mason	23	67	8	9
Okanogan	58	218	34	78
Pacific	24	50	14	17
Pend Oreille	9	46	4	8
Pierce	230	870	131	158
Fort Lewis	3	31	1	2
City Of Puyallup	7	20	4	4
Total Pierce	240	921	136	164
San Juan	17	32	5	5
Skagit	94	471	35	69
Skamania	11	52	5	6
Snohomish	260	734	99	144
Snohomish (SW)	23	72	8	14
Total Snohomish	283	798	107	158
Spokane	221	997	113	191
Stevens	21	76	9	11
Thurston	71	195	32	37
Wahkiakum	5	12	4	5
Walla Walla	55	277	26	87
Whatcom	96	516	49	89
Whitman	55	301	38	88
City of Pullman	9	37	4	12
Total Whitman	64	338	42	100
Yakima	216	821	155	315

Appendix 3

Washington State TRI by Chemical, 2002

CHEMICAL	CARCINOGEN*	PBT**	No. of Report	Air	Land	Water	2002 Releases	2001 Release	2002 Transfers	2001 Transfers
1,1-DICHLORO-1-FLUOROETHANE	No	No	1	30,988	0	0	**30,988**	19,254	0	0
1,2,4-TRIMETHYLBENZENE	No	No	14	6,660	2,625	0	**9,285**	7,393	23,157	19,892
1,2-DICHLOROETHANE	Yes	No	1	48	0	0	**48**	2,692	35,545	10
1,3-BUTADIENE	Yes	No	5	537	0	0	**537**	1,315	0	0
1,3-DICHLOROPROPYLENE	No	No	1	157	0	0	**157**	130	0	0
4,4'-ISOPROPYLIDENEDIPHENOL	No	No	1	0	0	0	**0**	0	0	0
ACETALDEHYDE	Yes	No	8	586,679	3,800	7,426	**597,905**	595,271	17	5
ACETONITRILE	Yes	No	2	362	0	0	**362**	6,424	55,720	150
ACRYLAMIDE	Yes	No	1	29	0	0	**29**	38	142	141
ALUMINUM (FUME OR DUST)	No	No	3	630	0	0	**630**	0	73,800	98,217
AMMONIA	No	No	31	1,454,506	1,415	125,224	**1,581,145**	1,700,657	187,673	214,740
ANTHRACENE	No	No	2	0	0	0	**0**	2	6	5
ANTIMONY	No	No	1	22	0	0	**22**	17	183	112
ANTIMONY COMPOUNDS	No	No	1	0	0	0	**0**	0	19,086	15,402
ARSENIC COMPOUNDS	Yes	No	2	7	19,295	12	**19,314**	15,402	456	475
BARIUM	No	No	1	140	9,531	0	**9,671**		0	
BARIUM COMPOUNDS	No	No	6	702	1,918,223	5,168	**1,924,093**	2,383,287	230,439	173,836
BENZENE	Yes	No	16	50,527	263	5	**50,795**	71,018	12,645	8,019
BENZO(G,H,I)PERYLENE	No	Yes	21	349	2	11	**362**	431	2,932	2,138
BENZOYL PEROXIDE	No	No	1	0	5	0	**5**	0	0	0
BIPHENYL	No	No	3	182	0	0	**182**	5,950	6,771	2,042
CARBON DISULFIDE	No	No	4	315	0	3	**318**	3,565	0	13
CARBONYL SULFIDE	No	No	5	188,219	0	0	**188,219**	316,090	0	0
CATECHOL	Yes	No	6	32	1	426	**459**	507	28,712	19,259

CHEMICAL	CARCINOGEN*	PBT**	No. of Report	Air	Land	Water	2002 Releases	2001 Release	2002 Transfers	2001 Transfers
CHLORINE	No	No	13	36,957	5	20,927	**57,889**	103,969	0	250
CHLORINE DIOXIDE	No	No	7	11,161	0	0	**11,161**	15,846	0	0
CHLORODIFLUOROMETHANE	No	No	1	4,236	0	0	**4,236**	3,503	0	0
CHLOROFORM	Yes	No	2	32,279	0	4,583	**36,862**	43,061	836	32
CHLOROPICRIN	No	No	1	5	0	0	**5**	4	0	0
CHROMIUM	Yes	No	20	1,243	0	69	**1,312**	1,543	151,229	91,963
CHROMIUM COMPOUNDS	Yes	No	9	745	214,252	609	**215,606**	166,282	142,185	128,315
COBALT COMPOUNDS	Yes	No	2	71	161,620	15	**161,706**	106,781	7,837	9,385
COPPER	No	No	25	524	150,905	610	**152,039**	167,466	1,184,101	1,526,723
COPPER COMPOUNDS	No	No	11	2,412	165,639	638	**168,689**	219,116	334,175	412,513
CREOSOTE	Yes	No	1	1,085	0	43	**1,128**	1,081	367	164
CRESOL (MIXED ISOMERS)	No	No	7	24,656	10	220	**24,886**	23,062	0	0
CUMENE	No	No	4	1,745	81	0	**1,826**	1,769	1,305	346
CYANIDE COMPOUNDS	No	No	2	16,000	4,500	120	**20,620**	7,200	0	0
CYCLOHEXANE	No	No	8	30,023	720	0	**30,743**	32,101	21,864	780
DECABROMODIPHENYL OXIDE	No	No	1	0	0	0	**0**	0	68,164	35,996
DI(2-ETHYLHEXYL) PHTHALATE	Yes	No	3	236	0	0	**236**	84	366	0
DIBUTYL PHTHALATE	No	No	1	4,605	0	0	**4,605**	6,556	590	680
DICHLOROMETHANE	Yes	No	5	51,258	0	1	**51,259**	56,663	34,509	44,790
DIETHANOLAMINE	No	No	7	24,586	0	3,320	**27,906**	32,053	11,253	20,488
DIISOCYANATES	No	No	9	424	440	0	**864**	305	2,444	2,050
DIMETHYLAMINE	No	No	1	7	0	7	**14**	20	0	0
DIURON	No	No	1	0	0	0	**0**	0	0	0
ETHYLBENZENE	Yes	No	17	17,715	1,512	5	**19,232**	20,078	124,415	158,005
ETHYLENE	No	No	6	16,240	0	0	**16,240**	70,845	0	0
ETHYLENE GLYCOL	No	No	12	6,080	130	6,241	**12,451**	70,721	1,047,444	237,884
FORMALDEHYDE	Yes	No	9	176,217	25	9,014	**185,256**	144,570	9,650	6,808
FORMIC ACID	No	No	6	591	0	5,513	**6,104**	5,998	0	0

CHEMICAL	CARCINOGEN*	PBT**	No. of Report	Air	Land	Water	2002 Releases	2001 Release	2002 Transfers	2001 Transfers
FREON 113	No	No	1	16,000	0	0	**16,000**	23,000	2,600	13,800
GLYCOL ETHERS	No	No	15	471,735	0	0	**471,735**	503,685	124,767	112,752
HEXACHLOROBENZENE	No	Yes	3	0	0	0	**0**	0	0	0
HYDROCHLORIC ACID	No	No	17	1,622,727	0	0	**1,622,727**	1,640,194	1,178	1,235
HYDROGEN CYANIDE	No	No	1	16,000	0	120	**16,120**	1,700	0	0
HYDROGEN FLUORIDE	No	No	16	180,150	0	0	**180,150**	289,456	88,354	8,805
LEAD	Yes	Yes	74	948	936,725	1,402	**939,075**	35,863	95,521	158,103
LEAD COMPOUNDS	Yes	Yes	73	3,013	253,046	3,424	**259,483**	165,513	651,396	657,113
LITHIUM CARBONATE	No	No	1	1,051	0	0	**1,051**	318	0	0
MANGANESE	No	No	21	1,871	641	511	**3,023**	2,768	490,342	641,956
MANGANESE COMPOUNDS	No	No	17	6,186	1,589,298	198,683	**1,794,167**	1,172,784	735,862	741,799
MERCURY	No	Yes	3	1	3	0	**4**	12	101	10
MERCURY COMPOUNDS	No	Yes	17	427	310	9	**746**	350	9,748	18,438
METHAM SODIUM	No	No	3	10,214	0	40	**10,254**	10,551	14,467	6,470
METHANOL	No	No	27	2,823,958	10,822	187,669	**3,022,449**	3,570,471	200,079	181,445
METHYL ETHYL KETONE	No	No	22	576,373	0	11,953	**588,326**	532,328	607,542	746,026
METHYL ISOBUTYL KETONE	No	No	7	36,210	0	0	**36,210**	52,470	245,751	409,028
METHYL METHACRYLATE	No	No	3	7,868	0	0	**7,868**	34,794	3,929	681
METHYL TERT-BUTYL ETHER	No	No	3	374	0	0	**374**	3,272	20,974	463
MOLYBDENUM TRIOXIDE	No	No	4	250	0	0	**250**	0	1,600	54,000
N,N-DIMETHYLFORMAMIDE	No	No	1	78	0	0	**78**	4,575	26,043	172
NAPHTHALENE	No	No	14	4,840	697	0	**5,537**	5,408	11,920	11,146
N-BUTYL ALCOHOL	No	No	10	410,881	0	0	**410,881**	445,259	131,808	170,788
N-HEXANE	No	No	15	70,473	2,175	0	**72,648**	146,722	23,112	4,518
NICKEL	Yes	No	15	794	5	683	**1,482**	9,560	81,931	87,440
NICKEL COMPOUNDS	Yes	No	6	650	136,285	942	**137,877**	76,164	25,761	25,930
NITRATE COMPOUNDS	No	No	38	11,659	128,130	950,954	**1,090,743**	1,581,972	4,287,467	3,633,807
NITRIC ACID	No	No	28	2,934	30	5	**2,969**	1,741	244,557	506,608

CHEMICAL	CARCINOGEN*	PBT**	No. of Report	Air	Land	Water	2002 Releases	2001 Release	2002 Transfers	2001 Transfers
NITROGLYCERIN	No	No	2	0	0	0	**0**	0	0	0
N-METHYL-2-PYRROLIDONE	No	No	4	4,589	0	0	**4,589**	18,189	247,852	265,343
PHENANTHRENE	No	No	3	3	0	0	**3**	65	2	50
PHENOL	No	No	16	117,981	29	989	**118,999**	129,949	7,358	8,302
POLYCHLORINATED BIPHENYLS	Yes	Yes	3	0	0	28	**28**	0	0	0
POLYCYCLIC AROMATIC COMPOUNDS	Yes	Yes	35	17,002	172	189	**17,363**	10,803	28,569	16,423
PROPYLENE	No	No	5	27,393	0	0	**27,393**	100,990	0	0
PYRIDINE	No	No	1	88	0	0	**88**	4,907	26,874	16
SEC-BUTYL ALCOHOL	No	No	2	17,700	0	0	**17,700**	18,700	19,936	29,758
SILVER	No	No	1	0	0	0	**0**	0	186,370	216,306
SODIUM DIMETHYLDITHIOCARBAMATE	No	No	1	238	0	4	**242**	335	293	592
STYRENE	Yes	No	32	991,075	0	98	**991,173**	1,088,868	28,260	16,887
SULFURIC ACID	No	No	11	1,117,739	0	0	**1,117,739**	1,469,431	0	0
TERT-BUTYL ALCOHOL	No	No	1	52	0	0	**52**		21,361	
TETRABROMOBISPHENOL A	No	Yes	4	717	0	0	**717**	956	233	685
TETRACHLOROETHYLENE	Yes	No	6	23,494	0	0	**23,494**	21,855	28,623	29,192
TOLUENE	No	No	29	280,137	7,764	6	**287,907**	449,225	773,254	1,026,769
TOLUENE DIISOCYANATE (MIXED ISOMERS)	Yes	No	1	369	0	0	**369**	380	130	300
TRANS-1,3-DICHLOROPROPENE	No	No	1	75	0	0	**75**	62	0	0
TRICHLOROETHYLENE	Yes	No	6	126,938	0	0	**126,938**	156,867	23,096	66,413
VANADIUM COMPOUNDS	No	No	1	686	310,146	53	**310,885**	422,407	14,128	18,244
VINYL ACETATE	Yes	No	1	3,666	0	250	**3,916**	6,245	0	0
XYLENE (MIXED ISOMERS)	No	No	30	222,683	8,099	6	**230,788**	222,261	634,461	820,494
ZINC COMPOUNDS	No	No	19	15,955	92,162	12,177	**120,294**	156,151	4,626,690	4,959,621
Grand Total			**998**	**12,028,437**	**6,131,538**	**1,560,405**	**19,720,380**		**18,614,319**	

***Chemicals classified by OSHA as known or suspected carcinogens.**
****Classified as Persistant, Bioacculative Toxic (PBT) chemicals under TRI.**

Appendix 4

Washington State Certification Form Reporters, 2002

Facility	City	County	Chemical
Achilles USA	Everett	Snohomish	Antimony compounds Barium compounds Cadmium compounds Zinc compounds
ADM Animal Health & Nutrition	Spokane	Spokane	Copper compounds
Air Liquide America	Tacoma	Pierce	Propylene
Allweather Wood Treaters	Washougal	Clark	Arsenic compounds Chromium compounds Copper compounds
Asahipen America	Seattle	King	Ethylene Glycol
Ball Metal Beverage Container Operations	Kent	King	Manganese
Basic American Foods	Moses Lake	Grant	Ammonia
Bay Zinc Co., Inc.	Moxee	Yakima	Copper compounds Sulfuric Acid
Brooks Manufacturing Co.	Bellingham	Whatcom	Pentachloropohenol
Canam Steel Corp.	Sunnyside	Yakima	Aluminum (fume or dust) Barium compounds Chromium Copper Manganese Nickel Phosphorus (yellow or white) Zinc (fume or dust)
Cargill, Inc.	Burlington	Skagit	Manganese compounds Zinc compounds
Cascade Columbia Distribution	Seattle	King	Ethylene Glycol Nitric Acid Trichloroethylene
Cascade Pole & Lumber Co.	Tacoma	Pierce	Arsenic compounds Chromium compounds Copper compounds Pentachlorophenol
CH2O	Olympia	Thurston	Nitrate compounds Nitric Acid Sodium Nitrite
Chemco, Inc.	Ferndale	Whatcom	Formaldehyde Methanol

Facility	City	County	Chemical
Chevron Products Co., Richmond Beach Asphalt Refinery	Seattle	King	1,2,4-Trimethylbenzene Naphthalene Xylene (mixed isomers)
Columbia Machine, Inc.	Vancouver	Clark	Methanol
Connelly Skis, Inc.	Lynnwood	Snohomish	Diisocyanates
Cooper Oil Longview Bulk Plant	Longview	Cowlitz	1,2,4-Trimethylbenzene N-Hexane
Cytec Industries, Inc.	Longview	Cowlitz	Acrylic Acid Ammonia Formaldehyde Hydrochloric Acid Methanol
Eaton/Cutler-Hammer Exotic Metals Forming Co. LLC	Kent	King	Copper Chromium compounds Nickel compounds
Exterior Wood, Inc.	Washougal	Clark	Arsenic compounds Chromium compounds
Fleetwood Homes of WA #31	Woodland	Cowlitz	Diisocyanates
Foamex – Kent	Kent	King	Diethanolamine
Fort James Camas LLC	Camas	Clark	Catechol Chloroform Formic Acid Glycol Ethers
Gaco Western, Inc.	Tukwila	King	Toluene Diisocyanate (mixed isomers)
Goldendale Aluminum Co.	Goldendale	Klickitat	Chlorine Chromium Copper Manganese
Hobart Bakery Systems Division of ITW Food/Equip Grp.	Orting	Pierce	Chromium Manganese Nickel
IBP, Inc.	Wallula	Walla Walla	Chromium Nickel
J.H. Baxter & Co.	Arlington	Snohomish	Pentachlorophenol
JCI Jones Chemicals, Inc.	Tacoma	Pierce	Ammonia
Jeld-Wen Coatings	Tukwila	King	Zinc compounds
Kelly-Moore Paint Co.	Seattle	King	Ammonia Barium compounds Cobalt compounds Dibutyl Phthalate Ethylene Glycol Glycol Ethers Manganese compounds Methanol N-Butyl Alcohol Toluene Xylene (mixed isomers)

Facility	City	County	Chemical
			Zinc compounds
Land O Lakes Farmland Feed	Othello	Adams	Manganese compounds Zinc compounds
Lincoln Mutual Service Inc. #1	Almira	Lincoln	1,2,4-Trimethylbenzene Benzene Ethylbenzene Toluene Xylene (mixed isomers)
Longview Aluminum LLC	Longview	Cowlitz	Chlorine
Mica Brick Plant	Mica	Spokane	Manganese compounds
Mikron Industries, Inc.	Kent	King	Antimony compounds Chromium compounds
Moses Lake Industries, Inc.	Moses Lake	Grant	Copper compounds
Newcastle Brick Plant	Renton	King	Barium compounds Manganese compounds
Northwest Castings	Seattle	King	Chromium Manganese
Northwest Terminaling Co.	Pasco	Franklin	Cresol (mixed isomers)
O'Brien Water Sports, Inc.	Redmond	King	Diisocyanates
Pace International, LLC	Wapato	Yakima	Diphenylamine Manganese compounds Nitrate compounds
Philips Oral Healthcare, Inc.	Snoqualmie	King	Nickel
Ponderay Newsprint Co.	Usk	Pend Oreille	Potassium Dimethyldithiocarbamate
PRC-Desoto Intl., Inc.	Woodinville	King	Manganese compounds
Purina Mills, LLC	Spokane	Spokane	Copper compounds Manganese compounds Zinc compounds
R.A. Pearson Co.			Chromium compounds
Saint-Gobain Containers	Seattle	King	Chromium compounds
Savage Western Transports, Inc.	Pasco	Franklin	Ammonia
Snokist Growers – Cannery	Yakima	Yakima	Chlorine
St. John Grange Supply, Inc.	St. John	Whitman	Ammonia
Telect, Inc.	Liberty Lake	Spokane	Diisocyanates
Tessenderlo Kerley, Inc.	Kennewick	Benton	Dimethylamine Sodium Dimethyldithiocarbamate
The Oeser Co.	Bellingham	Whatcom	Pentachlorophenol
Transpro, Inc.	Seattle	King	Copper
Trident Seafoods Corp.	Anacortes	Skagit	Ammonia
U.S. Oil & Refining Co.	Tacoma	Pierce	Glycol Ethers

Facility	City	County	Chemical
Univar USA, Inc. (Formerly Vopak USA, Inc.)	Kent	King	1,2,4-Trimethylbenzene Diethanolamine Ethylbenzene Ethylene Glycol Clycol Ethers Methyl Isobutyl Ketone N-Butyl Alcohol Nitric Acid Tetrachloroethylene Toluene Xylene (mixed isomers)
Van Doren Sales, Inc.	East	Douglas	Chromium Manganeso Nickel
Western Pneumatic Tube Co.	Kirkland	King	Chromium Nickel
Western Sintering Co., Inc.	Richland	Benton	Ammonia Copper
Western Steel Casting Co.	Seattle	King	Chromium Manganeso Nickel
Western Word Preserving	Sumner	Pierce	Arsenic compounds Chromium compounds Copper compounds

Appendix 5

Washington State TRI Dioxin and Dioxin-like Compounds, 2002 (in Grams)

Facility	City	County	Air	Water	Land	Total	Transfers
Boise Cascade Paper Division	Wallula	Walla Walla	0.34	0.131	0.0455	0.5165	
Boise Cascade Kettle Falls Plywood Mill	Kettle Falls	Stevens	0.1346	0	0	0.1346	0.0004
Brooks Manufacturing Co.	Bellingham	Whatcom	0.0831	0.0064	0	0.0895	1.4032
Cascade Pole & Lumber Co.	Tacoma	Pierce	0.295	0.9873	0	1.2823	160.1166
Conoco Phillips Ferndale Refinery	Ferndale	Whatcom	0.178	0	0	0.178	
Daishowa America Co. LTD	Port Angeles	Clallam	0.13	1.82	0	1.95	4.22
Fort James Camas LLC	Camas	Clark	0.7275	3.58186	3.18331	7.49267	0.04498
Grays Harbor Paper LP	Hoquiam	Grays Harbor	0.59	0.0161	0.185	0.7911	0.185
J. H. Baxter & Co.	Arlington	Snohomish	0.0009	0	0	0.0009	56.3635
Kaiser Aluminum & Chemical - Trentwood	Spokane	Spokane	0.261	0	0	0.261	0.154
Kettle Falls Lumber	Kettle Falls	Stevens	0.0657	0	0	0.0657	0.0469
Kimberly-Clark Worldwide, Inc.	Everett	Snohomish	0.088	8.19	0	8.278	42.272
LaFarge North America	Seattle	King	3.6	0	0	3.6	
Longview Fibre Company	Longview	Cowlitz	1.5	0	0	1.5	0.46
Port Townsend Paper Corp.	Port Townsend	Jefferson	0.4	0	0.113	0.513	
SDS Lumber Company	Bingen	Klickitat	0.14	0	0	0.14	0.003205
Simpson Tacoma Kraft Co.	Tacoma	Pierce	1.2623	0.1292	0	1.3915	66.547
Tesoro Refining & Marketing Co.	Anacortes	Skagit	0.0839	1.6329	4.8525	6.5693	0.2824
Theoeser Company	Bellingham	Whatcom	0.0042	0.181	0	0.1852	0.5983
Transalta Centralia Generation/Mining	Centralia	Lewis	2.03	0	0	2.03	
Weyerhaeuser Company	Longview	Cowlitz	1.4025	0.02	0	1.4225	3.16
Weyerhaeuser Pulp Mill	Cosmopolis	Grays Harbor	0.17	0.0137	0	0.1837	0.35
Yakima Complex	Yakima	Yakima	0.1415	0	0	0.1415	0.0024
			Grand Total	**Grand Total**	**Grand Total**	**Grand Total**	**Grand Total**
			13.6282	16.70946	8.37931	38.71697	336.20988

Appendix 6

Washington TRI - 2002 by County, Facility, Chemical

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
ADAMS	McCain Foods USA, Inc.	Othello	Ammonia	2,500	0	0	**2,500**	6,480	32,813	37,176
			Chlorine Dioxide	50	0	0	**50**	50	0	0
	Summary for McCain Foods USA, Inc.			**2,550**	**0**	**0**	**2,550**		**32,813**	
	Summary for Adams County			**2,550**	**0**	**0**	**2,550**		**32,813**	
BENTON	Agrium Kennewick Fertilizer Operations - Finley area	Kennewick	Ammonia	1,075	20	30	**1,125**	1,080	0	0
			Copper	0	5	0	**5**		0	
			Nickel	0	5	0	**5**		0	
			Nitrate Compounds	0	35,000	0	**35,000**	570	0	0
	Summary for Agrium Kennewick Fertilizer Operations - Finley area			**1,075**	**35,030**	**30**	**36,135**		**0**	
Benton	Agrium Kennewick Fertilizer Operations – Kennewick Area	Kennewick	Ammonia	688,000	0	1,470	**689,470**	674,800	14,460	3,710
			Nitrate Compounds	255	29,505	13,040	**42,800**	115,355	447,300	121,370
			Nitric Acid	0	5	5	**10**	15	0	10
	Summary for Agrium Kennewick Fertilizer Operations - Kennewick area			**688,255**	**29,510**	**14,515**	**732,280**		**461,760**	
Benton	Allied Technology Group	Richland	Lead	0	0	0	**0**	0	6,364	841
Benton	Framatome ANP, Inc.	Richland	Ammonia	2,896	0	0	**2,896**	3,800	822	713
			Hydrogen Fluoride	36	0	0	**36**	250	78,450	655
			Nitrate Compounds	0	0	0	**0**	0	1,280,000	1,113,000
			Nitric Acid	0	0	0	**0**	0	3,304	13,000
	Summary for Framatome ANP, Inc.			**2,932**	**0**	**0**	**2,932**		**1,362,576**	
Benton	Kaiser Aluminum & Chemical Corp.	Richland	Copper	0	0	0	**0**		29,649	
Benton	Lamb Weston Inc., Richland Facility	Richland	Chlorine	0	0	0	**0**	0	0	0
			Nitrate Compounds	0	0	5,259	**5,259**	6,770	0	0
	Summary for Lamb Weston Inc. Richland Facility			**0**	**0**	**5,259**	**5,259**		**0**	
Benton	Richland Specialty Extrusions	Richland	Copper	0	0	0	**0**	0	1	40,455

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
Benton	Sandvik Special Metals Corp.	Kennewick	Hydrogen Fluoride	55	0	0	**55**	55	0	0
			Nitrate Compounds	0	0	216,000	**216,000**	431,000	0	0
			Nitric Acid	115	0	0	**115**	115	0	0
	Summary for Sandvik Special Metals Corp.			**170**	**0**	**216,000**	**216,170**		**0**	
Benton	Tessenderlo Kerley, Inc.	Kennewick	Ammonia	1,968	0	0	**1,968**	1,738	7,962	3,054
			Carbon Disulfide	14	0	0	**14**	20	0	0
			Metham Sodium	250	0	0	**250**	509	10	12
	Summary for Tessenderlo Kerley, Inc.			**2,232**	**0**	**0**	**2,232**		**7,972**	
Benton	Tree Top, Inc. - Prosser Plant	Prosser	Polycyclic Aromatic	0	0	0	**0**		0	
Benton	U.S. Doe Hanford Site	Richland	Lead	5	935,643	0	**935,648**	11,485	11,444	198
	Summary for Benton County			**694,669**	**1,000,183**	**235,804**	**1,930,656**		**1,879,766**	
CHELAN	Alcoa Wenatchee Works	Malaga	Benzo(G,H,I)Perylene	129	0	0	**129**	271	2,847	2,108
			Lead	127	1	0	**128**	267	5	2
			Polycyclic Aromatic	1,165	0	0	**1,165**	2,448	25,740	15,566
	Summary for Alcoa Wenatchee Works			**1,421**	**1**	**0**	**1,422**		**28,592**	
Chelan	Tree Top, Inc. - Cashmere Plant	Cashmere	Polycyclic Aromatic	0	0	0	**0**	0	0	0
Chelan	Tree Top, Inc. Wenatchee Plant	Wenatchee	Nitrate Compounds	0	0	0	**0**	0	12,600	48,000
	Summary for Chelan County			**1,421**	**1**	**0**	**1,422**		**41,192**	
CLALLAM	Daishowa America Co. Ltd.	Port Angeles	Ammonia	250	0	2,142	**2,392**	1,781	0	0
			Benzo(G,H,I)Perylene	0	0	0	**0**	0	5	5
			Lead	54	0	454	**508**	505	286	261
			Methanol	16,073	0	427	**16,500**	21,508	0	0
			Nitrate Compounds	0	0	88,722	**88,722**	20,400	0	0
			Polycyclic Aromatic	1	0	20	**21**	1	56	51
	Summary for Daishowa America Co. Ltd.			**16,378**	**0**	**91,765**	**108,143**		**347**	
	Summary for Clallam County			**16,378**	**0**	**91,765**	**108,143**		**347**	
CLARK	Albina Asphalt/Vancouver Ice & Fuel	Vancouver	1,2,4-Trimethylbenzene	40	0	0	**40**	175	0	0
			Benzene	45	0	0	**45**	112	0	0
			Ethylbenzene	5	0	0	**5**	112	0	0
			N-Hexane	80	0	0	**80**	496	0	0
			Toluene	65	0	0	**65**	503	0	0
			Xylene (Mixed Isomers)	25	0	0	**25**	504	0	0
	Summary for Albina Asphalt/Vancouver Ice & Fuel			**260**	**0**	**0**	**260**		**0**	

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
Clark	Allweather Wood Treaters	Washougal	Lead	0	0	0	**0**		0	
Clark	Alpha Tec Systems, Inc.	Vancouver	Mercury Compounds	0	0	0	**0**		0	
Clark	Attbar, Inc.	Ridgefield	Styrene	71,705	0	0	**71,705**	61,800	0	0
Clark	Christensen Shipyards Ltd	Vancouver	Styrene	7,269	0	0	**7,269**	3,467	0	0
Clark	Columbia Machine, Inc.	Vancouver	Manganese	15	0	0	**15**	15	13,000	12,000
Clark	Controltek, Inc.	Vancouver	Lead	0	0	0	**0**	0	421	178
Clark	Corrosion Controllers, Inc.	Washougal	Styrene	18,165	0	0	**18,165**	6,104	0	0
Clark	Exterior Wood, Inc.	Washougal	Copper Compounds	0	0	78	**78**	206	966	2,010
			Diethanolamine	135	0	20	**155**		515	
	Summary for Exterior Wood, Inc.			**135**	**0**	**98**	**233**		**1,481**	
Clark	Fabricated Metal Products Inc., dba Seafab Metals Co	Vancouver	Lead Compounds	1	0	1	**2**	3	0	2
Clark	Fort James Camas LLC	Camas	Acetaldehyde	30,100	3,800	17	**33,917**	46,350	0	0
			Ammonia	78,000	0	25,000	**103,000**	78,000	0	0
			Chlorine	755	0	0	**755**	1,905	0	0
			Chlorine Dioxide	1,350	0	0	**1,350**	2,250	0	0
			Cresol (Mixed Isomers)	22,000	0	0	**22,000**	20,250	0	0
			Formaldehyde	9,500	0	0	**9,500**	15,500	0	0
			Hydrochloric Acid	8,400	0	0	**8,400**	8,800	0	0
			Lead Compounds	33	120	0	**153**	225	1	0
			Manganese Compounds	1,500	13,750	19,000	**34,250**	21,950	2,200	38,000
			Methanol	641,000	10,000	0	**651,000**	896,700	0	93
			Methyl Ethyl Ketone	5,550	0	11,000	**16,550**	12,755	3,200	68
			Nitrate Compounds	0	0	3,600	**3,600**	38,000	0	0
			Phenol	1,800	0	0	**1,800**	1,250	0	0
			Polycyclic Aromatic	96	0	23	**119**	197	0	10
			Sulfuric Acid	9,300	0	0	**9,300**	25,000	0	0
	Summary for Fort James Camas LLC			**809,384**	**27,670**	**58,640**	**895,694**		**5,401**	
Clark	Frito-Lay	Vancouver	Nitric Acid	0	0	0	**0**	0	0	0
Clark	GE Betz - Washougal	Washougal	Naphthalene	10	0	0	**10**	10	2,010	1,650

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
Clark	GI&V USA, Inc.	Vancouver	Styrene	4,111	0	0	**4,111**	4,715	0	0
Clark	Glacier Northwest, Inc., East Vancouver Ready-Mix Plant	Vancouver	Lead	0	0	0	**0**	0	118	54
Clark	Glacier Northwest, Inc., Vancouver Ready Mix Plant	Vancouver	Lead	0	0	0	**0**	3	24	25
Clark	Glacier Northwest, Inc., West Vancouver Ready-Mix Plant	Vancouver	Lead	0	0	0	**0**	0	7	36
Clark	Harder Mechanical Fabrication Pipe Shop	Vancouver	Chromium	20	0	0	**20**	250	0	0
			Nickel	20	0	0	**20**	250	0	0
	Summary for Harder Mechanical Fabrication Pipe Shop			**40**	**0**	**0**	**40**		**0**	
Clark	Kemira Chemicals, Inc.	Washougal	Carbon Disulfide	269	0	3	**272**	238	0	13
			Dimethylamine	7	0	7	**14**	20	0	0
			Glycol Ethers	1	0	0	**1**	1	0	0
			Metham Sodium	5,083	0	40	**5,123**	4,359	6,372	6,458
			Sodium	238	0	4	**242**	335	293	592
	Summary for Kemira Chemicals, Inc.			**5,598**	**0**	**54**	**5,652**		**6,665**	
Clark	Linear Technology Corp.	Camas	Hydrogen Fluoride	121	0	0	**121**	139	215	230
Clark	Macdermid Printing Solutions	Vancouver	Styrene	8,496	0	0	**8,496**	7,496	0	0
Clark	Matsushita Kotobuki Electronics Industries of America	Vancouver	Antimony Compounds	0	0	0	**0**	0	19,086	15,402
			Decabromodiphenyl Oxide	0	0	0	**0**	0	68,164	35,996
	Summary for Matsushita Kotobuki Electronics Industries of America, Inc.			**0**	**0**	**0**	**0**		**87,250**	
Clark	Pendleton Woolen Mills	Washougal	Formic Acid	0	0	0	**0**	0	0	0
Clark	SEH America Inc.	Vancouver	Hydrochloric Acid	805	0	0	**805**	665	0	0
			Hydrogen Fluoride	165	0	0	**165**	125	6,010	1,200
			Nitrate Compounds	0	0	0	**0**	0	938,000	1,011,000
			Nitric Acid	465	0	0	**465**	555	135	20
	Summary for SEH-America Inc.			**1,435**	**0**	**0**	**1,435**		**944,145**	
Clark	Silicon Forest Electronics Inc.	Vancouver	Lead	0	0	0	**0**	0	308	576
Clark	Thompson Metal Fab, Inc.	Vancouver	Chromium	125	0	0	**125**	250	9,500	12,500
			Nickel	50	0	0	**50**	250	3,500	4,850
	Summary for Thompson Metal Fab, Inc.			**175**	**0**	**0**	**175**		**13,000**	

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
Clark	Trim Systems LLC	Vancouver	Diisocyanates	0	0	0	**0**	260	1,500	750
			N-Methyl-2-Pyrrolidone	0	0	0	**0**	0	0	750
	Summary for Trim Systems LLC			**0**	**0**	**0**	**0**		**1,500**	
Clark	Universal Structural Inc.	Vancouver	Nickel	20	0	0	**20**	250	250	0
Clark	Varicast Inc.	Vancouver	Manganese	500	0	0	**500**	500	750	1,347
Clark	Wafertech Llc	Camas	Ammonia	1,282	0	0	**1,282**	1,214	12,254	11,146
			Catechol	32	0	0	**32**	87	28,710	19,257
			Hydrogen Fluoride	772	0	0	**772**	1,609	1,842	2,087
			Nitrate Compounds	5	0	0	**5**	5	46,744	26,235
			Nitric Acid	710	0	0	**710**	451	1,401	763
			N-Methyl-2-Pyrrolidone	1,713	0	0	**1,713**	407	118,694	93,505
	Summary for Wafertech LLC			**4,514**	**0**	**0**	**4,514**		**209,645**	
	Summary for Clark County			**931,954**	**27,670**	**58,793**	**1,018,417**		**1,286,190**	
COWLITZ	Chemtrade Performance Chemicals	Kalama	Lead Compounds	0	0	0	**0**	0	0	0
			Zinc Compounds	79	0	0	**79**	10	11	0
	Summary for Chemtrade Performance Chemicals LLC			**79**	**0**	**0**	**79**		**11**	
Cowlitz	Cooper Oil Longview Bulk Plant	Longview	Styrene	0	0	0	**0**		0	
Cowlitz	Cooper Oil Longview Bulk Plant	Longview	Toluene	0	0	0	**0**		0	
			Xylene (Mixed Isomers)	0	0	0	**0**		0	
	Summary for Cooper Oil Longview Bulk Plant			**0**	**0**	**0**	**0**		**0**	
Cowlitz	Cytec Industries, Inc.	Longview	Acrylamide	29	0	0	**29**	38	142	141
Cowlitz	Glacier Northwest, Inc., Longview Ready-Mix Plant	Longview	Lead	0	0	0	**0**	5	73	76
Cowlitz	Glacier Northwest, Inc., Woodland Ready-Mix Plant	Woodland	Lead	0	0	0	**0**	2	11	60
Cowlitz	Longview Aluminum LLC	Longview	Lead Compounds	0	0	4	**4**	200	208	1,110
Cowlitz	Longview Fibre Company	Longview	Acetaldehyde	17,250	0	0	**17,250**	26,250	0	0
			Ammonia	91,005	0	12,000	**103,005**	150,005	0	0
			Barium Compounds	0	0	0	**0**	0	36,000	20,000
			Catechol	0	0	250	**250**	250	0	0

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
			Chromium Compounds	0	0	0	**0**		26,023	
			Formaldehyde	10,005	0	820	**10,825**	11,105	0	0
			Hydrochloric Acid	55,005	0	0	**55,005**	53,005	0	0
			Lead Compounds	0	0	0	**0**	0	11,000	8,300
			Manganese Compounds	0	0	0	**0**	0	59,000	52,000
			Methanol	221,100	0	20,000	**241,100**	344,500	0	0
			Nitrate Compounds	0	0	82,000	**82,000**	73,000	0	0
			Nitric Acid	0	0	0	**0**	0	0	0
			Phenol	1,005	0	130	**1,135**	2,775	0	0
			Polycyclic Aromatic	240	0	29	**269**	283	3	2
			Zinc Compounds	0	0	0	**0**	0	129,200	74,700
	Summary for Longview Fibre Company			**395,610**	**0**	**115,229**	**510,839**		**261,226**	
Cowlitz	Noveon Kalama, Inc.	Kalama	Acetaldehyde	729	0	0	**729**	922	0	0
			Ammonia	1,419	62	146	**1,627**	3,529	99	1,163
			Benzene	15,918	0	0	**15,918**	21,280	6,486	6,034
			Benzo(G,H,I)Perylene	0	0	0	**0**	0	0	0
			Biphenyl	181	0	0	**181**	5,950	6,771	2,042
			Cobalt Compounds	60	1	5	**66**	137	5,154	7,042
			Copper Compounds	150	3	18	**171**	174	62,341	130,347
			Formic Acid	591	0	0	**591**	518	0	0
			Methanol	10,086	0	0	**10,086**	14,461	7	11
			Phenol	936	0	1	**937**	6,644	2,684	4,256
			Polycyclic Aromatic	0	0	0	**0**	0	0	0
			Toluene	81,239	0	0	**81,239**	88,392	1,287	2,951
	Summary for Noveon Kalama, Inc.			**111,309**	**66**	**170**	**111,545**		**84,829**	
Cowlitz	Pacific Coating & Laminating	Kelso	Diisocyanates	17	440	0	**457**		44	
Cowlitz	Solvay Interox, Inc.	Longview	Naphthalene	205	0	0	**205**	209	727	714
			Nitrate Compounds	0	0	0	**0**	0	142,222	79,104
			Nitric Acid	0	0	0	**0**	0	0	0
	Summary for Solvay Interox, Inc.			**205**	**0**	**0**	**205**		**142,949**	
Cowlitz	Steelscape	Kalama	1,2,4-Trimethylbenzene	52	0	0	**52**	51	12,920	13,090
			Chromium Compounds	6	0	0	**6**	8	16,333	14,059
			Glycol Ethers	82	0	0	**82**	64	20,285	16,400
			Lead Compounds	0	0	0	**0**	0	187	199
			Methyl Ethyl Ketone	33	0	0	**33**	28	8,378	7,340
			Naphthalene	31	0	0	**31**	19	7,602	4,894
			N-Butyl Alcohol	24	0	0	**24**	17	6,019	4,284
			Toluene	13	0	0	**13**	12	3,329	3,093
			Xylene (Mixed Isomers)	15	0	0	**15**	23	3,866	6,072
	Summary for Steelscape			**256**	**0**	**0**	**256**		**78,919**	
Cowlitz	Stowe Woodward	Kelso	Lead Compounds	4	0	0	**4**	17	592	799

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
Cowlitz	Weyerhaeuser Company	Longview	Acetaldehyde	446,919	0	3,786	**450,705**	425,319	17	5
			Ammonia	128,533	0	8,315	**136,848**	123,272	0	0
			Barium Compounds	315	0	0	**315**	352	28,213	36,035
			Benzo(G,H,I)Perylene	1	0	6	**7**	7	2	2
			Catechol	0	0	81	**81**	83	2	2
			Chlorine	460	0	20,927	**21,387**	23,021	0	0
			Chlorine Dioxide	1,911	0	0	**1,911**	1,846	0	0
			Chloroform	32,221	0	4,583	**36,804**	39,534	0	2
			Chromium Compounds	70	0	345	**415**		2,165	
			Cresol (Mixed Isomers)	1,269	0	179	**1,448**	2,156	0	0
			Dichloromethane	24,366	0	1	**24,367**	27,063	0	0
			Ethylene Glycol	14	0	6,241	**6,255**		3	
			Formaldehyde	80,985	0	2,578	**83,563**	66,686	0	3
			Hydrochloric Acid	34,438	0	0	**34,438**	40,074	0	0
			Lead Compounds	48	0	183	**231**	249	468	502
			Manganese Compounds	646	0	29,283	**29,929**	41,192	39,707	42,521
			Mercury Compounds	27	0	1	**28**	38	9	5
			Methanol	1,005,174	0	7,805	**1,012,979**	1,242,856	654	194
			Methyl Ethyl Ketone	215,755	0	105	**215,860**	156,697	628	9
			Nickel Compounds	278	0	802	**1,080**		4,523	
			Nitrate Compounds	0	0	356	**356**	366	19	6
			Phenol	72,577	0	0	**72,577**	68,906	2	1
			Polychlorinated	0	0	0	**0**	0	0	0
			Polycyclic Aromatic	43	0	45	**88**	84	29	35
			Styrene	35,567	0	98	**35,665**	32,517	0	0
			Sulfuric Acid	43,461	0	0	**43,461**	46,661	0	0
			Zinc Compounds	716	0	3,801	**4,517**	4,713	26,995	27,182
	Summary for Weyerhaeuser Company			**2,125,794**	**0**	**89,521**	**2,215,315**		**103,435**	
	Summary for Cowlitz County			**2,633,303**	**506**	**204,924**	**2,838,733**		**672,439**	
FERRY	K2 Mine	Curlew	Lead Compounds	1	1,490	0	**1,491**	1,511	0	0
			Mercury Compounds	0	90	0	**90**	91	0	0
	Summary for K2 Mine			**1**	**1,580**	**0**	**1,581**		**0**	
Ferry	Kettle River Operations Mill	Republic	Copper Compounds	2	39,000	0	**39,002**	66,004	0	0
			Cyanide Compounds	0	4,500	0	**4,500**	7,200	0	0
			Nitrate Compounds	0	48,005	0	**48,005**	77,005	0	0
			Nitric Acid	4	0	0	**4**		0	
	Summary for Kettle River Operations Mill			**6**	**91,505**	**0**	**91,511**		**0**	
	Summary for Ferry County			**7**	**93,085**	**0**	**93,092**		**0**	
FRANKLIN	Lamb-Weston Inc	Connell	Ammonia	1,400	0	0	**1,400**		4,580	
			Nitrate Compounds	0	0	0	**0**	0	0	0
	Summary for Lamb-Weston Inc			**1,400**	**0**	**0**	**1,400**		**4,580**	

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
Franklin	Lamb-Weston, Inc. Pasco Plant	Pasco	Chlorine	0	0	0	**0**	5	0	0
Franklin	Northwest Terminaling Co (Pasco)	Pasco	1,2,4-Trimethylbenzene	186	0	0	**186**	120	1,362	744
			Benzene	993	0	0	**993**	817	855	479
			Ethylbenzene	147	0	0	**147**	132	598	328
			Methyl Tert-Butyl Ether	118	0	0	**118**	346	686	436
			N-Hexane	1,422	0	0	**1,422**	1,516	860	470
			Toluene	1,542	0	0	**1,542**	1,386	3,419	1,884
			Xylene (Mixed Isomers)	789	0	0	**789**	661	3,174	1,736
	Summary for Northwest Terminaling Company (Pasco)			**5,197**	**0**	**0**	**5,197**		**10,954**	
Franklin	Safety-Kleen Systems (118302)	Pasco	Ethylene Glycol	26	0	0	**26**		125,393	
Franklin	Tidewater Terminal Co. Snake River Terminal	Pasco	1,2,4-Trimethylbenzene	72	0	0	**72**	122	0	0
			1,3-Dichloropropylene	157	0	0	**157**	130	0	0
			Ammonia	2,390	0	0	**2,390**	0	0	0
			Benzene	546	0	0	**546**	915	0	250
			Benzo(G,H,I)Perylene	0	0	0	**0**	0	0	0
			Chloropicrin	5	0	0	**5**	4	0	0
			Ethylbenzene	72	0	0	**72**	122	0	250
			Metham Sodium	4,881	0	0	**4,881**	5,683	8,085	0
			N-Hexane	656	0	0	**656**	1,097	0	0
			Nitrate Compounds	0	0	0	**0**	0	0	0
			Polycyclic Aromatic	0	0	0	**0**	0	0	0
			Toluene	728	0	0	**728**	1,219	0	250
			Trans-1,3-	75	0	0	**75**	62	0	0
			Xylene (Mixed Isomers)	364	0	0	**364**	609	0250	
	Summary for Tidewater Terminal Co. Snake River Terminal			**9,946**	**0**	**0**	**9,946**		**8,085**	
	Summary for Franklin County			**16,569**	**0**	**0**	**16,569**		**149,012**	
GRANT	Advanced Silicon Materials LLC	Moses Lake	Hydrochloric Acid	288	0	0	**288**		0	
			Hydrogen Fluoride	0	0	0	**0**		0	
			Nitrate Compounds	0	0	0	**0**		117,131	
			Nitric Acid	325	0	0	**325**		0	
	Summary for Advanced Silicon Materials LLC			**613**	**0**	**0**	**613**		**117,131**	
Grant	Genie Industries - Moses Lake	Moses Lake	Lead	1	2	0	**3**	2	141	132
			Manganese	40	80	0	**120**	81	19,007	12,486
	Summary for Genie Industries - Moses Lake			**41**	**82**	**0**	**123**		**19,148**	
Grant	Inflation Systems, Inc.	Moses Lake	Nitrate Compounds	11,379	0	0	**11,379**	0	982	660
Grant	Moses Lake Industries, Inc.	Moses Lake	Methanol	5,642	0	0	**5,642**		24,170	

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
Grant	Solar Grade Silicon	Moses Lake	Hydrochloric Acid	254	0	0	**254**	2,261	0	0
	Summary for Grant County			**17,929**	**82**	**0**	**18,011**		**161,431**	
GRAYS HARBOR	Grays Harbor Paper LP	Hoquiam	Lead	116	467	38	**621**	504	467	0
Grays Harbor	Howard Moe Enterprises, Inc.	Hoquiam	Styrene	2,994	0	0	**2,994**	5,692	0	0
Grays Harbor	Morton Intl. Inc.	Elma	Methanol	57,952	0	0	**57,952**	42,445	30,770	9,521
Grays Harbor	Westport Shipyard Inc	Westport	Styrene	21,592	0	0	**21,592**	21,592	0	0
Grays Harbor	Weyerhaeuser Pulp Mill	Cosmopolis	Acetaldehyde	8,700	0	750	**9,450**	9,250	0	0
			Ammonia	250	0	2,200	**2,450**	1,000	0	0
			Benzo(G,H,I)Perylene	0	0	0	**0**	0	0	0
			Chlorine	1,850	0	0	**1,850**	3,700	0	0
			Chlorine Dioxide	2,205	0	0	**2,205**	5,705	0	0
			Formic Acid	0	0	750	**750**	250	0	0
			Lead Compounds	51	0	89	**140**	151	67	873
			Manganese Compounds	750	0	43,000	**43,750**	45,400	29,000	29,000
			Methanol	49,750	0	750	**50,500**	49,500	0	0
			Nitrate Compounds	0	0	35,000	**35,000**	120,000	0	0
			Polycyclic Aromatic	7	0	37	**44**	44	3	4
	Summary for Weyerhaeuser Pulp Mill			**63,563**	**0**	**82,576**	**146,139**		**29,070**	
	Summary for Grays Harbor County			**146,217**	**467**	**82,614**	**229,298**		**60,307**	
ISLAND	Technical Services, Inc.	Oak Harbor	Lead Compounds	0	0	0	**0**	2	0	1,470
	Summary for Island County			**0**	**0**	**0**	**0**		**0**	
JEFFERSON	Port Townsend Paper Corp.	Port Townsend	Acetaldehyde	9,100	0	830	**9,930**	6,000	0	0
			Ammonia	71,250	0	6,000	**77,250**	77,750	0	0
			Benzo(G,H,I)Perylene	4	2	0	**6**	3	0	0
			Catechol	0	0	31	**31**	30	0	0
			Formaldehyde	10,000	0	0	**10,000**	11,000	0	0
			Hydrochloric Acid	273,000	0	0	**273,000**	287,000	0	0
			Lead Compounds	83	420	420	**923**	451	0	0
			Manganese Compounds	1,400	104,000	29,400	**134,800**	29,300	0	0
			Mercury Compounds	1	0	0	**1**	1	0	0
			Methanol	113,005	0	5	**113,010**	122,600	0	0
			Phenol	5,000	0	0	**5,000**	13,000	0	0
			Polycyclic Aromatic	54	21	0	**75**	56	0	0
	Summary for Port Townsend Paper Corp.			**482,897**	**104,443**	**36,686**	**624,026**		**0**	
	Summary for Jefferson County			**482,897**	**104,443**	**36,686**	**624,026**		**0**	

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
KING	Ace Galvanizing Inc.	Seattle	Zinc Compounds	1,500	0	0	**1,500**	1,500	221,335	340,792
King	Alaskan Copper Works	Seattle	Chromium Compounds	250	0	0	**250**	250	755	755
			Manganese Compounds	5	0	0	**5**	5	255	255
			Nickel Compounds	5	0	0	**5**	5	755	755
			Nitric Acid	5	0	0	**5**	5	0	0
	Summary for Alaskan Copper Works			**265**	**0**	**0**	**265**		**1,765**	
King	Arima Marine International, Inc	Auburn	Styrene	9,588	0	0	**9,588**	7,773	0	0
King	Art Brass Plating, Inc.	Seattle	Trichloroethylene	15,665	0	0	**15,665**	15,200	750	750
King	Asemco, Inc.	Kent	Lead	0	0	0	**0**		634	
King	Ash Grove Cement Company	Seattle	Chromium	58	0	0	**58**	58	0	0
			Lead Compounds	87	0	0	**87**	86	0	1
			Mercury Compounds	44	0	0	**44**	40	0	0
			Zinc Compounds	236	0	0	**236**		0	
	Summary for Ash Grove Cement Company			**425**	**0**	**0**	**425**		**0**	
King	Asko Processing, Inc.	Seattle	Lead Compounds	0	0	0	**0**	0	2,935	2,447
			Nitric Acid	0	0	0	**0**	0	0	0
			Trichloroethylene	13,625	0	0	**13,625**	12,626	610	2,440
	Summary for Asko Processing, Inc.			**13,625**	**0**	**0**	**13,625**		**3,545**	
King	Avtech Corp	Seattle	Lead	0	0	0	**0**	0	407	4,000
King	Ball Metal Beverage Container Corp.	Kent	Glycol Ethers	134,000	0	0	**134,000**	135,000	150	128
			Hydrogen Fluoride	98	0	0	**98**	69	0	0
			N-Butyl Alcohol	116,000	0	0	**116,000**	122,000	62	39
			Sulfuric Acid	63	0	0	**63**	45	0	0
	Summary for Ball Metal Beverage Container Corp.			**250,161**	**0**	**0**	**250,161**		**212**	
King	Ballard Brass & Aluminum	Seattle	Copper Compounds	250	0	0	**250**	250	6,134	6,652
King	Bardahl Mfg.Corp.	Seattle	Lead Compounds	0	0	0	**0**	0	3	3
King	BCAG - Auburn	Auburn	Chromium Compounds	37	0	0	**37**	75	62,184	69,734
			Copper	0	0	0	**0**	0	334,150	428,494
			Hydrogen Fluoride	0	0	0	**0**	0	1,837	4,633
			Lead	0	0	0	**0**	0	348	221
			Methyl Ethyl Ketone	23,000	0	0	**23,000**	19,300	12,522	19,740
			Nickel	0	0	0	**0**	0	7,524	15,355
			Nitrate Compounds	0	0	0	**0**	0	190,000	290,000

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
			Nitric Acid	0	0	0	**0**	0	13,483	35,744
			Sec-Butyl Alcohol	4,400	0	0	**4,400**	7,600	15,156	20,064
			Tetrabromobisphenol A	17	0	0	**17**	6	74	36
			Toluene	11,800	0	0	**11,800**	10,600	6,485	10,312
	Summary for BCAG - Auburn			**39,254**	**0**	**0**	**39,254**		**643,763**	
King	Berlix Labs Washington LLC	Seattle	Acetonitrile	0	0	0	**0**		12,305	
King	Boeing Commercial Airplane Grp	Seattle	Diethanolamine	1,165	0	0	**1,165**	1,625	10,488	14,628
	North Boeing Field		Glycol Ethers	1,455	0	0	**1,455**	1,906	10,677	15,685
			Methyl Ethyl Ketone	11,165	0	0	**11,165**	23,614	10,291	13,518
			Naphthalene	250	0	0	**250**	250	1,000	750
	Summary for Boeing Commercial Airplane Group - North Boeing Field			**14,035**	**0**	**0**	**14,035**		**32,456**	
King	Boeing Commercial Airplane Grp	Seattle	Diethanolamine	0	0	0	**0**	5	250	1,000
	Plant 2		Glycol Ethers	500	0	0	**500**	500	0	0
			Methyl Ethyl Ketone	500	0	0	**500**	500	250	0
			Naphthalene	5	0	0	**5**	250	0	1,250
	Summary for Boeing Commercial Airplane Group - Plant 2			**1,005**	**0**	**0**	**1,005**		**500**	
King	Boeing Commercial Airplane Grp. Renton		Chromium	2	0	0	**2**	4	14,768	22,010
			Copper	0	0	0	**0**	0	86,386	83,536
			Glycol Ethers	1,987	0	0	**1,987**	1,789	11,637	8,904
			Manganese	0	0	0	**0**	0	17,840	34,588
			Methyl Ethyl Ketone	20,652	0	0	**20,652**	33,089	16,326	17,957
			Methyl Isobutyl Ketone	6,640	0	0	**6,640**	12,849	6,475	9,302
			Naphthalene	255	0	0	**255**	5	0	0
			Toluene	23,426	0	0	**23,426**	35,815	18,398	18,321
	Summary for Boeing Commercial Airplane Group - Renton			**52,962**	**0**	**0**	**52,962**		**171,830**	
King	BP West Coast Products Co – Seattle Terminal		1,2,4-Trimethylbenzene	57	0	0	**57**	197	168	166
			Benzene	162	0	0	**162**	350	207	103
			Ethylbenzene	105	0	0	**105**	150	45	2
			Lead	0	0	0	**0**	0	0	0
			Mercury Compounds	0	0	0	**0**	0	0	0
			N-Hexane	400	0	0	**400**	835	88	83
			Polycyclic Aromatic	0	0	0	**0**	0	0	0
			Toluene	456	0	0	**456**	1,128	495	496
			Xylene (Mixed Isomers)	661	0	0	**661**	855	216	208
	Summary for BP West Coast Products Co - Seattle Terminal			**1,841**	**0**	**0**	**1,841**		**1,219**	

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
King	Burlington Environmental Inc.	Seattle	Ethylene Glycol	5	0	0	**5**	0	145,820	170,666
			Nitrate Compounds	0	0	0	**0**	0	5,334	45,679
	Summary for Burlington Environmental Inc.			**5**	**0**	**0**	**5**		**151,154**	
King	Burlington Environmental Inc	Kent	Chromium	0	0	0	**0**		7,569	
			Lead Compounds	0	0	0	**0**	0	281,268	177,320
			Mercury Compounds	0	0	0	**0**	0	9,601	18,155
	Summary for Burlington Environmental Inc.			**0**	**0**	**0**	**0**		**298,437**	
King	Central Pre-Mix Kent	Kent	Lead	0	0	0	**0**		0	
King	Circuit Services Worldwide LLC	Bellevue	Copper	1	0	0	**1**	1	20,161	26,908
			Lead	0	0	0	**0**	0	1,383	4,232
	Summary for Circuit Services Worldwide LLC			**1**	**0**	**0**	**1**		**21,544**	
King	Conocophillips Renton Terminal	Renton	1,2,4-Trimethylbenzene	57	2,400	0	**2,457**	41	52	150
			Benzene	219	210	0	**429**	300	4	87
			Benzo(G,H,I)Perylene	0	0	0	**0**	0	0	0
			Cyclohexane	166	620	0	**786**	650	13	193
			Ethylbenzene	66	1,400	0	**1,466**	77	31	150
			Naphthalene	12	620	0	**632**	10	13	0
			N-Hexane	780	2,100	0	**2,880**	1,000	46	193
			Polycyclic Aromatic	0	0	0	**0**	0	0	0
			Toluene	740	7,600	0	**8,340**	280	166	246
			Xylene (Mixed Isomers)	310	7,700	0	**8,010**	168	168	360
	Summary for Conocophillips Renton Terminal			**2,350**	**22,650**	**0**	**25,000**		**493**	
King	Darigold-Issaquah	Issaquah	Nitrate Compounds	0	5	0	**5**		20,277	
King	Darigold-Issaquah	Issaquah	Nitric Acid	10	5	0	**15**	10	1,084	2,130
	Summary for Darigold-Issaquah			**10**	**10**	**0**	**20**		**21,361**	
King	Darigold-Rainier	Seattle	Ammonia	2,147	0	0	**2,147**	3,924	19,325	35,317
			Nitric Acid	10	5	0	**15**	10	3,497	3,802
	Summary for Darigold-Rainier			2,157	5	0	2,162		**22,822**	
King	Davis Wire Corporation	Kent	Lead Compounds	0	0	0	**0**		35	
King	Dumwamish Shipyard, Inc.	Seattle	Xylene (Mixed Isomers)	10,168	0	0	**10,168**	15,965	0	0
King	Dynot Battery, Inc.	Seattle	Lead	13	0	0	**13**	10	0	0

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
King	Engineered Polymer Solutions, Inc. Dba Valspar Coatings	Seattle	Ethylbenzene	255	0	0	**255**	250	750	1,000
			Glycol Ethers	250	0	0	**250**	250	1,817	250
			Methanol	4,272	0	0	**4,272**	3,984	750	1,500
			Methyl Ethyl Ketone	1,848	0	0	**1,848**	1,839	1,250	1,500
			Methyl Isobutyl Ketone	255	0	0	**255**	500	750	1,500
			N-Butyl Alcohol	250	0	0	**250**	500	1,954	2,333
			Toluene	1,000	0	0	**1,000**	750	1,500	3,830
			Xylene (Mixed Isomers)	755	0	0	**755**	750	3,444	6,526
	Summary for Engineered Polymer Solutions, Inc. dba Valspar Coatings			**8,885**	**0**	**0**	**8,885**		**12,215**	
King	Equilon Seattle Lubricants Plant	Seattle	1,2,4-Trimethylbenzene	0	0	0	**0**	0	0	0
			Benzene	0	0	0	**0**	0	0	0
			Benzo(G,H,I)Perylene	0	0	0	**0**	0	0	0
			Ethylbenzene	250	0	0	**250**	250	0	0
			Lead	0	0	5	**5**	5	0	0
			N-Hexane	0	0	0	**0**	0	0	0
			Polycyclic Aromatic	0	0	0	**0**	0	0	0
			Toluene	0	0	0	**0**	222	0	0
			Xylene (Mixed Isomers)	137	0	0	**137**	356	0	0
			Zinc Compounds	0	0	5	**5**	5	0	0
	Summary for Equilon Seattle Lubricants Plant			**387**	**0**	**10**	**397**		**0**	
King	Equilon Seattle Terminal	Seattle	1,2,4-Trimethylbenzene	500	0	0	**500**	500	0	500
			Benzene	500	0	0	**500**	500	0	0
			Benzo(G,H,I)Perylene	0	0	0	**0**	0	0	0
			Ethylbenzene	500	0	0	**500**	500	0	0
			Lead Compounds	0	0	2	**2**	3	61	1,091
			N-Hexane	1,000	0	0	**1,000**	500	0	500
			Polycyclic Aromatic	0	0	0	**0**	0	2	43
			Toluene	1,000	0	0	**1,000**	1,000	0	0
			Xylene (Mixed Isomers)	500	0	0	**500**	500	250	250
			Zinc Compounds	0	0	5	**5**	5	0	5
	Summary for Equilon Seattle Terminal			**4,000**	**0**	**7**	**4,007**		**313**	
King	Exotic Metals Forming Co., Inc.	Kent	Nitric Acid	50	0	0	**50**	50	33,556	36,808
King	Farwest Paint Mfg Co	Tukwila	Lead Compounds	10	0	0	**10**	2	0	0
			Toluene	500	0	0	**500**	500	0	0
			Xylene (Mixed Isomers)	500	0	0	**500**	500	0	0
	Summary for Farwest Paint Mfg Co			**1,010**	**0**	**0**	**1,010**		**0**	
King	Foamex LP - Kent	Kent	Toluene Diisocyanate	369	0	0	**369**	380	130	300
King	Formula Corp	Seattle	Glycol Ethers	750	0	0	**750**	750	750	750
King	Gaco Western, Inc.	Tukwila	Methyl Isobutyl Ketone	797	0	0	**797**	807	1,176	1,369

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
			Tetrachloroethylene	1,465	0	0	**1,465**	897	929	201
			Toluene	202	0	0	**202**	641	1,873	4,025
			Xylene (Mixed Isomers)	1,690	0	0	**1,690**	2,491	490	309
	Summary for Gaco Western, Inc.			**4,154**	**0**	**0**	**4,154**		**4,469**	
King	Genie Industries - Bothell	Bothell	Lead	1	2	0	**3**	2	98	349
King	Genie Industries - Fab Services	Woodinville	Lead	1	2	0	**3**	2	112	350
King	Genie Industries - Moosworks	Redmond	Lead	1	2	0	**3**	2	216	385
			Manganese	36	86	0	**122**	78	35,430	44,940
	Summary for Genie Industries - Moosworks			**37**	**88**	**0**	**125**		**35,646**	
King	Genie Industries - Z45	Redmond	Lead	1	2	0	**3**	2	79	141
			Manganese	10	85	0	**95**	82	13,820	45,100
	Summary for Genie Industries - Z45			**11**	**87**	**0**	**98**		**13,899**	
King	Genie Industries Main Campus	Redmond	Lead	1	2	0	**3**	2	175	336
King	Genie Industries South Campus	Redmond	Glycol Ethers	7,890	0	0	**7,890**	15,607	6,750	1,562
			Lead	1	5	0	**6**	4	829	268
			Manganese	260	340	0	**600**	381	47,840	32,310
	Summary for Genie Industries South Campus			**8,151**	**345**	**0**	**8,496**		**55,419**	
King	Genies Industries Main Campus	Redmond	Manganese	95	50	0	**145**	114	22,060	56,774
King	Glacier Northwest, Inc.	Seattle	Lead Compounds	0	0	0	**0**	0	92	53
	East Marginal Way Plant		Nitrate Compounds	0	0	1,240	**1,240**	250	1,000	505
	Summary for Glacier Northwest, Inc. East Marginal Way Plant			**0**	**0**	**1,240**	**1,240**		**1,092**	
King	Glacier Northwest, Inc. Kenmore Ready-Mix Plant	Kenmore	Lead Compounds	0	0	0	**0**	0	9	0
King	Glacier Northwest, Inc. Snoqualmie Plant	Snoqualmie	Lead Compounds	0	0	0	**0**	0	0	5
King	Glacier Northwest, Inc. West Marginal Way Plant	Seattle	Lead Compounds	0	0	0	**0**	0	2	2
King	Heckett Multiserv Plant 65	Seattle	Manganese Compounds	124	0	0	**124**	174	0	0
King	Hexcel Corporation	Kent	Methyl Ethyl Ketone	10,080	0	0	**10,080**		750	
			Tetrabromobisphenol A	0	0	0	**0**	0	93	637
	Summary for Hexcel Corporation			**10,080**	**0**	**0**	**10,080**		**843**	

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
King	Honeywell Redmond WA	Redmond	Mercury	0	0	0	**0**		100	
King	Hot Cell Services Corp	Kent	Lead Compounds	0	0	0	**0**		0	
King	Hytek Finishes Company	Kent	Lead	0	0	0	**0**	0	3,338	2,404
			Nitric Acid	10	0	0	**10**	10	450	250
	Summary for Hytek Finishes Company			**10**	**0**	**0**	**10**		**3,788**	
King	Industrial Plating Corp	Seattle	Copper Compounds	116	0	0	**116**	264	340	922
			Lead Compounds	0	0	0	**0**	0	2,022	57
			Zinc Compounds	166	0	0	**166**	325	1,037	2,871
	Summary for Industrial Plating Corp			**282**	**0**	**0**	**282**		**3,399**	
King	Interpoint	Redmond	Lead	0	0	0	**0**	0	48	35
King	Johns Manville International	Kent	1,1-Dichloro-1-	30,988	0	0	**30,988**	19,254	0	0
			Chlorodifluoromethane	4,236	0	0	**4,236**	3,503	0	0
			Diisocyanates	7	0	0	**7**	40	0	0
	Summary for Johns Manville International			**35,231**	**0**	**0**	**35,231**		**0**	
King	Jorgensen Forge Corporation	Tukwila	Aluminum (Fume Or Dust)	0	0	0	**0**	0	73,800	98,217
			Chromium	0	0	0	**0**	0	23,132	27,053
			Lead	0	0	0	**0**	0	170	243
			Manganese	0	0	0	**0**	0	297,483	385,599
	Summary for Jorgensen Forge Corporation			**0**	**0**	**0**	**0**		**394,585**	
King	Kenworth Truck Company	Renton	Ethylene Glycol	24	0	0	**24**	13	14,000	12,000
King	Kistler Morse	Bothell	Lead	0	0	0	**0**	0	158	202
King	Lafarge North America	Seattle	Benzo(G,H,I)Perylene	0	0	0	**0**	0	0	0
			Chromium	0	0	0	**0**	0	0	0
			Lead Compounds	5	0	0	**5**	5	0	0
			Mercury Compounds	68	0	0	**68**	73	0	0
			Polycyclic Aromatic	4	0	0	**4**	4	0	0
	Summary for Lafarge North America			**77**	**0**	**0**	**77**		**0**	
King	Machinists	Seattle	Methyl Ethyl Ketone	18,004	0	0	**18,004**	18,004	250	250
	dsr dba Puget Sound Coatings		Xylene (Mixed Isomers)	21,769	0	0	**21,769**	21,769	0	0
	Summary for Machinists Dsr Dba Puget Sound Coatings			**39,773**	**0**	**0**	**39,773**		**250**	
King	Mackie Designs	Woodinville	Lead	0	0	0	**0**	0	866	3,308

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
King	Modine Aftermarket Holdings, Inc.	Seattle	Copper	0	0	0	**0**	1	10,113	20,332
			Lead	1	0	0	**1**	1	2,964	5,847
	Summary for Modine Aftermarket Holdings, Inc.			**1**	**0**	**0**	**1**		**13,077**	
King	Newcastle Brick Plant	Renton	Hydrogen Fluoride	40,523	0	0	**40,523**	49,616	0	0
King	Non-Ferrous Metals Inc.	Seattle	Lead	31	0	0	**31**	31	0	0
King	Nucor Steel Seattle Inc.	Seattle	Chromium Compounds	0	0	0	**0**	0	0	0
			Lead Compounds	544	0	0	**544**	888	311,429	382,258
			Manganese Compounds	760	0	0	**760**	1,145	430,028	455,660
			Mercury Compounds	0	0	0	**0**	0	48	52
			Nickel Compounds	8	0	0	**8**	12	3,905	4,138
			Zinc Compounds	7,958	0	0	**7,958**	12,550	4,001,253	4,239,757
	Summary for Nucor Steel Seattle Inc.			**9,270**	**0**	**0**	**9,270**		**4,746,663**	
King	Philips Oral Healthcare, Inc.	Snoqualmie	Chromium	0	0	0	**0**		750	
			Copper	0	0	0	**0**	0	931	52
			Lead	0	0	0	**0**		1,079	
	Summary for Philips Oral Healthcare, Inc.			**0**	**0**	**0**	**0**		**2,760**	
King	Praxair Specialty Ceramics	Woodinville	Lead Compounds	5	0	0	**5**	6	10	17
King	Prototron Circuits Inc	Redmond	Lead	0	0	0	**0**	0	949	0
King	Rexam Beverage Can Co. Re: Kent, WA Facility	Kent	Glycol Ethers	162,555	0	0	**162,555**	165,374	0	1,631
			Hydrogen Fluoride	26	0	0	**26**	26	0	0
			Manganese	0	0	0	**0**	0	68	28
			N-Butyl Alcohol	126,859	0	0	**126,859**	140,310	0	504
	Summary for Rexam Beverage Can Co. Re: Kent, WA Facility			**289,440**	**0**	**0**	**289,440**		**68**	
King	Rudd Company, Inc.	Seattle	Di(2-Ethylhexyl)	39	0	0	**39**	18	111	0
			Ethylbenzene	443	0	0	**443**	595	277	5,475
			Glycol Ethers	577	0	0	**577**	1,120	167	5,475
			Methanol	875	0	0	**875**	665	223	1,530
			Methyl Ethyl Ketone	877	0	0	**877**	1,115	1,325	22,725
			Methyl Isobutyl Ketone	2,506	0	0	**2,506**	2,840	2,138	101,800
			N-Butyl Alcohol	1,875	0	0	**1,875**	2,040	557	4,455
			Toluene	3,909	0	0	**3,909**	4,405	28,509	96,000
			Xylene (Mixed Isomers)	1,943	0	0	**1,943**	2,550	997	31,895
	Summary for Rudd Company, Inc.			**13,044**	**0**	**0**	**13,044**		**34,304**	
King	Safety-Kleen Systems (118101)	Auburn	Ethylene Glycol	28	0	0	**28**		153,086	
King	SaintGobain Containers	Seattle	Lead Compounds	432	0	0	**432**	409	13	7

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
King	Schippers & Crew Inc	Seattle	Lead Compounds	0	0	0	**0**	1	1,123	1,253
King	Scott Galvanizing Co Inc	Seattle	Zinc Compounds	0	0	0	**0**		169,430	
King	Seattle Pottery Supply Inc	Seattle	Lead Compounds	0	0	0	**0**	0	0	0
King	Sound Propeller Services Inc.	Seattle	Chromium	250	0	0	**250**	250	2,750	250
			Nickel	250	0	0	**250**	250	1,550	250
	Summary for Sound Propeller Services Inc.			**500**	**0**	**0**	**500**		**4,300**	
King	Tally Printer Corporation	Kent	Lead	0	0	0	**0**	0	157	255
King	Three Five Systems Inc	Redmond	Lead Compounds	0	0	0	**0**		10,001	
King	Todd Pacific Shipyards Corp	Seattle	N-Butyl Alcohol	18,722	0	0	**18,722**	13,086	250	177
			Xylene (Mixed Isomers)	12,019	0	0	**12,019**		250	
	Summary for Todd Pacific Shipyards Corp			**30,741**	**0**	**0**	**30,741**		**500**	
King	Transpro Inc.	Seattle	Lead	12	0	0	**12**	12	1,640	1,890
King	Travis Ind	Kirkland	Xylene (Mixed Isomers)	11,624	0	0	**11,624**	12,505	0	0
King	Trim Systems	Seattle	Dichloromethane	3,225	0	0	**3,225**	3,865	2,515	1,135
			Diisocyanates	0	0	0	**0**	0	0	0
			Ethylene Glycol	0	0	0	**0**	0	0	0
	Summary for Trim Systems			**3,225**	**0**	**0**	**3,225**		**2,515**	
King	TTM Technologies, Inc., Redmond	Redmond	Ammonia	4,099	0	0	**4,099**	1,708	38,805	60,005
			Copper Compounds	0	0	0	**0**		109,974	
			Formaldehyde	500	0	0	**500**	5,274	0	0
			Lead	0	0	0	**0**	0	4,508	6,002
			Nitrate Compounds	0	0	0	**0**	0	18,480	20,156
			Nitric Acid	0	0	0	**0**	0	0	0
	Summary for TTM Technologies, Inc., Redmond			**4,599**	**0**	**0**	**4,599**		**171,767**	
King	Univar USA, Inc.	Kent	Di(2-Ethylhexyl)	111	0	0	**111**	66	0	0
	(Formerly Vopak USA, Inc.)		Methanol	1,729	0	0	**1,729**	2,571	0	0
			Methyl Ethyl Ketone	834	0	0	**834**	1,197	0	0
	Summary for Univar USA Inc. (Formerly Vopak USA Inc.)			**2,674**	**0**	**0**	**2,674**	**0**		
King	Universal Mfg. Corp.	Woodinville	Copper	2	0	0	**2**	2	8,865	21,837
			Lead Compounds	0	0	0	**0**	0	2,125	2,839
	Summary for Universal Mfg. Corp.			**2**	**0**	**0**	**2**		**10,990**	

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
King	USCG Integrated Support Command Seattle	Seattle	Lead	0	0	2	**2**	2	3,396	2,281
King	Viox Corporation	Seattle	Lead Compounds	37	0	0	**37**	81	203	2,641
King	Wescor Graphics Corp.	Seattle	N-Butyl Alcohol	1,260	0	0	**1,260**	1,140	2,443	2,558
			Tetrachloroethylene	15,420	0	0	**15,420**	14,600	27,694	28,960
	Summary for Wescor Graphics Corp.			**16,680**	**0**	**0**	**16,680**		**30,137**	
King	Western Pneumatic Tube Co.	Kirkland	Nitrate Compounds	0	0	0	**0**	0	19,271	34,527
			Nitric Acid	0	0	0	**0**	0	0	0
			Trichloroethylene	30,446	0	0	**30,446**	38,788	3,371	6,000
	Summary for Western Pneumatic Tube Co.			**30,446**	**0**	**0**	**30,446**		**22,642**	
	Summary for King County			**982,097**	**23,241**	**1,258**	**1,006,596**		**7,590,414**	
KITSAP	U.S. DOD, U.S. Navy, Puget Sound Naval Shipyard	Bremerton	Chromium	119	0	69	**188**	161	3,181	2,764
			Copper	279	0	528	**807**	29,616	12,188	113,982
			Copper Compounds	1,876	0	528	**2,404**	5,937	13,458	19,722
			Lead	2	0	594	**596**	18,059	18,289	87,992
			Manganese	142	0	58	**200**	195	2,711	3,583
			Methyl Ethyl Ketone	9,117	0	0	**9,117**		6,080	
			N-Butyl Alcohol	12,720	0	0	**12,720**	25,894	8,481	17,262
			Nickel	123	0	682	**805**	8,030	20,272	36,471
			Xylene (Mixed Isomers)	8,648	0	1	**8,649**	8,314	5,769	5,547
			Zinc Compounds	1,604	0	2,343	**3,947**	4,658	24,277	38,288
	Summary for U.S. DOD, U.S. Navy, Puget Sound Naval Shipyard			**34,630**	**0**	**4,803**	**39,433**		**114,706**	
	Summary for Kitsap County			**34,630**	**0**	**4,803**	**39,433**		**114,706**	
KLICKITAT	Goldendale Aluminum Co.	Goldendale	Benzo(G,H,I)Perylene	160	0	0	**160**	114	0	0
			Carbonyl Sulfide	10,000	0	0	**10,000**	9,000	0	0
			Hydrogen Fluoride	5,890	0	0	**5,890**	3,561	0	0
			Polycyclic Aromatic	754	0	0	**754**	652	0	0
	Summary for Goldendale Aluminum Co.			**16,804**	**0**	**0**	**16,804**		**0**	
Klickitat	SDS Lumber Company	Bingen	Lead	60	0	0	**60**	60	100	100
	Summary for Klickitat County			**16,864**	**0**	**0**	**16,864**		**100**	
LEWIS	Atlas Castings & Technology	Chehalis	Chromium	250	0	0	**250**	250	500	250
			Manganese	250	0	0	**250**	250	250	250
			Nickel	250	0	0	**250**	250	500	250
	Summary for Atlas Castings & Technology			**750**	**0**	**0**	**750**		**1,250**	

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
Lewis	Darigold - Chehalis	Chehalis	Nitrate Compounds	0	5	0	**5**	0	0	0
			Nitric Acid	0	5	0	**5**	0	0	0
	Summary for Darigold - Chehalis			**0**	**10**	**0**	**10**		**0**	
Lewis	Foseco Metallurical, Inc.	Chehalis	Aluminum (Fume Or Dust)	630	0	0	**630**		0	
			Lead	0	0	0	**0**	0	0	0
	Summary for Foseco Metallurical, Inc.			**630**	**0**	**0**	**630**		**0**	
Lewis	Hampton Lumber Mills - Randle	Randle	Lead Compounds	11	0	0	**11**	27	113	18
Lewis	Hampton Lumber Mills - Morton	Morton	Lead Compounds	9	0	0	**9**	17	48	9
Lewis	Hampton Lumber Mills - Packwood	Packwood	Lead Compounds	10	0	0	**10**	5	37	0
Lewis	Transalta Centralia Generation / Mining	Centralia	Ammonia	20,267	0	0	**20,267**		0	
			Arsenic Compounds	2	19,295	7	**19,304**	15,142	206	225
			Barium Compounds	15	1,918,223	254	**1,918,492**	2,368,319	146,253	102,348
			Chromium Compounds	306	214,252	5	**214,563**	165,612	3,573	3,417
			Cobalt Compounds	11	161,619	10	**161,640**	106,644	2,683	2,343
			Copper Compounds	3	126,636	9	**126,648**	146,256	5,677	6,061
			Hydrochloric Acid	9,739	0	0	**9,739**	183,753	0	0
			Hydrogen Fluoride	12,712	0	0	**12,712**	183,753	0	0
			Lead Compounds	6	157,814	3	**157,823**	56,136	860	389
			Manganese Compounds	327	1,434,248	59	**1,434,634**	934,307	17,272	18,107
			Mercury Compounds	265	162	0	**427**		0	
			Nickel Compounds	280	135,925	20	**136,225**	75,315	2,427	1,529
			Sulfuric Acid	28,370	0	0	**28,370**	153,714	0	0
			Vanadium Compounds	686	310,146	53	**310,885**	422,407	14,128	18,244
			Zinc Compounds	2	91,162	11	**91,175**	111,218	3,412	4,274
	Summary for Transalta Centralia Generation / Mining			**72,991**	**4,569,482**	**432**	**4,642,905**		**196,491**	
	Summary for Lewis County			**74,401**	**4,569,492**	**432**	**4,644,325**		**197,939**	
MASON	Olympic Panel Products	Shelton	Lead Compounds	0	0	0	**0**		0	
Mason	Simpson Timber Co., Dayton Ops	Shelton	Lead	0	0	0	**0**		0	
Mason	Simpson Timber Company, NW Timber & Wood Products	Shelton	Lead Compounds	4	0	0	**4**	4	277	261
	Summary for Mason County			**4**	**0**	**0**	**4**		**277**	
PACIFIC	Weyerhaeuser Raymond Sawmill	Raymond	Lead Compounds	2	224	0	**226**	16	224	193
	Summary for Pacific County			**2**	**224**	**0**	**226**		**224**	

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
PEND OREILLE	Ponderay Newsprint Co.	Usk	Lead	1	0	11	**12**	10	77	0
			Nitrate Compounds	0	0	201,400	**201,400**	182,000	0	0
	Summary for Ponderay Newsprint Co.			**1**	**0**	**201,411**	**201,412**		**77**	
	Summary for Pend Oreille County			**1**	**0**	**201,411**	**201,412**		**77**	
PIERCE	Ace Tank & Equipment	Tacoma	Styrene	12,363	0	0	**12,363**	1,790	0	0
Pierce	American Reinforced Plastics Inc.	Tacoma	Styrene	14,348	0	0	**14,348**	14,699	5	5
Pierce	Atlas Castings & Technology	Tacoma	Chromium	255	0	0	**255**	255	10,840	10,145
			Copper	10	0	5	**15**	15	907	1,005
			Lead	0	0	0	**0**	2	6	9
			Manganese	19	0	1	**20**	260	1,827	1,851
			Molybdenum Trioxide	0	0	0	**0**	0	0	0
			Nickel	61	0	1	**62**	260	5,498	4,432
	Summary for Atlas Castings & Technology – Tacoma			**345**	**0**	**7**	**352**		**19,078**	
Pierce	BCAG - Frederickson	Puyallup	Copper	0	0	0	**0**	0	261,460	409,797
			Nitric Acid	0	0	0	**0**	0	130,000	356,004
			Toluene	17,130	0	0	**17,130**	24,170	3,718	827
	Summary for BCAG - Frederickson			**17,130**	**0**	**0**	**17,130**		**395,178**	
Pierce	Burlington Environmental Inc	Tacoma	Lead Compounds	0	0	0	**0**	0	1,535	2,103
			Mercury Compounds	0	0	0	**0**	0	10	79
			Nitric Acid	0	0	0	**0**	0	7,735	0
	Summary for Burlington Environmental Inc			**0**	**0**	**0**	**0**		**9,280**	
Pierce	Caravstar Mill Group	Tacoma	Lead Compounds	0	77	0	**77**	1	0	0
			Polycyclic Aromatic	375	0	0	**375**	0	0	0
	Summary for Caravstar Mill Group			**375**	**77**	**0**	**452**		**0**	
Pierce	Cascade Pole & Lumber Co	Tacoma	Creosote	1,085	0	43	**1,128**	1,081	367	164
			Hexachlorobenzene	0	0	0	**0**	0	0	0
			Polycyclic Aromatic	1	0	4	**5**	13	35	15
	Summary for Cascade Pole & Lumber Company			**1,086**	**0**	**47**	**1,133**		**402**	
Pierce	Dynea Overlays Inc. - Tacoma	Tacoma	Formaldehyde	12,400	0	0	**12,400**	11,900	9,650	6,805
			Methanol	53,050	0	0	**53,050**	57,350	6,360	4,847
			Phenol	7,900	0	0	**7,900**	7,300	3,530	2,027
	Summary for Dynea Overlays Inc. - Tacoma			**73,350**	**0**	**0**	**73,350**		**19,540**	
Pierce	Emerald Services, Inc.	Tacoma	1,2-Dichloroethane	48	0	0	**48**	2,692	35,545	10
			Acetonitrile	362	0	0	**362**	6,424	43,415	150
			Benzene	22	0	0	**22**	935	1,045	24
			Chloroform	58	0	0	**58**	3,527	836	30

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
			Cyclohexane	244	0	0	**244**	3,900	21,425	21
			Dichloromethane	114	0	0	**114**	4,231	30,180	37,144
			Ethylbenzene	61	0	0	**61**	3,427	119,079	149,287
			Ethylene Glycol	16	0	0	**16**	64,149	113,812	161
			Glycol Ethers	0	0	0	**0**		34,470	
			Lead Compounds	12	0	0	**12**	1,410	5,417	530
			Methanol	601	0	0	**601**	13,995	108,828	136,553
			Methyl Ethyl Ketone	1,076	0	0	**1,076**	32,033	259,458	300,449
			Methyl Isobutyl Ketone	335	0	0	**335**	11,725	221,673	276,928
			Methyl Tert-Butyl Ether	28	0	0	**28**	2,694	20,288	27
			N,N-Dimethylformamide	78	0	0	**78**	4,575	26,043	172
			N-Butyl Alcohol	171	0	0	**171**	3,272	112,042	139,176
			N-Hexane	265	0	0	**265**	4,418	18,130	78
			N-Methyl-2-Pyrrolidone	376	0	0	**376**	10,682	22,158	88
			Pyridine	88	0	0	**88**	4,907	26,874	16
			Tert-Butyl Alcohol	52	0	0	**52**		21,361	
			Toluene	2,324	0	0	**2,324**	59,990	604,784	769,747
			Trichloroethylene	2	0	0	**2**	2,753	10,365	39,360
			Xylene (Mixed Isomers)	838	0	0	**838**	21,369	598,538	764,211
	Summary for Emerald Services, Inc.			**7,171**	**0**	**0**	**7,171**		**2,455,768**	
Pierce	Foamex Lp - Lakewood	Lakewood	Diisocyanates	169	0	0	**169**		150	
Pierce	General Plastics Mfg Co.	Tacoma	Dichloromethane	14,183	0	0	**14,183**	13,891	1,074	1,094
			Diisocyanates	1	0	0	**1**	5	0	800
	Summary for General Plastics Mfg. Co.			**14,184**	**0**	**0**	**14,184**		**1,074**	
Pierce	Girard Custom Coaters Inc	Tacoma	Xylene (Mixed Isomers)	27,121	0	0	**27,121**	31,962	950	0
Pierce	Glacier Northwest, Inc. – Dupont Plant	Dupont	Lead Compounds	0	0	0	**0**	0	7	8
Pierce	Glacier Northwest, Inc. – Tacoma Plant	Tacoma	Lead Compounds	0	0	0	**0**	0	21	21
Pierce	Graymont Western US Inc.	Tacoma	Lead	0	0	0	**0**	0	0	0
			Mercury Compounds	1	0	0	**1**	1	0	0
	Summary for Graymont Western US Inc., Tacoma			**1**	**0**	**0**	**1**		**0**	
Pierce	JCI Jones Chemicals, Inc.	Tacoma	Chlorine	1	0	0	**1**	1	0	0
Pierce	Lianga Pacific, Inc.	Tacoma	Xylene (Mixed Isomers)	11,000	0	0	**11,000**	14,870	12	0
Pierce	Monierlifetile LLC	Lakewood	Lead	2	0	0	**2**	0		
Pierce	Northwest Etch Technology Inc.	Tacoma	Hydrochloric Acid	0	0	0	**0**	0	1,178	1,235

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
Pierce	Parker Point Mfg. Co. Inc.	Tacoma	Ethylene Glycol	2,525	130	0	**2,655**	2,567	0	57
Pierce	Pioneer Americas LLC	Tacoma	Chlorine	27	0	0	**27**	160	0	0
			Hydrochloric Acid	164	0	0	**164**	169	0	0
	Summary for Pioneer Americas LLC			**191**	**0**	**0**	**191**		**0**	
Pierce	Pioneer Americas, LLC Bleach Plant	Tacoma	Chlorine	0	0	0	**0**	3	0	0
Pierce	Rainier Ballistics LLC	Tacoma	Antimony	22	0	0	**22**	17	183	112
			Copper	15	0	0	**15**	15	6,382	7,705
			Lead Compounds	701	0	0	**701**	563	2,929	3,563
	Summary for Rainier Ballistics LLC			**738**	**0**	**0**	**738**		**9,494**	
Pierce	Range Facility for Fort Lewis	Fort Lewis	Copper	0	78,600	0	**78,600**	72,231	0	0
			Lead Compounds	200	78,500	0	**78,700**	82,961	0	0
			Nitroglycerin	0	0	0	**0**		0	
	Summary for Range Facility for Fort Lewis			**200**	**157,100**	**0**	**157,300**		**0**	
Pierce	Regency Thermographers	Tacoma	Lead	0	0	0	**0**		0	
Pierce	Simpson Tacoma Kraft Co.	Tacoma	Acetaldehyde	38,706	0	1,290	**39,996**	31,780	0	0
			Ammonia	46,550	0	2,840	**49,390**	112,550	0	0
			Barium Compounds	343	0	0	**343**	3,959	16	22
			Benzo(G,H,I)Perylene	1	0	4	**5**	6	6	6
			Catechol	0	0	6	**6**	0	0	0
			Chlorine	219	0	0	**219**	1,058	0	0
			Chlorine Dioxide	2,495	0	0	**2,495**	2,845	0	0
			Formaldehyde	16,109	0	5,000	**21,109**	18,307	0	0
			Formic Acid	0	0	2,430	**2,430**	2,930	0	0
			Hydrochloric Acid	252,000	0	0	**252,000**	38,200	0	0
			Lead Compounds	39	0	131	**170**	187	14	368
			Manganese Compounds	162	0	14,000	**14,162**	22,254	91	112
			Methanol	520,500	0	47,800	**568,300**	489,190	0	0
			Methyl Ethyl Ketone	7,766	0	548	**8,314**	5,538	0	0
			Phenol	17,800	0	0	**17,800**	21,500	0	0
			Polychlorinated	0	0	0	**0**		0	
			Polycyclic Aromatic	94	0	19	**113**	43	57	64
			Sulfuric Acid	22,900	0	0	**22,900**	41,400	0	0
	Summary for Simpson Tacoma Kraft Co.			**925,684**	**0**	**74,068**	**999,752**		**184**	
Pierce	Simpson Timber Co, Commencement Bay Operations	Tacoma	Lead	0	0	0	**0**	0	0	0

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
Pierce	Superior Wood Treating	Sumner	Arsenic Compounds	5	0	5	**10**	260	250	250
			Chromium Compounds	5	0	250	**255**	260	250	250
			Copper Compounds	5	0	5	**10**	15	250	250
	Summary for Superior Wood Treating			**15**	**0**	**260**	**275**		**750**	
Pierce	Temtco Steel - Washington Division	Tacoma	Chromium	100	0	0	**100**		20	
			Manganese	150	0	0	**150**		25	
	Summary for Temtco Steel - Washington Division			**250**	**0**	**0**	**250**		**45**	
Pierce	Thermafiber, LLC	Tacoma	Carbonyl Sulfide	20,046	0	0	**20,046**		0	
Pierce	Toray Composites (America)	Tacoma	Diuron	0	0	0	**0**	0	0	0
			Methanol	4,000	0	0	**4,000**	4,550	26,700	24,800
			Methyl Ethyl Ketone	31,000	0	0	**31,000**	29,900	92,000	136,500
			N-Methyl-2-Pyrrolidone	2,500	0	0	**2,500**	7,100	107,000	171,000
			Toluene	7,350	0	0	**7,350**	7,200	59,000	54,200
	Summary for Toray Composites (America)			**44,850**	**0**	**0**	**44,850**		**284,700**	
Pierce	U.S. Oil & Refining Co.	Tacoma	Benzene	2,319	0	0	**2,319**	2,366	21	500
			Cyclohexane	3,181	0	0	**3,181**	2,902	18	250
			Ethylbenzene	705	0	0	**705**	622	60	1,000
			Lead	7	0	0	**7**	7	8	10
			Naphthalene	110	0	0	**110**	121	42	750
			N-Hexane	6,826	0	0	**6,826**	7,585	10	250
			Polycyclic Aromatic	0	0	0	**0**	0	1	5
			Toluene	5,045	0	0	**5,045**	4,652	231	1,000
			Xylene (Mixed Isomers)	4,223	0	0	**4,223**	3,695	322	1,250
	Summary for U.S. Oil & Refining Co.			**22,416**	**0**	**0**	**22,416**		**713**	
Pierce	U.S.DOD U.S. Army Fort Lewis	Fort Lewis	Ethylene Glycol	7	0	0	**7**	15	91,866	55,000
Pierce	Wilcox Dairy Farms, L.L.C.	Roy	Nitric Acid	5	0	0	**5**		0	
	Summary for Pierce County			**1,195,573**	**157,307**	**74,382**	**1,427,262**		**3,290,394**	
SKAGIT	Fibrex Corporation	Burlington	Styrene	6,507	0	0	**6,507**	10,598	0	0
Skagit	General Chemical	Anacortes	Lead	0	91	0	**91**	66	91	66
			Mercury	0	1	0	**1**	10	1	10
			Sulfuric Acid	12,863	0	0	**12,863**	12,579	0	0
	Summary for General Chemical			**12,863**	**92**	**0**	**12,955**		**92**	
Skagit	Hallmark Refining Corp.	Mount	Silver	0	0	0	**0**	0	186,370	216,306

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
Skagit	Janicki Industries Inc	Sedro Woolley	Diisocyanates	230	0	0	**230**		0	
			Styrene	2,999	0	0	**2,999**		0	
	Summary for Janicki Industries Inc			**3,229**	**0**	**0**	**3,229**		**0**	
Skagit	March Point Cogeneration Co.	Anacortes	Ammonia	6,300	0	0	**6,300**	5,800	0	0
			Ethylene	31	0	0	**31**	31	0	0
			Propylene	46	0	0	**46**	46	0	0
	Summary for March Point Cogeneration Co.			**6,377**	**0**	**0**	**6,377**		**0**	
Skagit	Nordic Tug Inc.	Burlington	Styrene	11,492	0	0	**11,492**		0	
Skagit	Puget Sound Refinery	Anacortes	1,2,4-Trimethylbenzene	1,060	1	0	**1,061**	950	12	105
			1,3-Butadiene	37	0	0	**37**	621	0	0
			Ammonia	1,850	0	5,900	**7,750**	7,850	0	0
			Anthracene	0	0	0	**0**	1	6	1
			Benzene	4,700	0	0	**4,700**	3,900	44	31
			Benzo(G,H,I)Perylene	0	0	1	**1**	1	59	7
			Carbonyl Sulfide	690	0	0	**690**	690	0	0
			Cresol (Mixed Isomers)	750	0	0	**750**	550	0	0
			Cyanide Compounds	16,000	0	120	**16,120**	0		
			Cyclohexane	3,460	0	0	**3,460**	1,280	27	0
			Ethylbenzene	1,210	0	0	**1,210**	830	121	25
			Ethylene	761	0	0	**761**	22,022	0	0
			Hydrochloric Acid	44,000	0	0	**44,000**	42,000	0	0
			Hydrogen Cyanide	16,000	0	120	**16,120**	1,700	0	0
			Lead Compounds	99	24	9	**132**	116	10	36
			Mercury Compounds	12	26	1	**39**	39	8	2
			Methanol	250	0	0	**250**	2	0	0
			Molybdenum Trioxide	250	0	0	**250**	0	1,600	54,000
			Naphthalene	10	0	0	**10**	63	120	122
			N-Hexane	6,200	3	0	**6,203**	7,300	26	0
			Nickel Compounds	69	360	120	**549**	822	451	7,808
			Phenanthrene	1	0	0	**1**	17	2	0
			Phenol	0	0	270	**270**	150	0	0
			Polycyclic Aromatic	5	0	1	**6**	13	1,661	190
			Propylene	1,830	0	0	**1,830**	25,140	0	0
			Styrene	64	0	0	**64**	208	0	0
			Sulfuric Acid	200,000	0	0	**200,000**	230,000	0	0
			Tetrachloroethylene	250	0	0	**250**	0	0	0
			Toluene	6,700	1	0	**6,701**	5,000	508	143
			Xylene (Mixed Isomers)	7,100	1	0	**7,101**	6,200	862	149
	Summary for Puget Sound Refinery			**313,358**	**416**	**6,542**	**320,316**		**5,517**	
Skagit	Tesoro Refining & Marketing Inc.	Anacortes	1,2,4-Trimethylbenzene	1,893	0	0	**1,893**	2,057	0	0
			1,3-Butadiene	86	0	0	**86**	386	0	0
			Ammonia	57,185	1,328	1,507	**60,020**	110,475	0	0
			Anthracene	0	0	0	**0**	1	0	4

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
			Benzene	15,521	0	0	**15,521**	16,096	77	61
			Benzo(G,H,I)Perylene	1	0	0	**1**	2	0	0
			Biphenyl	0	0	0	**0**	0	0	
			Carbon Disulfide	25	0	0	**25**	3,300	0	0
			Carbonyl Sulfide	1,952	0	0	**1,952**	240,000	0	0
			Chlorine	4,005	0	0	**4,005**	4,005	0	0
			Cresol (Mixed Isomers)	593	0	0	**593**	0	0	0
			Cumene	733	0	0	**733**	215	0	0
			Cyclohexane	14,001	0	0	**14,001**	12,939	0	0
			Diethanolamine	1,353	0	0	**1,353**	2,390	0	0
			Ethylbenzene	9,034	0	0	**9,034**	8,705	14	49
			Ethylene	12,728	0	0	**12,728**	46,200	0	0
			Hydrochloric Acid	10	0	0	**10**	1	0	0
			Lead Compounds	10	13	17	**40**	43	12	47
			Mercury Compounds	5	32	3	**40**	42	16	107
			Methanol	3	0	0	**3**	80	0	0
			Methyl Tert-Butyl Ether	228	0	0	**228**	232	0	0
			Molybdenum Trioxide	0	0	0	**0**	0	0	0
			Naphthalene	2,201	0	0	**2,201**	3,090	30	115
			N-Hexane	30,903	0	0	**30,903**	23,182	0	0
			Phenanthrene	0	0	0	**0**	31	0	50
			Phenol	593	0	0	**593**	552	0	0
			Polycyclic Aromatic	64	35	0	**99**	777	12	39
			Propylene	23,079	0	0	**23,079**	72,680	0	0
			Sulfuric Acid	420,844	0	0	**420,844**	574,650	0	0
			Tetrachloroethylene	6,330	0	0	**6,330**	6,329	0	31
			Toluene	45,457	0	0	**45,457**	41,501	166	116
			Xylene (Mixed Isomers)	44,267	0	0	**44,267**	44,963	81	246
	Summary for Tesoro Refining & Marketing Co.			**693,104**	**1,408**	**1,527**	**696,039**		**408**	
Skagit	TTM Technologies,Inc	Burlington	Copper Compounds	0	0	0	**0**	0	63,295	144,569
			Lead	0	0	0	**0**	0	2,222	7,829
	Summary for TTM Technologies,Inc			**0**	**0**	**0**	**0**		**65,517**	
	Summary for Skagit County			**1,046,930**	**1,916**	**8,070**	**1,056,916**		**257,904**	
SNOHOMISH	Achilles USA, Inc.	Everett	Di(2-Ethylhexyl)	86	0	0	**86**		255	
			Phenol	6,127	0	0	**6,127**		0	
	Summary for Achilles USA, Inc.			**6,213**	**0**	**0**	**6,213**		**255**	
Snohomish	Aerocell, Inc.	Marysville	Phenol	642	0	0	**642**	3,808	1,033	189
Snohomish	Aerostructure Corp. WA Div	Everett	Copper	0	0	0	**0**	0	35,712	30,987
			Manganese	0	0	0	**0**	0	11,017	9,360
			Nickel	0	0	0	**0**	0	9,725	8,263
	Summary for Aerostructure Corp. Contour WA Div			**0**	**0**	**0**	**0**		**56,454**	

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
Snohomish	American Boiler Works, Inc.	Everett	Methyl Ethyl Ketone	10,140	0	0	**10,140**		250	
Snohomish	Applied Technical Services Corp.	Bothell	Lead	2	0	0	**2**	5	3,611	158
Snohomish	Boeing Commercial Airplane Group	Everett	Chromium Compounds	71	0	9	**80**	77	30,902	40,100
			Copper	0	0	76	**76**	115	88,013	101,524
			Dichloromethane	9,370	0	0	**9,370**	7,613	740	5,417
			Diethanolamine	21,000	0	0	**21,000**	24,000	0	4,860
			Freon 113	16,000	0	0	**16,000**	23,000	2,600	13,800
			Glycol Ethers	14,500	0	0	**14,500**	30,000	35,420	59,725
			Manganese Compounds	0	0	0	**0**	6	31,079	40,898
			Methanol	1,560	0	0	**1,560**	2,330	240	1,290
			Methyl Ethyl Ketone	128,000	0	0	**128,000**	166,033	59,400	58,780
			Methyl Isobutyl Ketone	25,500	0	0	**25,500**	23,300	10,900	13,640
			Naphthalene	8	0	0	**8**	10	140	790
			Nitric Acid	0	0	0	**0**	0	7,400	23,300
			Phenol	2,670	0	0	**2,670**	2,230	109	1,829
			Sec-Butyl Alcohol	13,300	0	0	**13,300**	11,100	4,780	9,694
			Tetrabromobisphenol A	700	0	0	**700**	950	0	0
			Toluene	42,200	0	1	**42,201**	39,135	8,631	26,843
			Trichloroethylene	60,000	0	0	**60,000**	84,200	8,000	15,800
	Summary for Boeing Commercial Airplane Group - Everett			**334,879**	**0**	**86**	**334,965**		**288,354**	
Snohomish	Canyon Creek Cabinet Co.	Monroe	Formaldehyde	255	0	0	**255**	125	0	0
			Methanol	16,048	0	0	**16,048**	12,581	1,123	856
	Summary for Canyon Creek Cabinet Co.			**16,303**	**0**	**0**	**16,303**		**1,123**	
Snohomish	Chevron Products Company Richmond Beach Asphalt Refinery	Seattle	Benzo(G,H,I)Perylene	0	0	0	**0**	0	0	0
			Lead Compounds	0	0	0	**0**	0	0	0
			Polycyclic Aromatic	0	0	0	**0**	0	0	0
	Summary for Chevron Products Co., Richmond Beach Asphalt			**0**	**0**	**0**	**0**		**0**	
Snohomish	Circuits Engineering, Inc.	Bothell	Copper	0	0	0	**0**	0	19,661	32,136
			Lead	0	0	0	**0**		765	
	Summary for Circuits Engineering, Inc.			**0**	**0**	**0**	**0**		**20,426**	
Snohomish	Cook Composites & Polymers	Arlington	Methyl Methacrylate	1,196	0	0	**1,196**	994	3,929	681
			Styrene	3,466	0	0	**3,466**	2,880	22,181	9,064
	Summary for Cook Composites & Polymers			**4,662**	**0**	**0**	**4,662**		**26,110**	
Snohomish	Cutler Hammer Sensors	Everett	Lead Compounds	0	0	0	**0**	0	145	22
Snohomish	Eldec Corp. – Martha Lake	Lynnwood	Lead Compounds	0	0	0	**0**	0	338	412

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
Snohomish	Eldec Corp. – North Creek	Bothell	Lead Compounds	0	200	0	**200**	0	1,328	1,559
			Tetrabromobisphenol A	0	0	0	**0**	0	66	12
	Summary for Eldec Corp. – North Creek			**0**	**200**	**0**	**200**		**1,394**	
Snohomish	Fluke Corp.	Everett	Lead Compounds	0	0	0	**0**	0	5,836	6,420
Snohomish	Fluke Corp.	Everett	Lead Compounds	0	0	0	**0**	0	306	336
Snohomish	Glacier Bay, Inc.	Monroe	Styrene	0	0	0	**0**	26,356	0	4,075
Snohomish	Glacier Northwest, Inc. - Everett	Everett	Lead Compounds	0	0	0	**0**	0	1	0
Snohomish	Hampton Lumber Mills - Darrington	Darrington	Lead Compounds	3	0	0	**3**		12	
Snohomish	Hampton Lumber Mills - Arlington	Arlington	Lead Compounds	1	0	0	**1**		0	
Snohomish	Industrial Finishings, LLC dba Calvert, Ind.	Snohomish	Methyl Ethyl Ketone	32,057	0	0	**32,057**	29,163	6,962	2,958
Snohomish	J. H. Baxter & Co.	Arlington	Hexachlorobenzene	0	0	0	**0**	0	0	0
			Polycyclic Aromatic	1	0	0	**1**	1	0	0
	Summary for J. H. Baxter & Co.			**1**	**0**	**0**	**1**		**0**	
Snohomish	Kimberly-Clark Worldwide, Inc.	Everett	Ammonia	3,813	0	31,279	**35,092**	32,674	0	0
			Barium Compounds	5	0	4,914	**4,919**	10,657	19,916	15,431
			Chlorine	0	0	0	**0**	0	0	0
			Chlorine Dioxide	250	0	0	**250**	250	0	0
			Formic Acid	0	0	0	**0**	0	0	0
			Hydrochloric Acid	355,443	0	0	**355,443**	399,110	0	0
			Lead Compounds	6	0	2,521	**2,527**	5,028	4,478	1,830
			Manganese Compounds	5	0	22,251	**22,256**	34,030	62,598	44,198
			Mercury Compounds	1	0	2	**3**	14	44	30
			Methanol	31,724	0	98,232	**129,956**	169,223	0	0
			Nitrate Compounds	0	0	139,470	**139,470**	328,926	0	0
			Vinyl Acetate	3,666	0	250	**3,916**	6,245	0	0
			Zinc Compounds	250	0	5,751	**6,001**	16,885	44,970	35,515
	Summary for Kimberly-Clark Worldwide, Inc.			**395,163**	**0**	**304,670**	**699,833**		**132,006**	
Snohomish	Neuvant Areospace	Everett	Lead	0	0	0	**0**		0	
Snohomish	Philips Ultrasound Inc.	Bothell	Lead	0	0	0	**0**	0	1,386	790
Snohomish	Plexus Corp.- BWA	Bothell	Lead Compounds	0	0	0	**0**	0	1,147	4,525
Snohomish	Reynolds Corp.	Lynnwood	Styrene	1,668	0	0	**1,668**	1,953	0	0

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
Snohomish	Romac Industries, Inc.	Bothell	Chromium	5	0	0	**5**		5	
			Nickel	5	0	0	**5**	5	5	2
	Summary for Romac Industries, Inc			**10**	**0**	**0**	**10**		**10**	
Snohomish	Safety-Kleen Systems (709201)	Lynnwood	Ethylene Glycol	25	0	0	**25**		226,314	
Snohomish	Spectrum Glass Company	Woodinville	Barium Compounds	24	0	0	**24**		41	
			Lead Compounds	0	0	0	**0**	1	0	0
			Manganese Compounds	14	0	0	**14**		14	
			Zinc Compounds	74	0	0	**74**	95	307	568
	Summary for Spectrum Glass Company			**112**	**0**	**0**	**112**		**362**	
Snohomish	Tone Commander Systems, Inc.	Mukilteo	Lead	0	0	0	**0**	0	0	219
Snohomish	US Marine/Bayliner Marine	Arlington	Styrene	111,970	0	0	**111,970**	101,421	0	0
	Summary for Snohomish County			**913,851**	**200**	**304,756**	**1,218,807**		**773,836**	
SPOKANE	ADM Animal Health & Nutrition	Spokane	Manganese Compounds	2	0	0	**2**	2	613	786
			Zinc Compounds	7	0	0	**7**	9	3,173	3,676
	Summary for ADM Animal Health & Nutrition			**9**	**0**	**0**	**9**		**3,786**	
Spokane	Agilent Technologies	Liberty Lake	Lead	1	0	0	**1**		3,015	
Spokane	Apollo Plastics	Spokane	Styrene	97	0	0	**97**	115	0	0
Spokane	Central Pre-Mix	Spokane	Lead	0	0	0	**0**		0	
Spokane	Columbia Paint & Coatings Co.	Spokane	Ethylene Glycol	3,388	0	0	**3,388**	3,977	0	0
			Toluene	3,280	0	0	**3,280**	3,943	0	0
			Xylene (Mixed Isomers)	2,409	0	0	**2,409**	3,161	0	0
	Summary for Columbia Paint & Coatings Co.			**9,077**	**0**	**0**	**9,077**		**0**	
Spokane	Conoco Parkwater Product Terminal	Spokane	1,2,4-Trimethylbenzene	311	0	0	**311**	199	5,155	250
			Benzene	800	0	0	**800**	1,180	3,712	250
			Benzo(G,H,I)Perylene	0	0	0	**0**	0	0	0
			Biphenyl	1	0	0	**1**		0	
			Cumene	79	0	0	**79**	405	1,031	115
			Cyclohexane	344	0	0	**344**		0	
			Ethylbenzene	225	0	0	**225**	145	2,887	40
			Naphthalene	45	0	0	**45**	0		
			N-Hexane	1,314	0	0	**1,314**	2,152	2,062	17
			Phenol	5	0	0	**5**		0	
			Polycyclic Aromatic	0	0	0	**0**	0	0	0
			Styrene	0	0	0	**0**		0	

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
			Toluene	1,751	0	0	**1,751**	1,758	12,990	187
			Xylene (Mixed Isomers)	1,076	0	0	**1,076**	725	13,403	164
	Summary for Conoco Parkwater Product Terminal			**5,951**	**0**	**0**	**5,951**		**41,239**	
Spokane	Fiber-Tech Industries	Spokane	Methyl Methacrylate	6,180	0	0	**6,180**	33,800	0	0
			Styrene	77,460	0	0	**77,460**	96,400	1,391	1,399
	Summary for Fiber-Tech Industries			**83,640**	**0**	**0**	**83,640**		**1,391**	
Spokane	Goodrich Corporation	Spokane	1,3-Butadiene	5	0	0	**5**		0	
			Benzene	250	0	0	**250**		0	
			Ethylene	750	0	0	**750**		0	
	Summary for Goodrich Corporation			**1,005**	**0**	**0**	**1,005**		**0**	
Spokane	Honeywell Electronic Materials Inc.	Cheney	Copper	0	0	0	**0**		43,105	
			Lead	0	0	0	**0**	0	202	3,100
			Nitrate Compounds	10	0	0	**10**		25,000	
			Nitric Acid	205	0	0	**205**		0	
	Summary for Honeywell Electronic Materials Inc.- Cheney			**215**	**0**	**0**	**215**		**68,307**	
Spokane	Honeywell Electronic	Spokane	Copper Compounds	10	0	0	**10**	10	71,740	101,980
			Lead	1	0	0	**1**	1	5,002	9,901
			N-Hexane	11,000	0	0	**11,000**	10,000	1,700	2,700
			Nickel Compounds	10	0	0	**10**	10	13,700	11,700
			Nitrate Compounds	10	0	0	**10**	10	40,000	25,000
			Nitric Acid	1,000	0	0	**1,000**	500	0	0
	Summary for Honeywell Electronic Materials, Inc. - Spokane			**12,031**	**0**	**0**	**12,031**		**132,142**	
Spokane	Huntwood Industries	Spokane	Methyl Ethyl Ketone	39,912	0	0	**39,912**		0	
			Toluene	1,651	0	0	**1,651**	81,286	0	2,644
			Xylene (Mixed Isomers)	37,297	0	0	**37,297**	10,457	0	121
	Summary for Huntwood Industries			**78,860**	**0**	**0**	**78,860**		**0**	
Spokane	Inland Empire Paper Company	Spokane	Lead Compounds	4	0	6	**10**	4	94	9
			Methanol	14,606	0	250	**14,856**	12,326	250	250
	Summary for Inland Empire Paper Company			**14,610**	**0**	**256**	**14,866**		**344**	
Spokane	Inland Foundry Co Inc	Mead	Lead Compounds	97	333	0	**430**	105	1,331	1,331
Spokane	Kaiser Aluminum & Chemical Corp. - Trentwood	Spokane	1,2,4-Trimethylbenzene	110	0	0	**110**	279	2,639	4,489
			Chlorine	29,635	0	0	**29,635**	70,106	0	0
			Chromium	44	0	0	**44**	50	65	141
			Copper	33	0	1	**34**	90	253	542
			Glycol Ethers	188	0	0	**188**	324	2,644	2,242
			Hydrochloric Acid	3,150	0	0	**3,150**	7,451	0	0
			Lead	53	0	0	**53**	97	2	3
			Manganese	47	0	1	**48**	90	96	151

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
			Methyl Ethyl Ketone	757	0	0	**757**	1,523	128,222	163,620
			Methyl Isobutyl Ketone	177	0	0	**177**	449	2,639	4,489
			Polychlorinated	0	0	28	**28**		0	
			Toluene	708	0	0	**708**	1,479	17,155	29,140
			Zinc Compounds	15	0	261	**276**	520	290	828
	Summary for Kaiser Aluminum & Chemical Corp. - Trentwood			**34,917**	**0**	**291**	**35,208**		**154,005**	
Spokane	Koch Materials Company - Spokane Hillyard Facility	Spokane	Benzo(G,H,I)Perylene	0	0	0	**0**	0	0	0
			Polycyclic Aromatic	0	0	0	**0**	0	0	11
	Summary for Koch Materials Company - Spokane Hillyard Facility			**0**	**0**	**0**	**0**		**0**	
Spokane	Melcher Manufacturing Co Inc	Spokane	Styrene	9,252	0	0	**9,252**	13,192	0	0
Spokane	Mica Brick Plant	Mica	Hydrogen Fluoride	25,671	0	0	**25,671**	28,328	0	0
Spokane	Quarry Tile Company	Spokane	Lead Compounds	2	0	0	**2**		0	
Spokane	Safety-Kleen Systems (118301)	Spokane	Ethylene Glycol	22	0	0	**22**	177,150		
Spokane	Servatron Inc.	Spokane	Lead	0	0	0	**0**	0	24	30
Spokane	Spokane Galvanizing Inc	Airway	Zinc Compounds	1,274	0	0	**1,274**	1,614	0	146,515
Spokane	Spokane Metal Products	Spokane	Chromium	5	0	0	**5**	5	13,414	12,517
			Nickel	5	0	0	**5**	5	7,042	6,571
	Summary for Spokane Metal Products			**10**	**0**	**0**	**10**		**20,456**	
Spokane	Spokane Steel Foundry	Spokane	4,4'-	0	0	0	**0**	0	0	0
			Chromium	10	0	0	**10**	10	250	250
			Manganese	255	0	0	**255**	255	1,943	1,589
			Nickel	10	0	0	**10**	10	250	250
	Summary for Spokane Steel Foundry			**275**	**0**	**0**	**275**		**2,443**	
Spokane	Telect Inc	Liberty Lake	Lead Compounds	0	0	0	**0**	0	857	872
Spokane	Travis Pattern & Foundry, Inc.	Spokane	Copper	0	0	0	**0**	0	0	0
			Trichloroethylene	7,200	0	0	**7,200**	3,300	0	2,063
	Summary for Travis Pattern & Foundry, Inc.			**7,200**	**0**	**0**	**7,200**		**0**	
Spokane	United Coatings Mfg. Co.	Greenacres	Diisocyanates	0	0	0	**0**	0	500	500
			Ethylbenzene	474	0	0	**474**	400	128	200
			Lead Compounds	0	0	0	**0**	0	0	0
			Xylene (Mixed Isomers)	1,901	0	0	**1,901**	1,600	385	600
	Summary for United Coatings Mfg. Co.			**2,375**	**0**	**0**	**2,375**		**1,013**	

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
Spokane	Univar USA Inc. (formerly Vopak USA Inc.)	Spokane	Methanol	283	0	0	**283**	454	0	0
	Summary for Spokane County			**286,874**	**333**	**547**	**287,754**		**607,503**	
STEVENS	Boise Kettle Falls Plywood Mill	Kettle Falls	Lead	164	0	0	**164**	33	220	341
			Methanol	29,493	0	0	**29,493**		0	
	Summary for Boise Kettle Falls Plywood Mill			**29,657**	**0**	**0**	**29,657**		**220**	
Stevens	Kettle Falls Lumber	Kettle Falls	Lead	83	0	0	**83**	16	280	170
Stevens	Northwest Alloys, Inc.	Addy	Lead	0	0	0	**0**	4,253	0	37
Stevens	Stimson Lumber Co., Arden Operation	Colville	Lead Compounds	10	0	0	**10**	8	140	120
	Summary for Stevens County			**29,750**	**0**	**0**	**29,750**		**640**	
THURSTON	Amtech Corp.	Yelm	Styrene	50,515	0	0	**50,515**	55,519	0	0
Thurston	Crown Cork & Seal Co., Inc. (USA)	Olympia	Glycol Ethers	147,000	0	0	**147,000**	151,000	0	0
			Hydrogen Fluoride	0	0	0	**0**	0	0	0
			Manganese Compounds	0	0	0	**0**	0	5	255
			N-Butyl Alcohol	133,000	0	0	**133,000**	137,000	0	0
	Summary for Crown Cork & Seal Co., Inc. (USA)			**280,000**	**0**	**0**	**280,000**		**5**	
Thurston	Lasco Bathware	Yelm	Styrene	354,400	0	0	**354,400**	461,440	1,618	0
	Summary for Thurston County			**684,915**	**0**	**0**	**684,915**		**1,623**	
WALLA WALLA	Boise Cascade Paper Division	Wallula	Acetaldehyde	35,175	0	753	**35,928**	49,400	0	0
			Ammonia	120,188	0	16,510	**136,698**	137,500	0	0
			Barium	140	9,531	0	**9,671**		0	
			Catechol	0	1	58	**59**	57	0	0
			Chlorine Dioxide	2,900	0	0	**2,900**	2,900	0	0
			Cresol (Mixed Isomers)	19	0	41	**60**		0	
			Formaldehyde	36,463	25	616	**37,104**	4,673	0	0
			Formic Acid	0	0	2,333	**2,333**	2,300	0	0
			Hydrochloric Acid	586,000	0	0	**586,000**	577,000	0	0
			Lead	25	506	297	**828**	352	0	0
			Manganese Compounds	218	37,300	41,000	**78,518**	42,000	0	7
			Mercury	1	2	0	**3**	2	0	0
			Methanol	15,772	822	12,400	**28,994**	27,480	0	0
			Methyl Ethyl Ketone	8,250	0	300	**8,550**		0	
			Nitrate Compounds	0	0	26,000	**26,000**	25,400	0	0
			Phenol	605	25	0	**630**	600	0	0

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
			Polycyclic Aromatic	80	12	12	**104**	94	0	0
			Sulfuric Acid	137,400	0	0	**137,400**	146,000	0	0
	Summary for Boise Cascade Paper Division			**943,236**	**48,224**	**100,320**	**1,091,780**		**0**	
Walla Walla	IBP, Inc.	Wallula	Ammonia	25,300	0	0	**25,300**	34,400	56,500	62,400
			Chlorine	5	5	0	**10**	5	0	250
			Nitrate Compounds	0	15,600	0	**15,600**		0	
	Summary for IBP, Inc.			**25,305**	**15,605**	**0**	**40,910**		**56,500**	
Walla Walla	Key Technology, Inc.	Walla Walla	Chromium	0	0	0	**0**	0	22,907	750
			Manganese	0	0	0	**0**		2,070	
			Nickel	0	0	0	**0**	0	10,376	10,746
	Summary for Key Technology, Inc.			**0**	**0**	**0**	**0**		**35,353**	
Walla Walla	Key Technology, Inc.	Walla Walla	Chromium	0	0	0	**0**		33,986	
			Manganese	0	0	0	**0**		3,105	
			Nickel	0	0	0	**0**		15,439	
	Summary for Key Technology, Inc.			**0**	**0**	**0**	**0**		**52,530**	
Walla Walla	Nelson Irrigation Corp.	Walla Walla	Copper	80	0	0	**80**	80	221,920	204,115
			Lead	15	0	0	**15**	20	12,388	12,060
	Summary for Nelson Irrigation Corp.			**95**	**0**	**0**	**95**		**234,308**	
Walla Walla	Reiff Manufacturing	Walla Walla	Styrene	5,500	0	0	**5,500**	5,100	0	0
Walla Walla	Walla Walla Foundry Inc	Walla Walla	Copper	0	0	0	**0**	0	4,244	3,316
	Summary for Walla Walla County			**974,136**	**63,829**	**100,320**	**1,138,285**		**382,935**	
WHATCOM	BP Cherry Point Refinery	Blaine	1,2,4-Trimethylbenzene	2,090	0	0	**2,090**	2,490	0	0
			1,3-Butadiene	130	0	0	**130**	211	0	0
			Ammonia	419	0	7,500	**7,919**	7,699	0	0
			Benzene	5,800	0	5	**5,805**	20,139	100	155
			Benzo(G,H,I)Perylene	1	0	0	**1**	1	0	0
			Carbon Disulfide	7	0	0	**7**	7	0	0
			Cresol (Mixed Isomers)	14	3	0	**17**	31	0	0
			Cumene	359	0	0	**359**	676	0	0
			Cyclohexane	1,710	0	0	**1,710**	5,990	0	0
			Diethanolamine	0	0	3,300	**3,300**	3,100	0	0
			Ethylbenzene	2,200	0	5	**2,205**	2,274	0	0
			Ethylene	220	0	0	**220**	280	0	0
			Hydrochloric Acid	31	0	0	**31**	705	0	0
			Lead Compounds	148	31	0	**179**	69	28	67
			Manganese Compounds	273	0	690	**963**	1,019	64,000	20,000
			Mercury Compounds	3	0	0	**3**	10	7	3
			Methanol	9,400	0	0	**9,400**	39,100	4	0

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
			Molybdenum Trioxide	0	0	0	**0**	0	0	0
			Naphthalene	590	0	0	**590**	545	0	0
			N-Hexane	7,800	0	0	**7,800**	84,530	0	0
			Nitrate Compounds	0	0	24,000	**24,000**	25,000	0	0
			Phenanthrene	2	0	0	**2**	17	0	0
			Phenol	320	0	530	**850**	1,140	0	0
			Polycyclic Aromatic	20	104	0	**124**	301	0	0
			Propylene	712	0	0	**712**	2,160	0	0
			Sulfuric Acid	60,000	0	0	**60,000**	63,000	0	0
			Tetrachloroethylene	22	0	0	**22**	23	0	0
			Toluene	7,000	0	5	**7,005**	24,101	0	0
			Xylene (Mixed Isomers)	8,000	0	5	**8,005**	10,352	10	1
	Summary for BP Cherry Point Refinery			**107,271**	**138**	**36,040**	**143,449**		**64,149**	
Whatcom	Brooks Manufacturing Co.	Bellingham	Hexachlorobenzene	0	0	0	**0**		0	
			Polycyclic Aromatic	0	0	0	**0**	0	0	0
	Summary for Brooks Manufacturing Co.			**0**	**0**	**0**	**0**		**0**	
Whatcom	Conocophillips Ferndale Refinery	Ferndale	1,2,4-Trimethylbenzene	232	224	0	**456**	212	849	398
			1,3-Butadiene	279	0	0	**279**	97	0	0
			Ammonia	155	0	2,385	**2,540**	2,963	0	0
			Benzene	2,732	53	0	**2,785**	2,128	95	45
			Benzo(G,H,I)Perylene	14	0	0	**14**	26	13	10
			Cresol (Mixed Isomers)	11	7	0	**18**	75	0	0
			Cumene	574	81	0	**655**	473	274	231
			Cyclohexane	6,917	100	0	**7,017**	4,440	381	316
			Diethanolamine	933	0	0	**933**	933	0	0
			Ethylbenzene	1,963	112	0	**2,075**	1,487	424	199
			Ethylene	1,750	0	0	**1,750**	2,312	0	0
			Hydrogen Fluoride	465	0	0	**465**	465	0	0
			Lead Compounds	6	0	39	**45**	48	0	73
			Manganese	0	0	451	**451**	466	0	0
			Mercury Compounds	0	0	1	**1**	1	5	5
			Methanol	10	0	0	**10**	20	0	0
			Naphthalene	1,108	77	0	**1,185**	826	236	111
			N-Hexane	1,827	72	0	**1,899**	2,111	189	227
			Nitrate Compounds	0	0	30,867	**30,867**	31,915	0	0
			Phenol	1	4	58	**63**	94	0	0
			Polycyclic Aromatic	1,909	0	0	**1,909**	2,147	104	73
			Propylene	1,726	0	0	**1,726**	964	0	0
			Sulfuric Acid	182,538	0	0	**182,538**	176,382	0	0
			Tetrachloroethylene	7	0	0	**7**	6	0	0
			Toluene	12,921	163	0	**13,084**	8,157	610	514
			Xylene (Mixed Isomers)	5,534	398	0	**5,932**	4,387	1,274	599
	Summary for Conocophillips Ferndale Refinery			**223,612**	**1,291**	**33,800**	**258,703**		**4,454**	

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
Whatcom	Darigold-Lynden	Lynden	Nitrate Compounds	0	5	0	**5**	0	72,012	87,507
			Nitric Acid	10	5	0	**15**	10	7	0
			Polycyclic Aromatic	0	0	0	**0**	0	0	0
	Summary for Darigold-Lynden			**10**	**10**	**0**	**20**		**72,019**	
Whatcom	Encogen NW Cogeneration Plant	Bellingham	Ammonia	66,234	0	0	**66,234**	79,203	0	0
Whatcom	Ershigs, Inc.	Bellingham	Chromium	0	0	0	**0**	0	7,592	3,333
			Styrene	44,641	0	0	**44,641**	55,165	1,952	1,344
	Summary for Ershigs, Inc.			**44,641**	**0**	**0**	**44,641**		**9,544**	
Whatcom	Georgia-Pacific West, Inc.	Bellingham	Nitrate Compounds	0	0	84,000	**84,000**	106,000	0	0
Whatcom	IKO Pacific Inc.	Sumas	Polycyclic Aromatic	0	0	0	**0**	66		
Whatcom	Intalco Aluminum Corp.	Ferndale	Carbonyl Sulfide	155,531	0	0	**155,531**	66,400	0	0
			Copper	104	0	0	**104**	1	0	0
			Hydrogen Fluoride	93,616	0	0	**93,616**	21,460	0	0
			Lithium Carbonate	1,051	0	0	**1,051**	318	0	0
			Manganese	52	0	0	**52**	1	0	0
			Polycyclic Aromatic	8,570	0	0	**8,570**	3,645	800	315
	Summary for Intalco Aluminum Corp.			**258,924**	**0**	**0**	**258,924**		**800**	
Whatcom	Maax-Hydro Swirl Mfg.	Bellingham	Methyl Methacrylate	492	0	0	**492**		0	
			Styrene	49,198	0	0	**49,198**	51,068	0	0
	Summary for Maax-Hydro Swirl Mfg.			**49,690**	**0**	**0**	**49,690**		**0**	
Whatcom	Oceanus Plastics Inc.	Ferndale	Lead	0	0	0	**0**	0	0	0
			Styrene	7,977	0	0	**7,977**	8,657	1,110	1,000
	Summary for Oceanus Plastics Inc.			**7,977**	**0**	**0**	**7,977**		**1,110**	
Whatcom	Praxair Inc.	Ferndale	Ammonia	19,060	0	0	**19,060**	25,200	0	0
Whatcom	Sea Sport Boats, Inc.	Bellingham	Styrene	10,909	0	0	**10,909**	11,689	0	0
Whatcom	Tenaska WA Partners Ferndale Cogeneration Facility	Ferndale	Ammonia	8,716	0	0	**8,716**	14,257	0	0
	Summary for Whatcom County			**797,044**	**1,439**	**153,840**	**952,323**		**152,142**	

County	Facility	City	Chemical	Air	Land	Water	2002 Releases	2001 Releases	2002 Transfers	2001 Transfers
WHITMAN	Schweitzer Engineering Labs Inc.	Pullman	Copper	0	0	0	**0**		0	
			Diisocyanates	0	0	0	**0**		250	
			Lead	0	0	0	**0**		4,210	
	Summary for Schweitzer Engineering Labs Inc.			**0**	**0**	**0**	**0**		**4,460**	
	Summary for Whitman County			**0**	**0**	**0**	**0**		**4,460**	
YAKIMA	Bay Zinc Company, Inc.	Moxee	Lead Compounds	2	0	0	**2**	0	0	48,742
			Zinc Compounds	1,574	0	0	**1,574**	794	0	42,650
	Summary for Bay Zinc Company, Inc.			**1,576**	**0**	**0**	**1,576**		**0**	
Yakima	Darigold-Sunnyside	Sunnyside	Ammonia	5	5	0	**10**	5	53	56
			Benzoyl Peroxide	0	5	0	**5**	0	0	0
			Nitrate Compounds	0	5	0	**5**	0	868,095	650,708
			Nitric Acid	10	5	0	**15**	10	42,505	34,777
	Summary for Darigold-Sunnyside			**15**	**20**	**0**	**35**		**910,653**	
Yakima	Pace International, LLC	Wapato	Zinc Compounds	500	1,000	0	**1,500**	1,250	1,000	2,000
Yakima	Shields Bag & Printing	Yakima	Dibutyl Phthalate	4,605	0	0	**4,605**	6,556	590	680
Yakima	Trail Wagons, Inc.	Yakima	Styrene	36,762	0	0	**36,762**	19,462	3	0
Yakima	Tree Top, Inc. - Ross Plant	Selah	Nitrate Compounds	0	0	0	**0**	0	43,000	80,350
Yakima	Welchs	Grandview	Benzo(G,H,I)Perylene	38	0	0	**38**		0	
			Polycyclic Aromatic	3,519	0	0	**3,519**		0	
	Summary for Welchs			**3,557**	**0**	**0**	**3,557**		**0**	
Yakima	Yakima Bait Co/Worden's Lure	Granger	Lead	0	0	0	**0**	0	0	0
Yakima	Yakima Complex	Yakima	Lead	166	0	0	**166**	34	401	100
Yakima	Yakima Training Center Range Ops	Yakima	Aluminum (Fume or Dust)	0	0	0	**0**	0	0	0
			Copper	0	72,300	0	**72,300**	65,299	0	0
			Lead Compounds	290	13,800	0	**14,090**	14,474	0	0
			Nitroglycerin	0	0	0	**0**	0	0	0
	Summary for Yakima Training Center Range Operations			**290**	**86,100**	**0**	**86,390**		**0**	
Summary for Yakima County				**47,471**	**87,120**	**0**	**134,591**		**955,647**	
	Grand Totals	**12,028,437**	**6,131,538**	**1,560,405**	**19,720,380**	**18,614,319**				