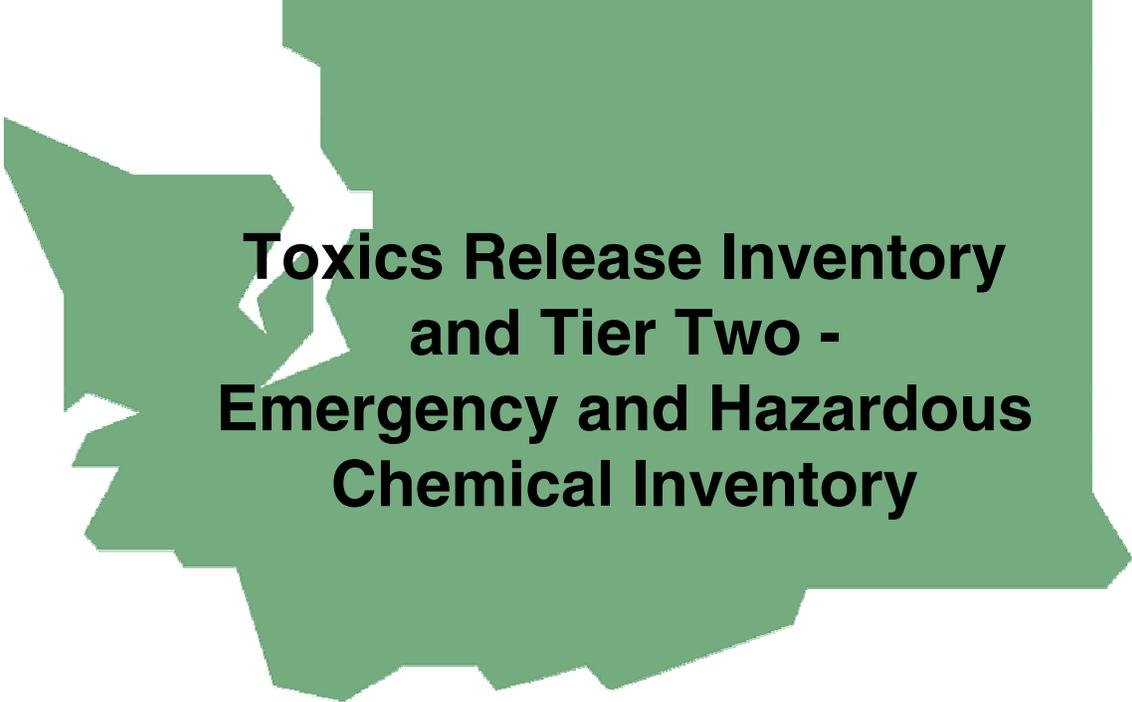


WASHINGTON STATE
DEPARTMENT OF
E C O L O G Y

Chemicals in Washington State Summary Report 2003



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

Department of Ecology
Hazardous Waste and Toxics Reduction Program
Publication Number 05-04-020
May 2005

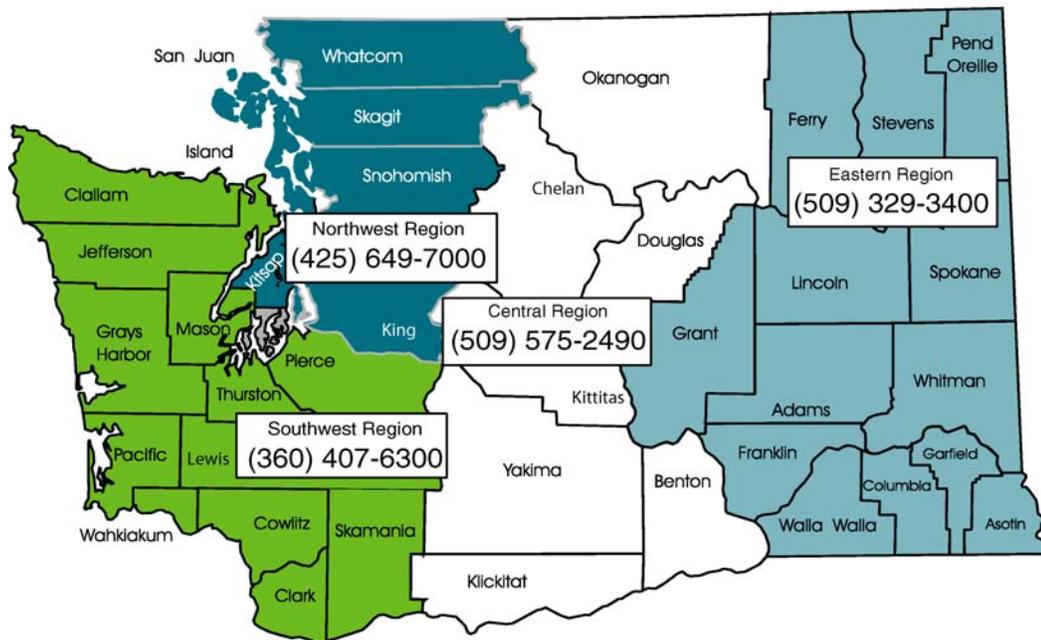
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Chemicals in Washington State Summary Report 2003

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

A Special Acknowledgement to: The EPCRA Team (Idell Hansen and Sadie Whitener), John Ridgway (Environmental Justice) and HWTR Management

Table of Contents

Executive Summary	1
Introduction.....	5
Tier Two - Emergency & Hazardous Chemical Inventory Reporting	5
Toxics Release Inventory Reporting.....	6
Tier Two – Emergency & Hazardous Chemical Inventory Reporting, 2003	7
Tier Two Reporting Facilities	8
Reports by LEPC	10
Most Frequently Reported Hazardous Substances.....	11
The Toxics Release Inventory, 2003	13
TRI Data Limitations	13
TRI Releases by Environmental Media.....	14
TRI Releases by Industry Category	15
TRI Releases by County	18
TRI Releases by Water Body.....	22
TRI Releases by Chemical.....	22
Washington TRI PBT Reporting	25
TRI Off-site Transfers	29
TRI Pollution Prevention Act Reporting	31
Trends in TRI Releases and Transfers.....	32
Uses of Chemical Data	35
Tier Two Data	35
TRI Data.....	35
Risk Screening Environmental Indicators	35
Environmental Justice	38
Beyond Waste Project.....	39
New and Pending EPCRA Developments.....	41
Electronic – Facility Data Releases (e-fdr)	41
Form R Changes for 2003 Reporting Year	41
TRI Reporting Forms Modification Rule	41

Figures

1. Number of Tier Two Reporting Facilities, 1987-2003.....	8
2. Total Facilities and Chemicals by County, 2003	9
3. Top Ten LEPCs with Most Reporting Facilities, 2003.....	10
4. Top Ten LEPCs with Most Chemicals Reported, 2003	10
5. Top Ten Most Frequently Reported Hazardous Substances, 2003.....	11
6. Top Ten Most Frequently Reported EHSs, 2003.....	11
7. Washington State TRI Reporters by General Location, 2003.....	14
8. Washington State TRI by Environmental Media, All Industries, 2003	15
9. Washington State TRI by Industry, 2003	15
10. Washington State TRI by County, 2003	19
11. Washington State TRI Top Counties, Pounds per Square Mile, 2003.....	20
12. Washington State TRI Top Counties, Pounds per Person, 2003	21
13. Washington State TRI by Water Body, 2003	22
14. Washington State TRI Releases by Chemical, 2003	23
15. Washington State TRI PBT Releases, 2003.....	26
16. Washington State TRI Dioxin Releases, 2003.....	29
17. Washington State TRI Transfers by Type, 2003	29
18. Washington State TRI Releases, 1995 – 2003	33
19. Washington State TRI Transfers, 1995 – 2003	34

Tables

1. Washington State TRI Releases Top 20 Reporting Facilities, 2003	17
2. Washington State TRI Transfers Top 20 Reporting Facilities, 2003	30
3. TRI Pollution Prevention Act Reporting, 2003.....	32
4. Washington State TRI Relative Risk Ranking by Chemical, 2002.....	37
5. Standard Industrial Classification Codes	44
6. PBT Reporting Thresholds.....	45

Appendices

1. Reporting Requirements and Glossary of Terms	43
2. Tier Two Reporting, 2003.....	49
3. Washington State TRI by Chemical, 2003.....	51
4. Washington Certification Form Reporters, 2003.....	55
5. Washington State TRI Dioxin Reporters, 2003.....	59
6. Washington State TRI Reporters by County, Facility Chemical, 2003.....	61

Executive Summary

The Emergency Planning and Community Right-to-Know Act (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 on the two annual EPCRA reporting requirements: Tier Two - Emergency & Hazardous Chemical Inventory reporting (Section 312) and Toxics Release Inventory reporting (Section 313) for 2003.

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 serves 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.

Statewide Summary of Tier Two - Emergency and Hazardous Chemical Inventory Reporting in Washington State, 2003

Nearly 3,500 facilities in the state of Washington reported storage of one or more hazardous chemicals at reportable thresholds during 2003. 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 with much lower thresholds for extremely hazardous substances.

Top Three Hazardous Substances Reported in Storage	
Chemical	Times Reported
1 Diesel Fuel	1206
2 Gasoline	804
3 Propane	522

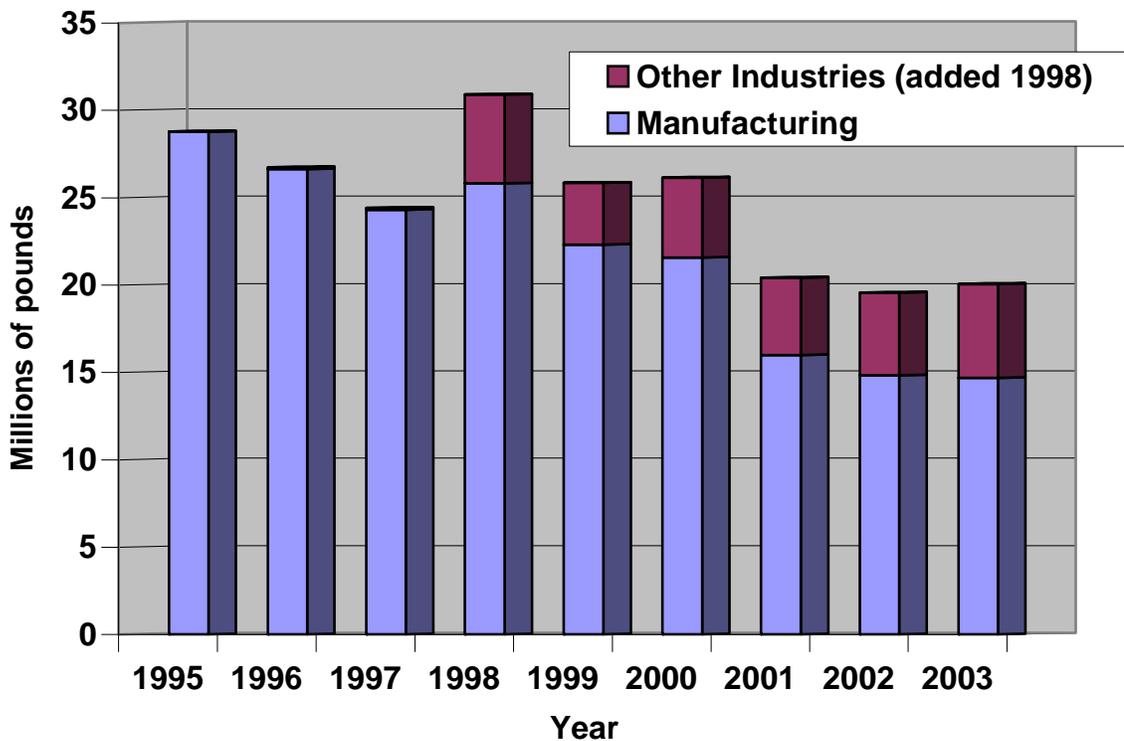
Federally designated “Extremely Hazardous Substances” (EHS) have significantly lower thresholds for reporting due to their acute risk to employees, the public and the environment. The most commonly reported EHSs were sulfuric acid, ammonia, and chlorine.

Top Three Extremely Hazardous Substances Reported in Storage	
Chemical	Times Reported
1 Sulfuric Acid	953
2 Ammonia	475
3 Chlorine	257

Statewide Summary of the Toxics Release Inventory (TRI) in Washington State, 2003

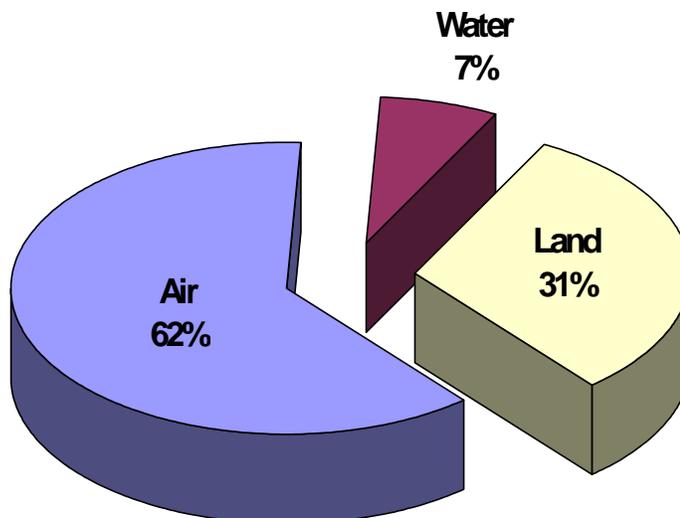
In the year 2003, industries reported 20.6 million pounds of toxic chemicals released to the air, land and water in Washington State. This was an increase of about 500,000 pounds from reported releases in 2002.

However, releases in the manufacturing sectors decreased by about 150,000 pounds from 2002. Since 1995, total releases of all reported chemicals by manufacturing sectors have decreased by nearly 50%.



Releases to Air, Water and Land

The relative percentage of releases to land increased when mining and electric utilities industry categories were added in 1998. However, the greatest percentage of releases consistently continues to be to air.



Top Releases

Top Three Industries Reporting Releases

Industry	Releases _{mp}	
1 Paper and Allied Products	8.0	Paper & Allied Products, decreased their total reported releases by about 50% since 1995.
2 Electric Services	5.6	
3 Petroleum Refining	1.3	

mp = millions of pounds

Top Three Facilities Reporting Releases

Facility	Releases _{mp}	
1 Transalta Centralia Generation/Mining	5.5	These three facilities represent 45% of all releases reported in 2003.
2 Weyerhaeuser Co., Longview	2.6	
3 Boise Cascade Paper Division, Wallula	1.3	

mp = millions of pounds

Top Three Chemical Releases

Chemical	Releases _{mp}	
1 Methanol	3.6	Methanol was the chemical with the highest amount of reported releases (500,000 more than in 2002).
2 Barium Compounds	2.2	
3 Manganese Compounds	1.8	

mp = millions of pounds

Top Three Carcinogen Reporting Releases

Carcinogen	Releases ^{mp}	
1 Styrene	1.4	Releases of styrene increased by about 400,000 pounds from 2002.
2 Acetaldehyde	0.73	
3 Lead	0.64	

mp = millions of pounds

Top Three Counties Reporting Releases

Counties	Releases ^{mp}	
1 Lewis	5.5	Transalta Centralia Generation/Mining accounted for almost all of Lewis County's amount.
2 Cowlitz	3.1	
3 Clark	1.5	

mp = millions of pounds

TRI PBT Reporting

By federal rule, certain persistent, bioaccumulative, toxic (PBT) chemicals have lower thresholds for reporting under TRI. The thresholds for chemical use are ten pounds for chemicals like mercury and mercury compounds, 100 pounds for chemicals like polycyclic aromatic compounds and lead or lead compounds or 0.1 grams for the dioxin and dioxin-like compounds category. The greatest percentage of PBT chemicals reported was for lead and lead compounds. Forty-three 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	902,727	Releases of Mercury & Mercury Compounds have decreased by 66% since 2000.
2 Polycyclic Aromatic Compounds	15,208	
3 Mercury and Mercury Compounds	644	

p = pounds

For More Information

Additional information on Tier Two and TRI is available on the Community Right-to-Know website at <http://www.ecy.wa.gov/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 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. 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.

Besides 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 reports tell 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 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 covered industry sectors (Appendix 1). 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 2003 reporting, the due date for filing was July 1, 2004. 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 <http://www.ecy.wa.gov/epcra>.

Tier Two – Emergency & Hazardous Chemical Inventory Reporting, 2003

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.

Chapter 118-40, Washington Administrative Code (WAC) 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 Chapter 118-40 WAC, Ecology is designated to receive EPCRA reports on behalf of the SERC. Ecology's Community Right-to-Know program tracks facilities' compliance history and manages the chemical data submitted by businesses in accordance with this regulation.

One of the 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 information 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 meet or 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 (EHS) depending on the chemical. The chemical inventory 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 2004 and represents chemicals on-site during the calendar year 2003. Figure 1 below, shows that 3,318 facilities stored hazardous chemicals during 2003. These facilities reported 15,521 chemicals in 26,655 different storage locations at their business sites. More than 3,200 extremely hazardous substances were reported.

The number of facilities reporting Tier Two chemicals increased each year prior to 1998 due to increased outreach efforts, awareness of reporting requirements and enforcement activities. In addition, 1998 was the first year reporting requirements were changed for retail gas stations causing a significant decrease from this sector. Each year the number of reporting facilities changes because some businesses store smaller quantities and are no longer required to report while other new businesses start reporting. Increased outreach efforts, awareness and enforcement activities have helped to increase the number of reporting facilities.

Figure 1: Number of Tier Two Reporting Facilities, 1987 - 2003

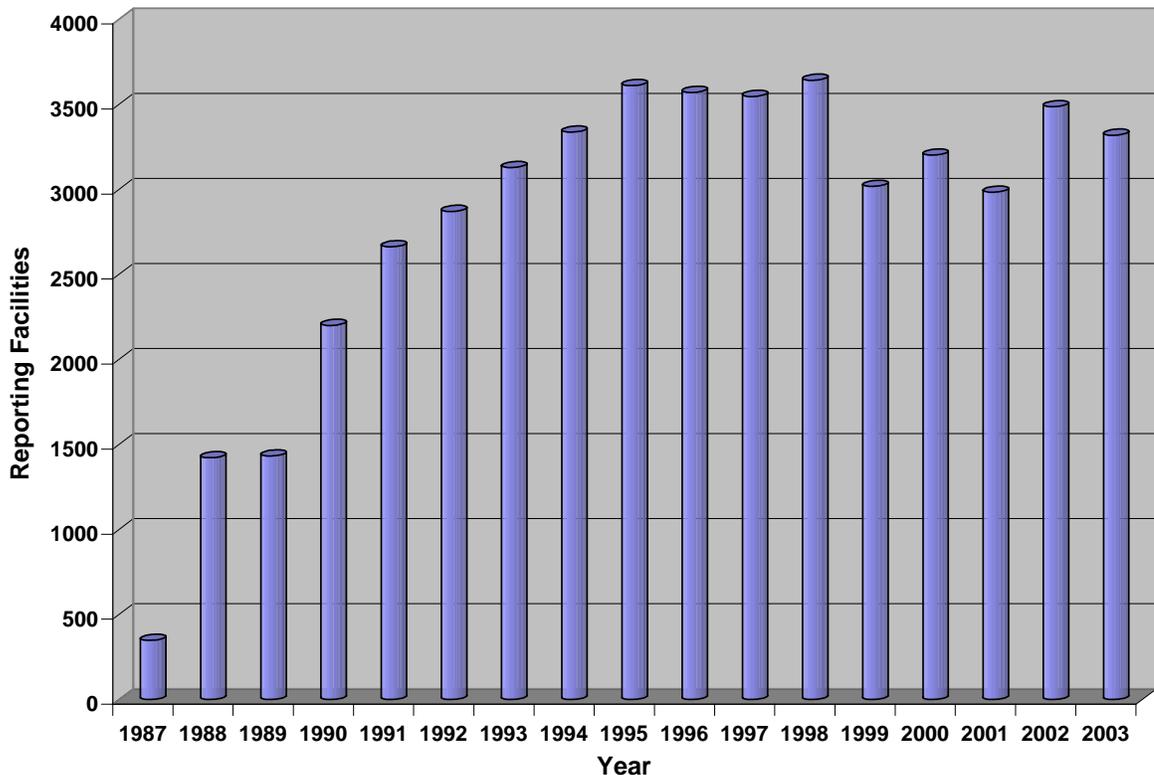


Figure 2: Total Facilities and Chemicals by County

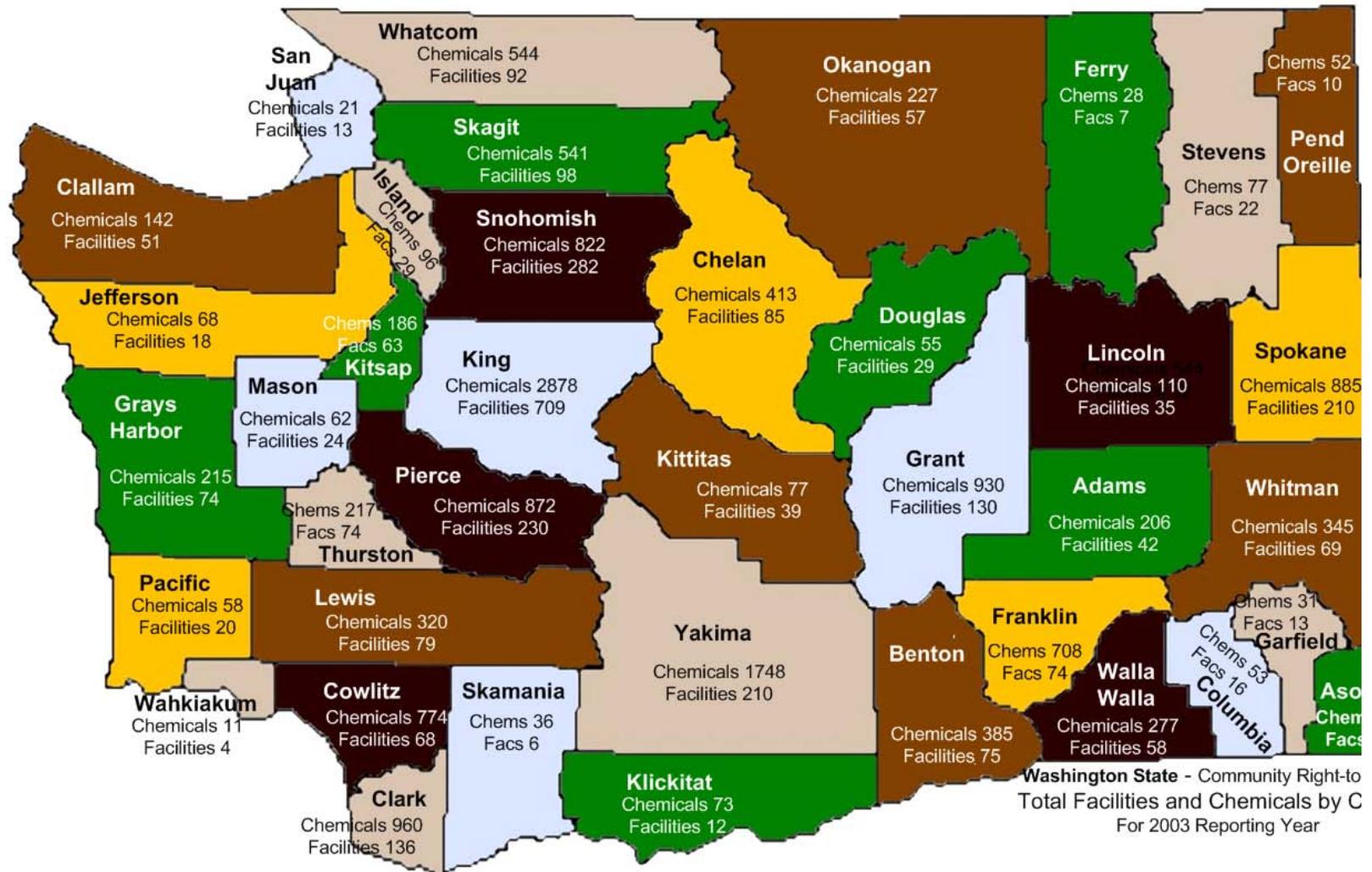
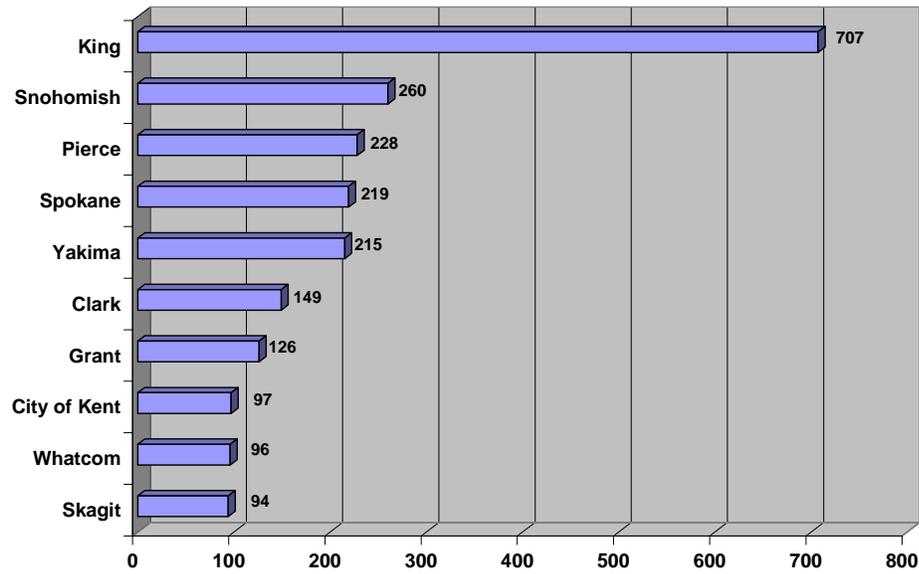


Figure 3: Top Ten LEPCs with Most Reporting Facilities, 2003



Reports by LEPC

There are 49 LEPCs in Washington State. Most of these share the same jurisdictional area as counties, but some communities serve as their own LEPC. Figure 2 displays the total facilities and chemicals by county. Figure 3 displays the 10 LEPCs which have the most facilities within their jurisdiction that filed reports for reporting year 2003. Figure 4 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, 2003

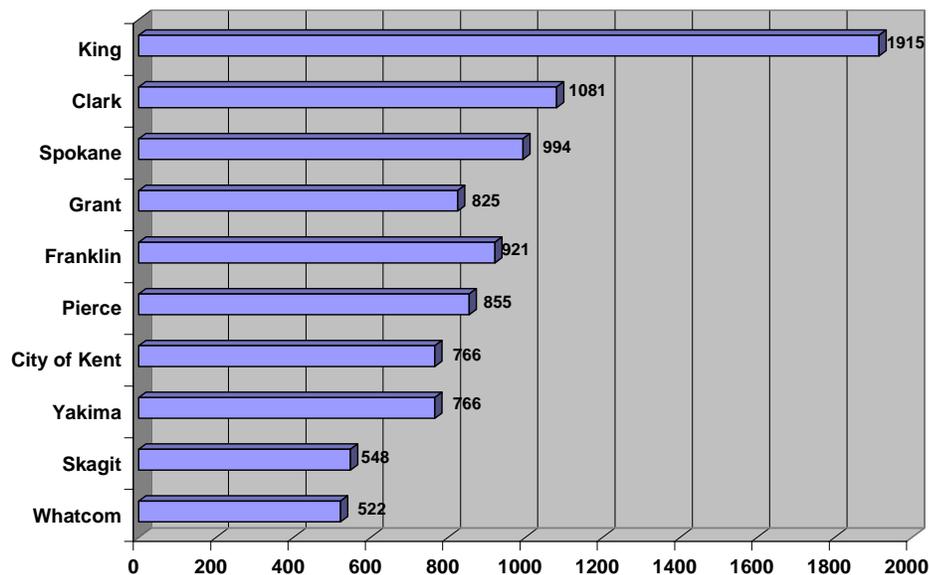
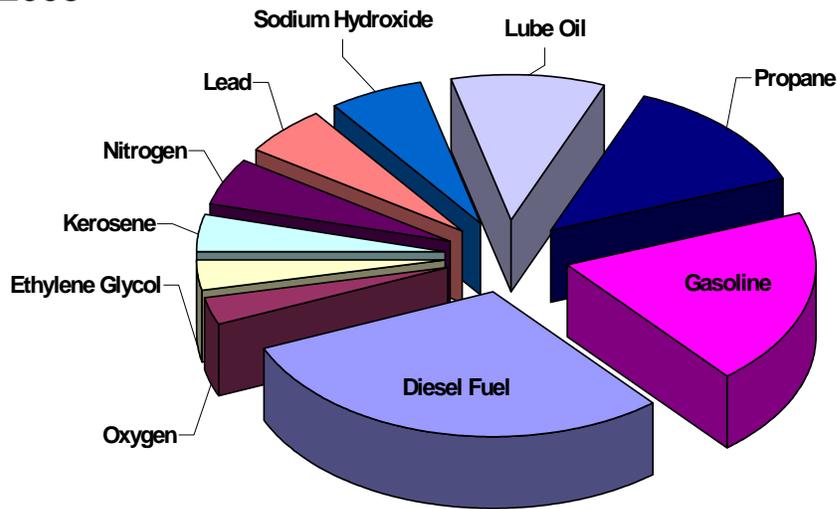


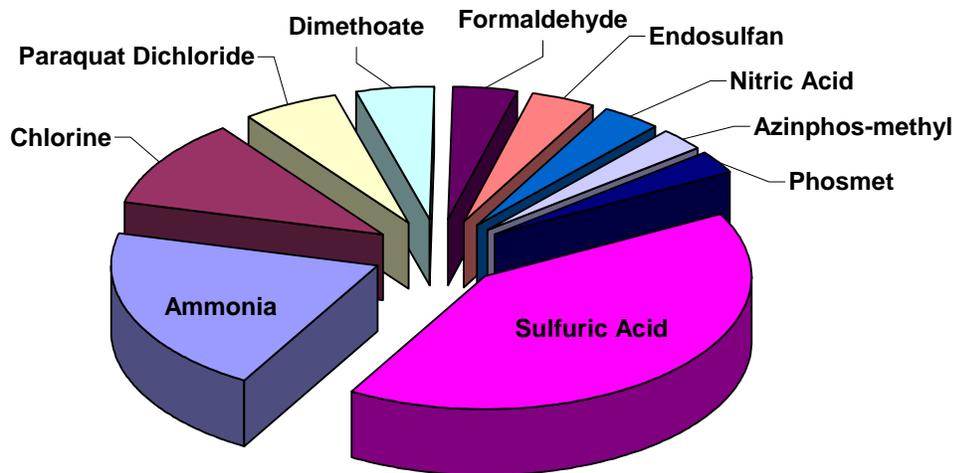
Figure 5: Top Ten Most Frequently Reported Hazardous Substances, 2003



Most Frequently Reported Hazardous Substances

The 10 most frequently reported chemicals are displayed in Figure 5. Figure 6 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, 2003



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/epcra.

The Toxics Release Inventory, 2003

The Toxics Release Inventory (TRI) annually summarizes and 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 and facilities may file one form or many forms depending on the number of chemicals used. The five-page "Form R" chemical report is required for most reports. However, 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 2003.

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*, (http://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 Industrial 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. Recent federal air and water regulations should result in decreased emissions of some compounds reported in the TRI for these industries over the next several years. Decreases in these compounds may not appear in the TRI immediately 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 2003 reporting year, 344 facilities in Washington State reported under TRI reporting requirements (Form R, Form A or both). This is a decrease of 16 facilities from 2002. Of these 344 facilities, 311 facilities filed one or more five-page Toxic Release Inventory Report “Form Rs” (see Appendix 6, page 61). Sixty-eight filed one or more two-page TRI Certification “Form As” (see Appendix 4, page 57, facilities may file both form Rs and form As). Of these 344 reporting facilities, 27 had not reported for the previous calendar year. Figure 7 shows the location of reporting facilities throughout Washington State.

Figure 7: Washington State TRI Reporters by General Location, 2003

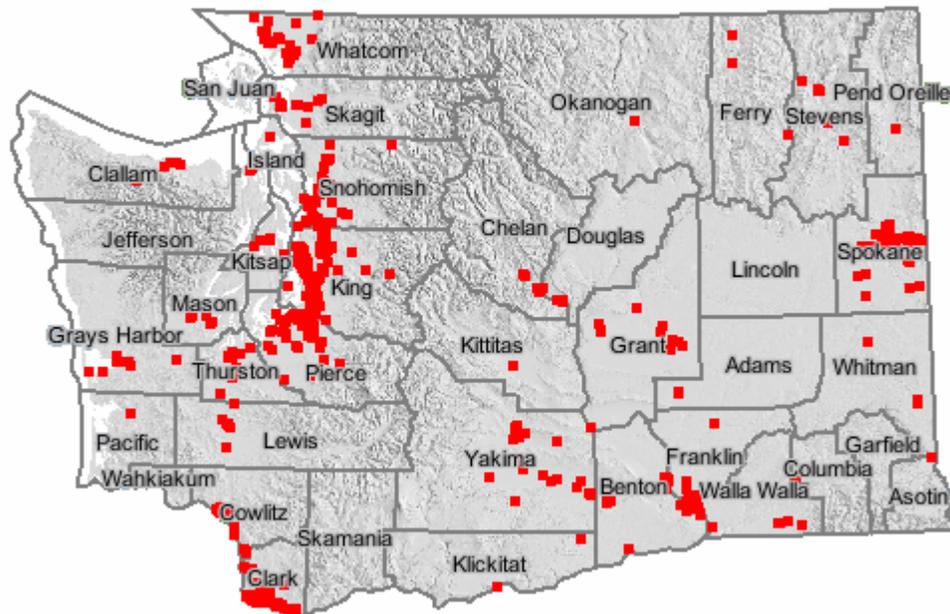
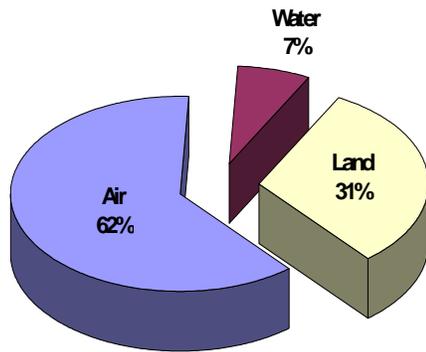


Figure 8: Washington State TRI by Environmental Media - All Industries, 2003



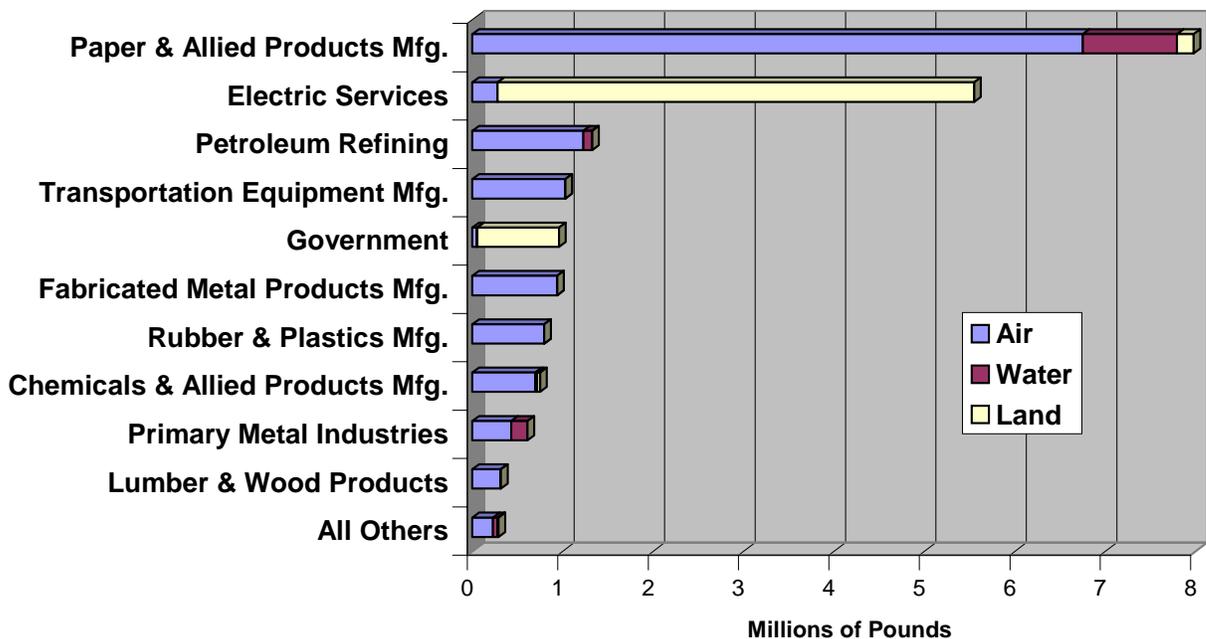
Facilities reported a total of 20,550,319 pounds of toxic chemicals released to air, water and land for the 2003 reporting year. Air releases comprised 62% of all releases (12,745,107 pounds). Land releases made up 31% (6,408,303 pounds) and water releases accounted for 7% (1,397,182 pounds). No underground injection releases were reported.

TRI Releases by Industry Category

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). These are paper and allied products manufacturing, electric services and petroleum refining.

The 10 highest industry categories reported 99% of the state's total releases. All other classifications combined reported releases of about 290,000 pounds or 1% of the Washington State total.

Figure 9: Washington State TRI by Industry, 2003



Paper & Allied Products

With 8 million pounds of reported releases, the paper and allied products manufacturing category accounted for about 38% of the releases reported in the state. Fourteen different facilities reported in this category in 2003. The amount released in this industry category increased by 200,000 pounds from 2002. Releases of methanol in this industry have varied significantly from year to year due to new technologies and changes in emission factors used to calculate releases. Increased production due to the improving economy contributed to the increases. Overall, reported releases in this industry have decreased over 50% (8 million pounds) since 1995.

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 2003, a total of 5.6 million pounds, about 27% of the state's total. Four facilities reported in this industry category. One facility, Transalta Centralia Generation/Mining, reported releases of 5.5 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. Reported releases in this industry have increased by 22% (1 million pounds) since 1998. That was the first year reporting was required for this industry.

Petroleum Refining

The petroleum refining industry reported releases of 1.3 million pounds, about 6% of the state's total. This is a decrease of about 100,000 pounds from 2002. Nine facilities reported in this industry category. Major chemicals reported by this industry are sulfuric acid and carbonyl sulfide. For reporting year 2003, releases in the petroleum refining industry category were 33% or 680,000 pounds less than they were in 2000, the year with the highest reported amount for this industry.

Top Reporting Facilities for Total Releases

For the 2003 reporting year, the top 20 reporting facilities for total releases on-site are listed in the table below. They represent 17.4 million pounds of the state's 20.6 million pounds or about 84 %. Transalta Centralia Generation/Mining was the facility reporting the highest total releases of 5.5 million pounds. The second highest releases were reported by Weyerhaeuser Co., Longview, 2.6 million pounds. The third highest reporting facility for total releases was Boise Cascade Paper Division in Wallula, 1.3 million pounds. Six of the top 10 ranked facilities are in the paper and allied products manufacturing category.

Table 1. Washington State TRI Releases Top 20 Reporting Facilities, 2003 (In Pounds)

Facility	City	County	Air	Land	Water	Total	Prior Yr Releases
Transalta Centralia Generation / Mining	Centralia	Lewis	212,006	5,270,742	562	5,483,309	4,642,905
Weyerhaeuser Company	Longview	Cowlitz	2,521,526	0	115,752	2,637,279	2,215,315
Boise Cascade Paper Division	Wallula	Walla Walla	1,134,627	59,251	91,865	1,285,743	1,091,781
Simpson Tacoma Kraft Co.	Tacoma	Pierce	900,033	0	120,348	1,020,381	999,752
Fort James Camas LLC	Camas	Clark	791,701	26,197	17,322	835,220	895,694
Kimberly-Clark Worldwide	Everett	Snohomish	406,307	0	325,535	731,843	697,736
Tesoro Refining & Marketing Co	Anacortes	Skagit	706,719	1,042	1,422	709,182	696,040
U.S. DOE Hanford Site	Richland	Benton	255	646,473	0	646,728	935,648
Port Townsend Paper Corp	Port Townsend	Jefferson	497,530	98,655	40,913	637,098	686,465
Agrium US Inc - KFO - Kennewick	Kennewick	Benton	457,559	32,060	21,010	510,629	732,280
Longview Fibre Company	Longview	Cowlitz	320,206	0	82,586	402,792	510,839
Intalco Aluminum Corporation	Ferndale	Whatcom	375,608	0	0	375,608	258,924
Lasco Bathware Inc.	Yelm	Thurston	335,000	0	0	335,000	354,400
Glacier Bay Catamarans	Monroe	Snohomish	331,010	0	0	331,010	198,010
Crown Beverage Packing	Olympia	Thurston	310,000	0	0	310,000	280,000
Puget Sound Refinery	Anacortes	Skagit	289,043	1,271	5,241	295,554	320,318
Ball Metal Beverage Container Corp.	Kent	King	247,201	0	0	247,201	250,161
Boeing Commercial Airplane Group - Everett	Everett	Snohomish	246,610	0	114	246,724	334,965
Rexam Beverage Can Company	Kent	King	193,731	0	0	193,731	287,225
Range Facility for Fort Lewis	Fort Lewis	Pierce	200	188,905	0	189,105	157,300

Individual Facilities Showing Changes in Total Releases in 2003 from 2002

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. Many TRI reporters in Washington participate in the state's Pollution Prevention Planning Requirements, (<http://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 increases or decreases. Economic factors like those affecting the aluminum industry may also impact releases. For example, over time, the amount of releases reported by the aluminum industry has decreased with the reduced production or closing of facilities in the state.

The U.S. Department of Energy, Hanford, showed the greatest decrease in total releases from 2002, 289,000 pounds. Their land releases of lead materials varies from year to year. Agrim US Inc. – KFO – Kennewick Area, reported a decrease of more than 221,000 pounds. Two other facilities reported decreases of more than 100,000 pounds: Conoco Phillips Ferndale Refinery and Longview Fibre Company. Six other facilities reported decreases between 50,000 and 100,000 pounds. Overall, 118 the state's 311 Form R reporting facilities reported decreases for 2003 when compared to 2002. This represents 38 % of the state's Form R reporters.

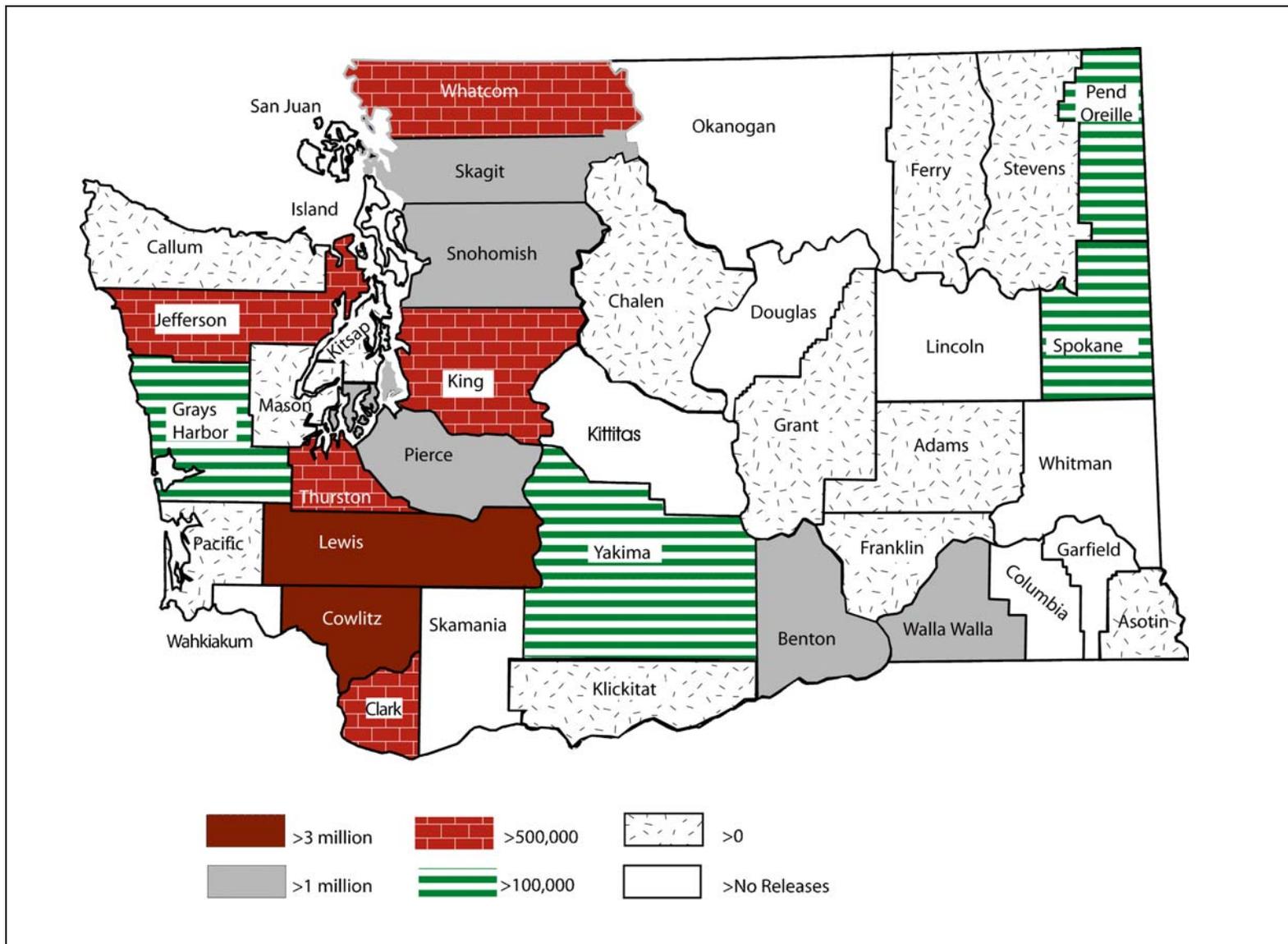
The facility showing the greatest increase in total pounds released from 2002 to 2003 was the Transalta Centralia Generation/Mining. They reported an increase of 840,000 pounds. The second highest increase in total pounds was from Weyerhaeuser Co., Longview (422,000 pounds). The third highest was Boise Cascade Paper Division in Wallula (194,000 pounds).

Two other companies also showed an increase in reported releases of more than 100,000 pounds for 2003 as compared to 2002 — Glacier Bay Catamarans in Monroe and Intalco Aluminum Corp in Ferndale. In all, 31% of the state's 311 Form R reporting facilities show increases in reported releases from 2002 to 2003.

TRI Releases by County

Of Washington's 39 counties, 31 had facilities that reported under TRI (see Appendix 6). Reporters in Lewis and Cowlitz County acknowledged releases that totaled over 3 million pounds (see Figure 10, page 19). Snohomish County facilities had between 1.5 and 2 million pounds of reported releases. Benton, Pierce, Skagit, and Walla Walla, each totaled between 1 and 1.5 million pounds released per county. The releases in these seven counties accounted for almost 75% of all TRI releases statewide.

Figure 10: Washington State TRI by County, 2003



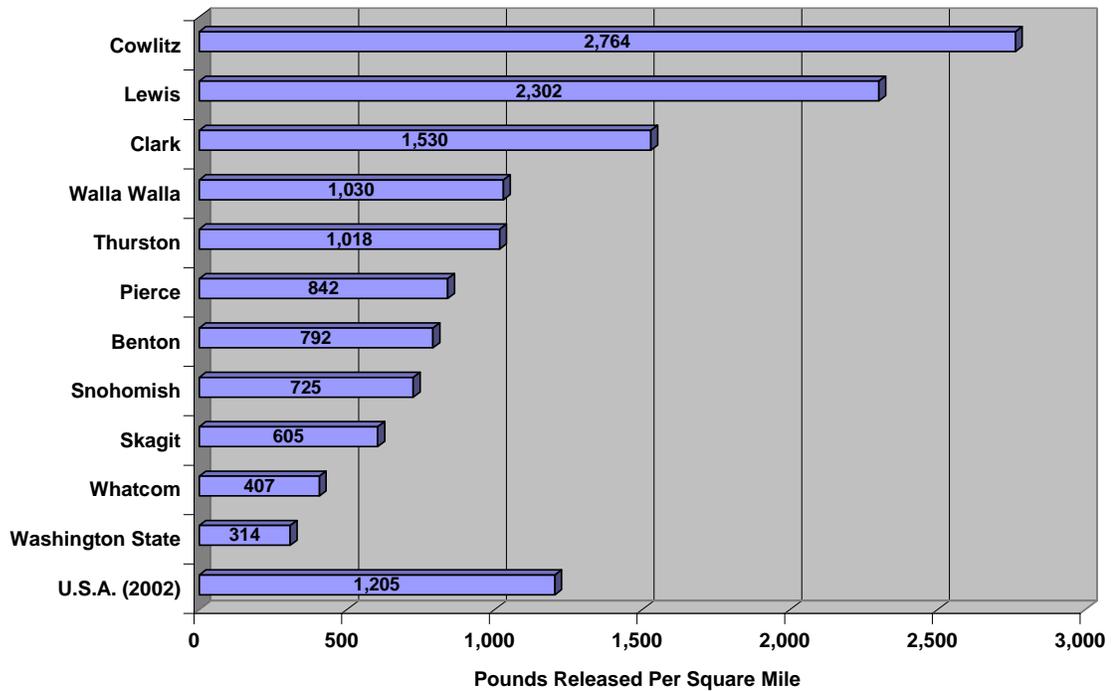
Lewis County reported the largest amount of chemicals released in the state in 2003. The 5.5 million pounds accounted for 26% of the state total. Nine facilities reported in Lewis County. All but 65,100 pounds of the releases were reported by Transalta Centralia Generation/Mining. Cowlitz County ranked second with 3.1 million pounds. Eleven facilities reported in Cowlitz County including Weyerhaeuser Company, Longview (2.6 million pounds) and Longview Fibre (403,000 pounds).

Counties Ranked By Pounds Per Square Mile

County rankings relating TRI releases per square mile appear in Figure 11. A county may rank higher on releases per area, but lower on the overall county rankings because of its relatively smaller size for total releases.

Cowlitz County ranked first with 2,764 pounds per square mile. Cowlitz County has a relatively small area and ranked second in total releases per county. These two factors give it a high number for pounds per area. Lewis County ranked second with 2,302 pounds per square mile. Clark County was third with 1,530 pounds per square mile. Pierce, Walla Walla and Thurston counties placed fourth, fifth and sixth respectively. Statewide releases averaged 314 pounds per square mile. Nationally, reported releases per square mile averaged 1,205 for the 2002 reporting year (the most recent year for which national data is available).

Figure 11: Washington TRI Top Counties, Pounds Per Square Mile, 2003

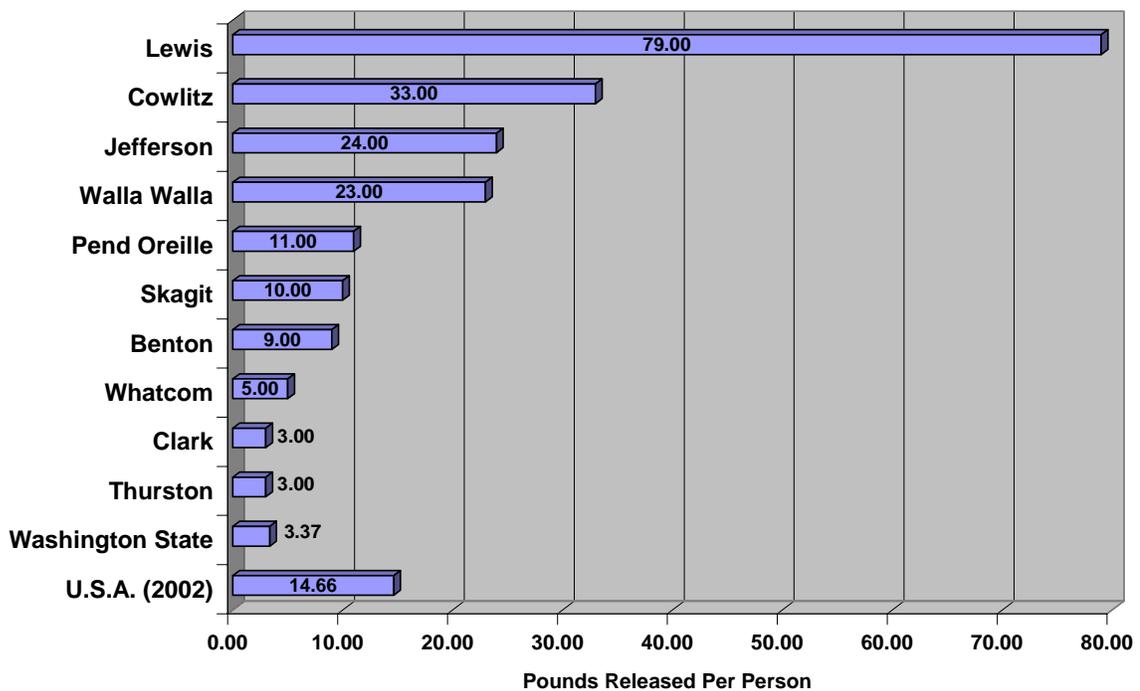


Counties Ranked By Pounds Per Person

Lewis County was first for TRI releases ranked by estimated 2003 population in pounds per person — 79 pounds per person (Figure 12). Cowlitz County reported 33 pounds of chemical releases per person. Jefferson County reported 24 pounds per person. Walla Walla, Pend Oreille, and Skagit counties ranked fourth through sixth with 23, 11 and 10 pounds per person reported respectively.

Statewide, releases averaged 3.4 pounds per person. Nationally, the average release of reported chemicals was 14.7 pounds per person for 2002. 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, 2003



Counties appearing high on this list often have fairly high release amounts and average populations (Lewis) or have 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 1.4 million pounds in 2003. This is a decrease of about 170,000 pounds from 2002 and 2.5 million pounds since 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 (<http://www.epa.gov/tri/chemical/oshacarc.htm>) totaled 47,000 pounds of the water releases, an increase of 7,000 pounds from 2002. Overall, state-wide water releases of carcinogens have decreased from 443,000 pounds reported for 1995.

The Columbia River was the water body with the greatest reported amounts of carcinogens released (29,700 pounds). It was also reported as receiving the highest amount of total water releases (509,000 pounds). The water body with the second highest reported releases was Everett Harbor. Figure 13 shows water releases by water body.

Figure 13: Washington State TRI Releases by Water Body, 2003 (In pounds)

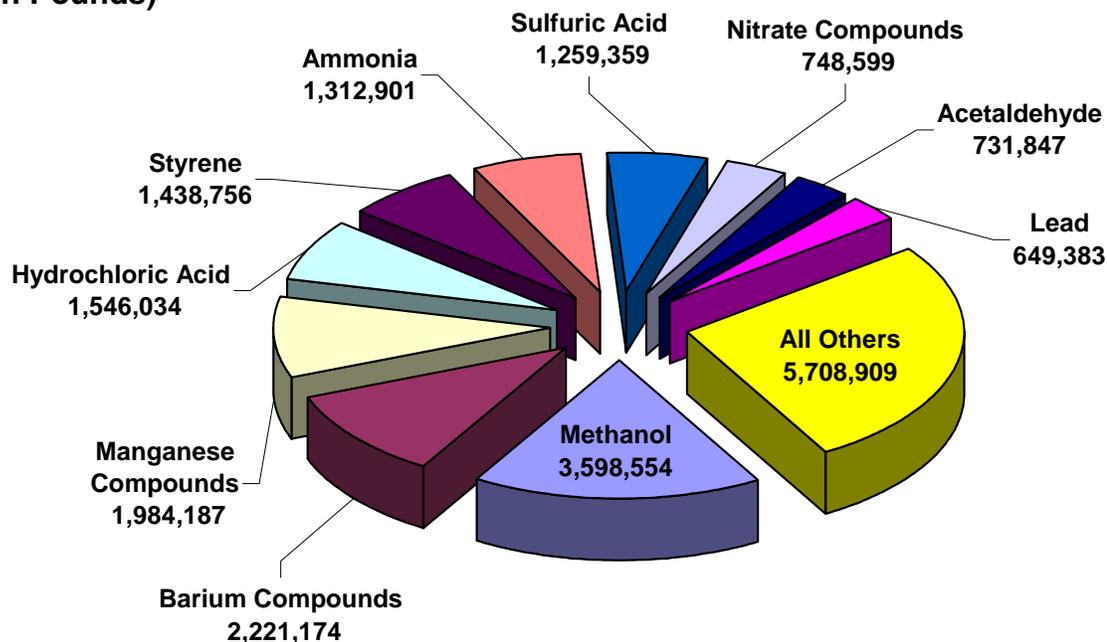
Water Body	Other Chemicals	Carcinogens
Columbia River	478,801	29,734
Everett Harbor	325,096	439
Pend Oreille River	132,700	12
Commencement Bay of Puget Sound	114,088	6,260
Grays Harbor	88,124	603
Strait of Georgia	88,234	16
Chehalis River	43,587	29
Port Townsend Bay	33,305	7,608
Strait of Juan De Fuca	26,733	460
Yakima River	7,701	
All Others	11,346	2,306

TRI Releases by Chemical

One hundred and five of the approximately 600 chemicals or chemical categories reported under TRI were reported by one or more facilities in Washington State for 2003 (see Appendix 3 and Appendix 6).

The top 10 chemicals cover almost 75% of all chemical releases reported in the state (Figure 14, page 23). In descending order, the top 4 chemicals reported were methanol, barium compounds, manganese compounds and hydrochloric acid.

**Figure 14: Washington State TRI Releases by Chemical, 2003
(In Pounds)**



Methanol

Methanol is a flammable solvent and was the most reported chemical for 2003. The primary reporters of methanol operate in the paper and allied products industry category. 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. In the environment, methanol contributes to the formation of smog.

Methanol releases in 2003 were 3.6 million pounds, about 500,000 pounds more than the amount that was reported for 2002. Thirty facilities reported releases of methanol in 2003. Weyerhaeuser Company, Longview, reported 1.3 million pounds, about 300,000 pounds more than in 2002. Fort James Camas LLC reported 636,000 pounds and two other facilities reported more than 200,000 pounds of releases: Simpson Tacoma Kraft in Tacoma and Boise Cascade, Wallula.

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 2003. A total of 2.2 million pounds was reported released to the environment by the six facilities reporting this chemical. Of this amount, all but 17,600 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, but too much manganese causes neurological and other toxic effects. Manganese compounds were the third most reported chemical in 2003. A total of 1.8 million pounds were reported released to the environment by 16 facilities reporting this chemical. This represents an increase of about 20,000 pounds from 2002. Of this amount, all but 380,000 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 2003. 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 so that 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.

Sixteen facilities reported releases of 1.5 million pounds of hydrochloric acid for 2003, about the same amount that was reported for 2002. The paper and allied products industry category accounted for the greatest releases: Boise Cascade Paper Division, Wallula (558,000 pounds); Kimberly-Clark Corporation (367,000 pounds); Port Townsend Paper Company (260,000 pounds); and Simpson Tacoma Kraft Company (183,000 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 4.1 million pounds in Washington State in 2003, an increase from 4.0 million pounds in 2002. Styrene was the carcinogen with the highest amount of releases, 1.4 million pounds. Acetaldehyde was second (732,000 pounds) and lead was third (649,000 pounds).

U.S. Department of Energy, Hanford reported 646,000 pounds of releases of lead to an on-site landfill. Lasco Bathware of Yelm and Glacier Bay Catamarans of Monroe each reported over 300,000 pounds of styrene released to the air. Lead and lead compounds are classified as carcinogens. Because the threshold of use for reporting has been reduced to 100 pounds, the number of facilities and amount of releases has increased. This has affected the general downward trend for the amount of carcinogens release reported. 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).

Washington TRI PBT Reporting

In December 2000, Ecology adopted a strategy to reduce risks to human health and the environment from exposures to persistent, bioaccumulative, toxic chemicals (PBT) 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.

For the 2000 reporting year, 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 because:

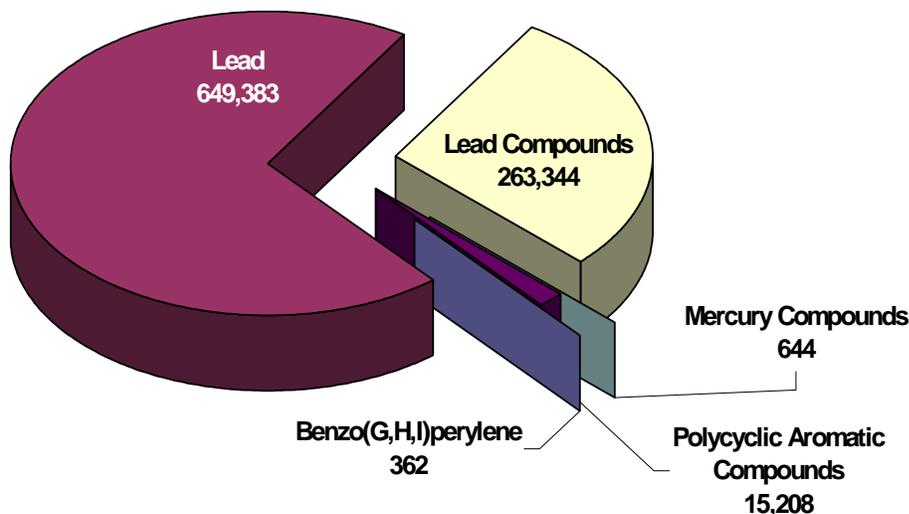
- ❖ They **persist** in the environment for a long time without breaking down;
- ❖ They build up in the tissues of humans, fish and animals (“**bioaccumulative**”);
- ❖ They have **toxic** effects (cancer and other health problems) on living organisms.

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). These changes started with the 2000 reporting year for all chemicals except lead and lead compounds which started with the 2001 reporting year. As a result of these lowered reporting thresholds, there has been an increase in the number of facilities reporting these chemicals. Total PBT releases for 2003 were 928,941 pounds.

Figure 15 shows the most reported, by release amount, PBT chemicals for 2003. 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 State TRI PBT Releases, 2003 (In pounds)
[Except Dioxin Category]**



Lead and Lead Compounds

Since the 2001 reporting year, lead and lead compounds have had a PBT reporting threshold 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 because they are smaller and still developing.

Lead or lead compounds were reported by 147 facilities in Washington State for 2003 (912,727 pounds). For many companies, lead or lead compounds were the only TRI chemical reported. U.S. Department of Energy, Hanford reported land releases of 646,459 pounds (71%).

More than 10,000 pounds of lead or lead compound releases were reported by three other facilities: Transalta Centralia Generation/Mining (155,940 pounds), the Range Facility for Fort Lewis (83,200 pounds), and the Yakima Training Center Range (15,800 pounds). Much 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 PACs are classified as known or suspected carcinogens.

For reporting year 2003, 15,208 pounds of polycyclic aromatic compounds were reported released to the air, land and water. Thirty-eight companies reported these chemicals. Releases have declined over the last 3 years from 17,363 pounds in 2002, 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 Caraustar Mill Group, Tacoma.

EPA has set the thresholds for benzo(g,h,i)perylene separately from the other PAC compounds because it is considered a highly persistent and bioaccumulative toxic chemical. 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-five companies reported releases of benzo(g,h,i)perylene (total 362 pounds). The Alcoa Wenatchee Works, in Malaga reported releases of 103 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. When released into the environment, mercury can recycle through the air indefinitely or can bind with bacteria in water to create such compounds as methylmercury. These 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. 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 <http://www.ecy.wa.gov/programs/eap/pbt/pbtfaq.html>.

Mercury and mercury compounds are reportable when 10 or more pounds are manufactured, processed or used during the calendar year. Mercury and mercury compounds reported releases have decreased by 66% since 2000, the year reporting thresholds were lowered. Total mercury and mercury compounds released were 2,183 pounds for 2000, and 851 pounds for 2001. They decreased to 745 pounds for 2002 and 644 pounds for 2003.

For the reporting year 2003, one company reported for mercury and nineteen reported for mercury compounds. This included 334 pounds (51%) reported by Transalta Centralia Generation/Mining of which 113 pounds were released to air during the burning of coal for electric power generation. The remaining 221 pounds were returned to the land during mining operations. Other facilities reporting more than ten pounds of mercury compounds released were: Tesoro Refining Company in Anacortes, LaFarge North America in Seattle, Puget Sound Refinery in Anacortes, Ash Grove Cement in Seattle, Weyerhaeuser Longview in Longview, Simpson Tacoma Kraft in Tacoma and BP Cherry Point Refinery in Blaine.

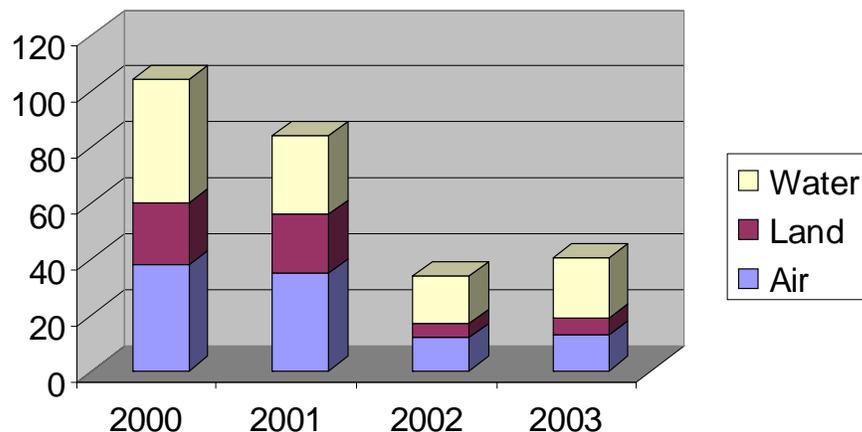
Dioxin and Dioxin-like Compounds

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 and 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 of the 17 compounds, 2,3,7,8-TCDD (2,3,7,8-tetrachlorodibenzodioxin). The toxicity of any particular dioxin-like compounds category mixture may be overestimated if the entire amount is treated as TCDD.

The threshold for reporting dioxin and dioxin-like compounds is 0.1 gram 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 43.2 grams (compared to 38.3 for 2002 and 86.2 grams reported in 2001) were reported. Figure 16 below, shows the trend for reporting dioxin between 2000 and 2003. The increase for 2003 reflects the improving economy and greater industrial activity.

Figure 16: TRI Dioxin Releases, 2000 - 2003 (In grams)



TRI Off-site Transfers, 2003

Transfers reported under TRI include chemicals transferred to publicly owned treatment works (POTWs, commonly known 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 (see Figure 17, below). Transfers are not included in “on-site” release totals. Total transfers for 2003 were 19.6 million pounds. Table 2 on page 30, shows the top twenty facilities reporting off-site transfers for 2003.

Figure 17: Washington State TRI Transfers by Type, 2003 (In pounds)

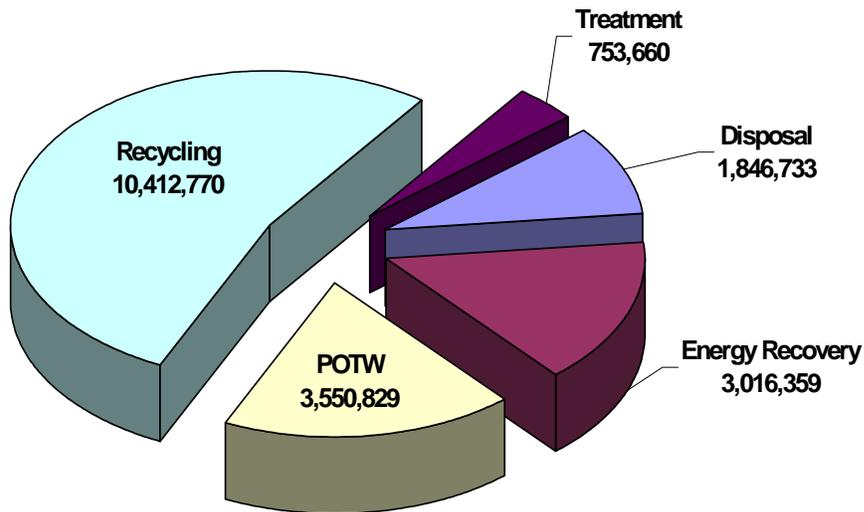


Table 2: Washington State TRI Transfers Top 20 Reporting Facilities, 2003 (In pounds)

FACILITY	CITY	COUNTY	DISPOSAL	ENERGY RECOVERY	POTW	RECYCLING	TREATMENT	GRAND TOTAL
Nucor Steel Seattle Inc.	Seattle	King				5,716,257		5,716,257
Emerald Services Inc.	Tacoma	Pierce	479	2,762,521		138,436		2,901,437
Framatome ANP, Inc.	Richland	Benton	3,500		1,079,739			1,083,239
SEH-America Inc.	Vancouver	Clark			950,000		6,770	956,770
Darigold - Sunnyside	Sunnyside	Yakima			850,993			850,993
Jorgensen Forge Corporation	Tukwila	King	481,869					481,869
BCAG - Auburn	Auburn	King	38,546	13,053	150,221	254,733	904	457,457
Toray Composites (America)	Tacoma	Pierce		77,000		308,000		385,000
BCAG - Frederickson	Puyallup	Pierce	773	2,000	9	220,003	91,035	313,820
Ace Galvanizing Inc.	Seattle	King	31			307,643		307,674
Boeing Commercial Airplane Group	Everett	Snohomish	43,778	19,121	40,028	171,873	7,277	282,077
Nelson Irrigation Corp.	Walla Walla	Walla Walla	340			250,173		250,513
Honeywell Electronic Materials Inc	Spokane	Spokane		2,500	40,167	201,509		244,176
Tyson Fresh Meats, Pasco WA	Walla Walla	Walla Walla	228,200					228,200
Safety-Kleen Systems (118301)	Spokane	Spokane				215,351		215,351
TTM Technologies Inc. Redmond	Redmond	King			11,744	191,359		203,103
Wafertech LLC	Camas	Clark	305	13,940	63,214	111,505	3,982	192,946
Burlington Environmental Inc	Kent	King	24,378	13	1	160,567	3,204	188,162
Solar Grade Silicon	Moses Lake	Grant		1	181,803			181,804
U.S. Navy, PSNS & IMF - Bremerton Site & Naval Base Kitsap	Bremerton	Kitsap	106,081		91	40,965	28,743	175,880

Transfers to Publicly Owned Treatment Works (POTWs)

In 2003, transfers to publicly owned treatment works (POTWs or sewage treatment plants) totaled 3.5 million pounds, compared to 3.8 million pounds reported in 2002. 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 million pounds of nitrate compounds transferred to the POTW. SEH America in Vancouver reported POTW transfers of 950,000 pounds of nitrate compounds. Three other companies reported POTW transfers of over 100,000 pounds of nitrate compounds: Darigold Inc., in Sunnyside (842,000 pounds); Boeing Commercial Airplane Group Auburn (150,000 pounds); and Solar Grade Silicon, in Moses Lake (182,000 pounds). These five chemical reports from these companies account for 90% of POTW transfers.

Chemicals sent to a sanitary sewer may be treated by a variety of methods. Those chemicals not removed by the treatment methods are typically discharged into surface waters and quite often settle 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 16.3 million pounds in 2003 for all reporting facilities. This represents an increase of 1.7 million pounds from 2002. Facilities reporting the highest amount being transferred off-site were: Nucor Steel Corp in Seattle sent 5.7 million pounds to off-site recycling; Emerald Services in Tacoma sent 2.8 million pounds to off-site energy recovery; and Jorgensen Forge Corp. in Tukwila sent 482,000 pounds to off-site disposal.

Some materials that are reported as transferred off-site under TRI are classified as hazardous waste. Others, like metals being recycled, are not classified as hazardous waste. For information on transfers of hazardous waste in Washington see the "Hazardous Waste Annual Report Summary for 2001 Reported Data" at <http://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 related to a reportable chemical that is 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 32). Facilities must report for the current and prior year and provide projected totals for the next two years. Estimates for 2004 and 2005

indicate that the total waste processed or disposed by those facilities required to report will increase. Total waste was reported to have increased by 2.4 million pounds from 2002 to 2003. Categories that showed significant increases were total releases/disposal, on-site recycling, and off-site recycling. Categories showing decreases were on-site treatment and on-site energy recovery.

Table 3: TRI Pollution Prevention Act Reporting (In pounds)

	2002	2003	2004 (projected)	2005 (projected)
On-site Releases	18,073,360	19,893,874	19,893,874	19,980,890
Off-site Releases	959,188	1,261,601	1,183,181	1,193,734
On-site Disposal*	138,109	821,614	1,490,439	1,478,369
Off-site Disposal*	1,454,813	1,083,248	1,513,588	1,540,164
Total Releases/Disposal	20,627,471	23,062,341	24,081,081	24,193,157
On-site Energy Recovery	15,296,578	14,561,182	15,450,931	15,500,460
Off-site Energy Recovery	2,633,127	3,075,825	3,614,743	4,305,255
On-site Recycling	15,296,578	18,896,302	19,948,463	21,460,021
Off-site Recycling	8,879,017	10,858,661	10,600,345	10,537,209
On-site Treatment	80,829,422	75,420,157	75,774,389	76,091,806
Off-site Treatment	4,083,961	3,835,996	3,539,533	3,277,616
Total Waste	147,646,154	149,710,463	153,009,484	155,365,524
One Time Releases		233,068		

*On-site and off-site disposal includes underground injection and RCRA Subtitle D landfills.

One-time releases, such as remediation and spills were 233,068 pounds in 2003. This includes 180,010 pounds of zinc compounds reported by Chemtrade Performance Chemicals LLC, Kalama.

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 or values adjusted for changes in reporting requirements, 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 increased in 2003 by 500,000 pounds (2.5%) since 2002. Figure 18 below, shows the trends in TRI releases where all chemicals reported are included. The general trend over time has been for releases to decline. Releases reported by manufacturing facilities decreased by about 150,000 pounds from 2002. Since 1995, releases of all chemicals by manufacturing facilities (not adjusted for reporting changes) have decreased by 14 million pounds (50%).

For the 1998 reporting year, several new industry sectors were added to TRI reporting. These include electric utilities burning coal or oil for commercial use, bulk storage terminals and certain mines (see Appendix 1). Reported releases in the industry sectors that first reported under TRI in 1998 reached their highest point in 2003, 5.4 million pounds. Most of the increase was due to Transalta Centralia Generation/Mining, where production increased due to the improved economy.

Figure 18: Washington State TRI Releases, 1995-2003

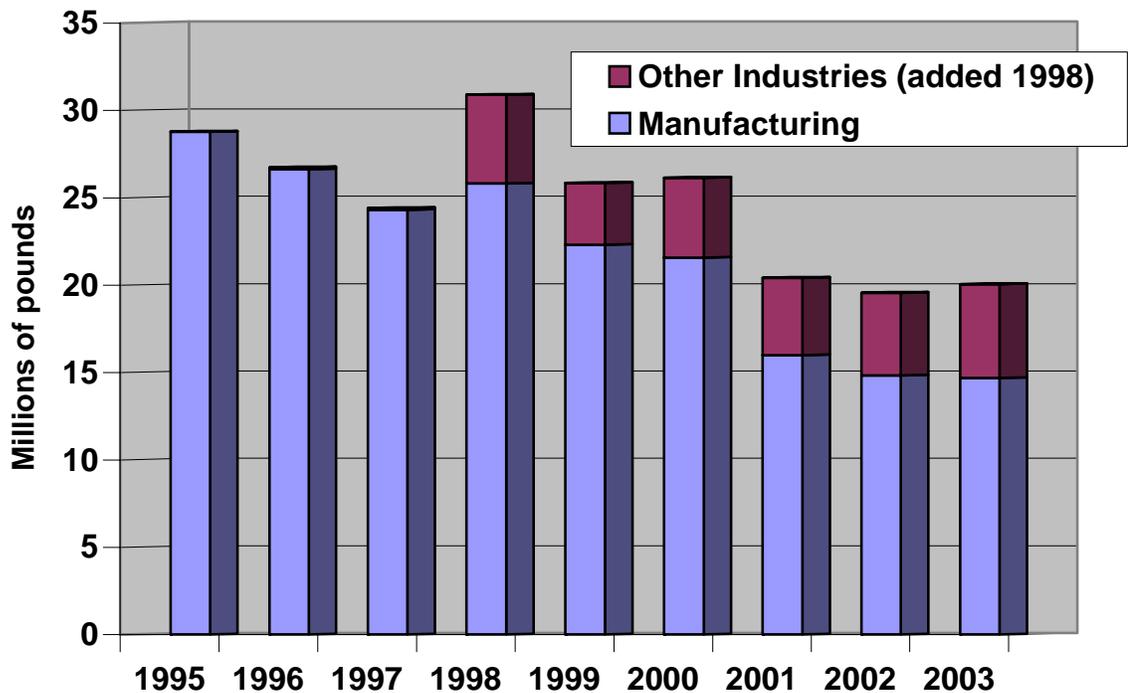
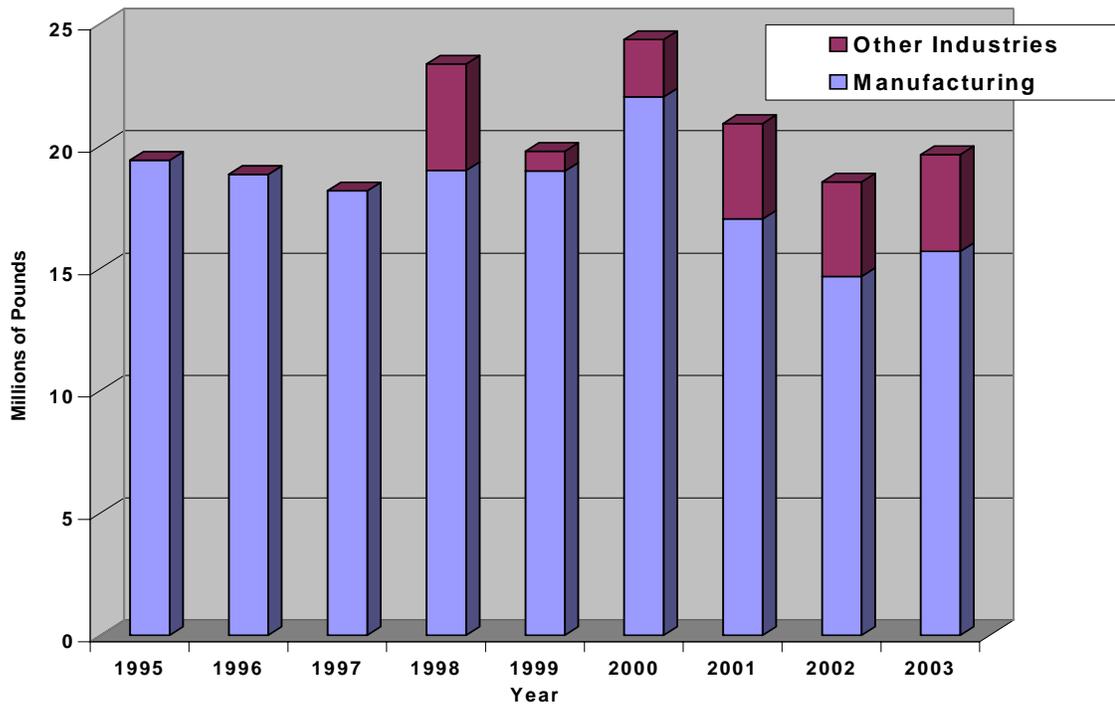


Figure 19 on page 34, shows changes in reporting for off-site transfers since 1995. The Pollution Prevention Act of 1990 significantly expanded reporting for off-site transfers for recycling, energy recovery and treatment. The addition of reporting of nitrate compounds has resulted in an increase in reported transfers particularly to POTWs. The addition of the new industries in 1998 resulted in an increase in reported off-site transfers. The 2003 totals show that off-site transfers increased 1.1 million pounds since 2002. Off-site transfers are 4.7 million pounds less than the reported amount for 2000. Nucor Steel in Seattle had an increase of 1 million pounds for recycling of zinc and lead compounds in 2003.

Figure 19: Washington State TRI Transfers, 1995-2003



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 State Emergency Response Commission (SERC), local emergency planning committees (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 their 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 interest.

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.” (http://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 bears 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 that 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.

EPA's Office of Pollution Prevention and Toxics' developed the Risk-Screen Environmental Indicators (RSEI) model (the most current public version RSEI 2.1.2 released Sept. 2004) which covers TRI reporting years 1988 to 2002. The model uses releases reported under 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: <http://www.epa.gov/opptintr/rsei/index.html>. While it cannot provide a detailed quantitative risk assessment, the RSEI model can provide relative hazard and risk-related rankings for chemicals, industries, facilities and communities.

In the example in Table 4, comparisons are made by chemical for the State of Washington, based on reporting year 2002 TRI data, the most current year available in the model. Nitrate compounds, zinc compounds, methanol and manganese rank at the top of the list for reported release amounts, based on air and water releases only. The ranking changes when the TRI pounds are multiplied by their respective toxicity weight. Manganese compounds are ranked highest in relative hazard. The rankings change again when the relative hazard scores are multiplied by the estimate of the exposed population to create a relative risk based score. When using RSEI, three of the top four chemicals by release amount drop off the top chemicals list completely and manganese compounds moves to number 10. Sulfuric acid becomes the highest rank chemical by risk-related criteria.

Table 4. Washington State TRI Relative Risk Ranking by Chemical, Top 10 Chemicals, 2002 Reporting Year

TRI Pounds	Hazard Score	Risk-related score
Nitrate compounds	Manganese compounds	Sulfuric acid
Zinc compounds	Chromium compounds	Chromium
Methanol	Manganese	Chlorine
Manganese compounds	Cobalt compounds	Diisocyanates
Barium compounds	Chromium	Chromium compounds
Ammonia	Lead	Polychlorinated biphenyls (PCBs)
Hydrochloric acid	Lead compounds	Manganese
Copper	Nickel compounds	Mercury compounds
Methyl ethyl ketone	Nickel	Lead compounds
Sulfuric acid	Sulfuric acid	Manganese compounds

It should also be noted that:

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 the RESI website: <http://www.epa.gov/oppt/rsei>. All of these caveats should be considered when using the RSEI model.

RSEI provides users of TRI data an additional tool to use in understanding the impact of chemicals in a community. Some of the ways RSEI has been used include:

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

Environmental Justice

Research has shown that, in general, low-income populations and communities of color are exposed to greater quantities and concentrations of toxic chemicals through pollution. This has been commonly recognized as an environmental justice issue. One reason (of many) for this disproportionate impact is the close proximity of low-income residents to polluting facilities and contaminated sites. In particular, in 1995, the Department of Ecology and the Washington State Department of Health, under the Legislature's direction conducted a "Study on Environmental Equity in Washington State." This study can be read or downloaded from the Internet at: <http://www.ecy.wa.gov/biblio/95413.html>. The Toxic Release Inventory data was crucial in the development of this study.

In a related effort, Washington's State Board of Health came to a similar finding in its "Final Report - State Board of Health Priority: Environmental Justice," June 2001, which concludes that the public's access to health care within communities of color and/or low income is disproportionately lower. This report can be viewed at: <http://www.doh.wa.gov/sboh/Priorities/EJustice/default.htm>.

Combined, the circumstances addressed in these two referenced reports highlight the need for the state to better understand and address how disproportionate pollution is adversely affecting those with the fewest resources to adequate health care. This is a good example of how community right-to-know information, such as the Toxic Release Inventory, can help educate Washington's citizens to tackle environmental justice challenges.

The combined or cumulative impact of local pollution, regardless of source, is of understandable and particular concern to those who live or work closest to it. Residents in these areas are 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 prefer to stay and choose to work with local businesses 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.

Ecology recognizes that environmental justice and 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." At Ecology this means we are 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 (including this report) is one of many ways to support that. 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 EPA, 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: <http://www.epa.gov/oswer/ej/index.html>. Another key resource for EPA and state environmental agencies is the National Environmental Justice Advisory Council at: <http://www.epa.gov/compliance/environmentaljustice/nejac/index.html>.
4. Translate more documents where appropriate (into Spanish, Korean, Vietnamese, Chinese and Russian – other languages are also possible) 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 or email at jrid461@ecy.wa.gov.

Beyond Waste Project

The Beyond Waste Project was created on behalf 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 waste as inefficient use of resources and believes that waste can be eliminated. Moving beyond waste will take many years and this innovative planning process will offer new ways of thinking about wastes and toxic substances. The goals of implementing the two program plans include:

- Influence significant reduction of wastes and toxic substances used;
- Shift to a system where resources are used more efficiently, and excess materials are reused as resources.

- Support efforts in Washington state to make sure businesses' needs are met, while protecting the environment; and
- 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 <http://www.ecy.wa.gov/beyondwaste>.

New and Pending EPCRA Developments

Electronic –Facility Data Releases (e-fdr)

In response to requests to make TRI data available sooner, EPA established the e-fdr query tool that allows the retrieval of data from the TRI data base in Envirofacts for the 2003 reporting year in November 2004. This tool allows you to access facility and chemical information one form at a time. Previously, no TRI data was available from EPA until the annual public data release.

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 C 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.

TRI Reporting Forms Modification Rule

EPA initiated a stakeholder dialogue process in September 2002, to identify improvements to the Toxics Release Inventory (TRI) and 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 issued the first of two proposed rules. The first proposed rule focused on eliminating certain information from the reports, simplifying other reporting data and reducing duplication data collection efforts. The goal is to reduce the cost of compiling and submitting TRI reports while maintaining the quality and utility of the data. *The TRI Reporting Forms modification Proposed Rule – Federal Register Notice (1674 Federal Register/Vol. 70, No. 6/Monday, January 10, 2005).*

EPA's comment period for the stakeholder process ended March 11, 2005.

The second proposed rule (August 2005) will identify options for further reducing TRI reporting requirements. Some possible options include:

- 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.

Appendix 1

Reporting Requirements and Glossary of Terms

Releases to Air

Releases to air are reported as either non-point (“fugitive”) or point (“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 manufactures 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.

Table 6. PBT Reporting Thresholds

Chemical Name or Category	Reporting Threshold (2000 reporting year)
Aldrin	100 lbs.
Benzo(g,h,l)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. A state’s Governor may request that 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 physically 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, 2003

LEPC	Number of Reporting Facilities	Number of Chemicals Reported	Number of EHS Reporting Facilities	Number of EHS Chemicals Reported
Adams	42	206	26	77
Asotin	11	25	4	4
Benton	74	384	51	98
Chelan	84	412	56	136
Clallam	51	142	20	23
Clark	136	960	60	135
Columbia	16	53	10	16
Cowlitz	68	774	42	106
Douglas	27	53	16	17
Ferry	7	28	1	2
Franklin	74	708	41	157
Garfield	13	31	5	8
Grant	125	924	60	268
Grays Harbor	74	215	24	32
Island	29	96	8	10
Jefferson	18	68	7	8
King	386	1015	191	235
City Of Auburn	22	118	10	13
City Of Kent	95	856	51	182
City of Seattle	204	885	102	153
Skykomish	1	1	0	0
Total King County	707	2875	354	583
Kitsap	63	186	33	41
Kittitas	35	73	19	22
Klickitat	12	73	8	11
Lewis	79	320	35	58
Lincoln	35	110	23	37
Mason	24	62	8	9
Okanogan	57	227	33	77
Pacific	20	58	10	13
Pend Oreille	10	52	4	6
Pierce	221	822	113	142
Fort Lewis	3	29	1	4
City Of Puyallup	6	15	4	4
Total Pierce	230	866	118	150
San Juan	13	21	4	4
Skagit	98	541	41	85
Skamania	6	36	1	1
Snohomish	256	740	92	141
Snohomish (SW)	26	82	9	11
Total Snohomish	282	822	101	152
Spokane	210	885	94	153
Stevens	22	77	11	14
Thurston	74	217	25	31
Wahkiakum	4	11	3	4
Walla Walla	58	277	33	74
Whatcom	92	544	47	80
Whitman	60	306	42	104
City of Pullman	10	39	5	10
Total Whitman	69	345	47	114
Yakima	210	1748	147	387

Appendix 3

Washington State TRI by Chemical, 2003

CHEMICAL	CARCINOGEN	PBT	No. of Reports	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
1,1-dichloro-1-fluoroethane	No	No	1	24,749	0	0	24,749	30,988	0	0
1,2,4-trimethylbenzene	No	No	16	6,892	131	0	7,023	9,286	48,981	23,156
1,2-dichloroethane	Yes	No	1	62	0	0	62	48	41,697	35,545
1,3-butadiene	Yes	No	4	1,360	0	0	1,360	537	0	0
1,3-dichloropropylene	No	No	1	151	0	0	151	157	133	0
acetaldehyde	Yes	No	9	700,802	3,800	27,245	731,847	660,345	14	17
acetonitrile	Yes	No	2	240	0	0	240	362	78,485	55,720
acrylamide	Yes	No	1	32	0	0	32	29	0	142
aluminum (fume or dust)	No	No	3	533	0	0	533	630	93,715	73,800
aluminum oxide (fibrous forms)	No	No	1	5	0	0	5	0	0	0
ammonia	No	No	30	1,187,499	4,110	121,292	1,312,901	1,581,145	127,809	187,673
anthracene	No	No	2	0	0	0	0	0	19	6
antimony	No	No	1	21	0	0	21	22	129	183
antimony compounds	No	No	1	0	0	0	0	0	23,773	19,086
arsenic compounds	Yes	No	2	1	26,150	14	26,166	19,314	572	456
barium compounds	No	No	6	1,385	2,215,239	4,550	2,221,174	1,924,093	162,163	230,439
benzene	Yes	No	20	66,885	113	256	67,254	50,796	23,908	12,645
benzo(g,h,i)perylene	No	Yes	25	337	11	15	362	362	1,171	2,932
benzoyl peroxide	No	No	1	0	5	0	5	5	0	0
biphenyl	No	No	3	152	0	0	152	182	6,843	6,771
carbon disulfide	No	No	4	243	0	3	246	318	0	0
carbonyl sulfide	No	No	4	286,263	0	0	286,263	188,219	0	0
catechol	Yes	No	6	176	1	196	373	459	15,695	28,712
certain glycol ethers	No	No	11	389,480	0	0	389,480	0	69,653	0
chlorine	No	No	11	10,016	5	21,998	32,019	57,889	0	0
chlorine dioxide	No	No	6	8,586	0	0	8,586	11,161	0	0
chlorodifluoromethane	No	No	2	19,998	0	0	19,998	4,236	1	0
chloroform	Yes	No	2	38,355	0	5,782	44,137	36,863	1,928	836
chloropicrin	No	No	1	6	0	0	6	5	28	0
chromium	Yes	No	17	844	0	62	906	1,312	174,248	151,227

CHEMICAL	CARCINOGEN	PBT	No. of Reports	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
chromium compounds	Yes	No	9	705	264,216	855	265,776	215,606	148,823	142,185
cobalt compounds	Yes	No	2	61	191,895	17	191,972	161,706	12,667	7,837
copper	No	No	26	970	158,655	609	160,234	152,039	1,259,573	1,184,101
copper compounds	No	No	9	5,126	223,430	538	229,095	168,689	399,673	334,175
creosote	Yes	No	2	971	0	45	1,016	1,128	727	367
cresol (mixed isomers)	No	No	6	3,951	22	241	4,214	24,886	0	0
cumene	No	No	4	1,597	28	0	1,625	1,826	2,702	1,305
cyanide compounds	No	No	3	892	281	110	1,283	20,620	0	0
cyclohexane	No	No	8	28,253	110	0	28,363	30,742	32,493	21,864
decabromodiphenyl oxide	No	No	1	0	0	0	0	0	84,902	68,164
di(2-ethylhexyl) phthalate	Yes	No	2	140	0	0	140	236	378	366
dichloromethane	Yes	No	5	56,385	0	1	56,386	51,260	50,436	34,510
diethanolamine	No	No	6	29,311	0	6,830	36,141	27,906	770	11,253
diisocyanates	No	No	8	267	8	0	275	864	2,876	2,444
dimethyl phthalate	No	No	1	139	0	0	139	0	0	0
dimethylamine	No	No	1	6	0	7	13	14	0	0
diuron	No	No	1	0	0	0	0	0	0	0
ethylbenzene	Yes	No	20	26,203	82	6	26,291	19,233	162,221	124,414
ethylene	No	No	6	14,377	0	0	14,377	16,240	0	0
ethylene glycol	No	No	13	7,802	42	6,241	14,085	12,451	701,679	1,047,444
formaldehyde	Yes	No	9	197,418	274	7,927	205,619	222,743	2,315	10,817
formic acid	No	No	7	289	0	5,448	5,737	6,104	0	0
hexachlorobenzene	No	Yes	2	0	0	0	0	0	0	0
hydrochloric acid	No	No	16	1,546,034	0	0	1,546,034	1,622,727	2,586	1,178
hydrogen cyanide	No	No	1	440	0	110	550	16,120	0	0
hydrogen fluoride	No	No	16	168,619	0	0	168,619	180,150	9,161	88,354
isopropyl alcohol (manufacturing)	No	No	1	0	0	0	0	0	0	0
lead	Yes	Yes	75	832	647,407	1,144	649,383	939,229	137,259	96,470
lead compounds	Yes	Yes	73	4,009	257,912	1,424	263,344	257,385	800,319	654,278
lithium carbonate	No	No	1	1,300	0	0	1,300	1,051	0	0
manganese	No	No	21	5,520	191	466	6,176	3,022	628,353	490,342
manganese compounds	No	No	16	5,106	1,760,817	218,264	1,984,187	1,794,048	674,664	735,863
mercury	No	Yes	1	0	0	0	0	4	15	101
mercury compounds	No	Yes	19	322	313	9	644	746	20,330	9,747
metham sodium	No	No	3	9,582	0	40	9,622	10,254	3,429	14,467
methanol	No	No	30	3,363,771	11,785	222,998	3,598,554	3,093,249	227,420	200,084
methyl ethyl ketone	No	No	21	497,980	0	10,559	508,539	588,326	488,086	607,542

CHEMICAL	CARCINOGEN	PBT	No. of Reports	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
methyl isobutyl ketone	No	No	8	17,554	0	0	17,554	36,209	280,447	245,752
methyl methacrylate	No	No	4	26,470	0	0	26,470	13,373	4,773	3,929
methyl tert-butyl ether	No	No	3	970	0	0	970	374	24,739	20,974
molybdenum trioxide	No	No	6	254	0	0	254	250	113,160	1,600
n,n-dimethylformamide	No	No	2	117	0	0	117	79	31,438	26,043
naphthalene	No	No	14	4,651	58	0	4,709	5,537	17,201	11,920
n-butyl alcohol	No	No	9	419,226	0	0	419,226	410,358	155,991	132,333
n-hexane	No	No	16	72,623	133	0	72,756	72,647	33,348	23,111
nickel	Yes	No	14	648	0	689	1,337	1,482	104,841	81,931
nickel compounds	Yes	No	6	866	158,507	1,505	160,878	137,877	31,439	25,761
nitrate compounds	No	No	36	1,452	32,070	715,077	748,599	1,090,743	465,133	4,287,467
nitric acid	No	No	25	3,139	35	15	3,189	2,969	147,929	244,557
nitroglycerin	No	No	1	0	0	0	0	0	0	0
n-methyl-2-pyrrolidone	No	No	4	10,812	0	0	10,812	4,589	295,590	247,852
pentachlorophenol	Yes	No	1	0	0	0	0		250	
phenanthrene	No	No	3	2	0	0	2	3	156	2
phenol	No	No	18	134,938	274	981	136,193	119,058	12,431	7,686
polychlorinated biphenyls	Yes	Yes	4	0	0	0	0	28	9,039	0
polycyclic aromatic compounds	Yes	Yes	38	14,000	1,011	197	15,208	17,366	11,200	28,568
propylene	No	No	5	24,750	0	0	24,750	27,393	0	0
pyridine	No	No	1	113	0	0	113	88	32,431	26,874
sec-butyl alcohol	No	No	2	7,750	0	0	7,750	17,700	16,320	19,936
silver	No	No	1	0	0	0	0	0	164,567	186,370
sodium dimethyldithiocarbamate	No	No	1	219	0	4	223	242	151	293
sodium nitrite	No	No	1	0	0	0	0		17	
styrene	Yes	No	30	1,438,654	0	102	1,438,756	1,184,422	36,984	28,260
sulfuric acid	No	No	11	1,259,359	0	0	1,259,359	1,117,739	0	0
tert-butyl alcohol	No	No	1	0	0	0	0	51	25,779	21,361
tetrabromobisphenol a	No	Yes	3	0	0	0	0	717	111	233
tetrachloroethylene	Yes	No	4	6,862	0	0	6,862	23,494	430	28,623
toluene	No	No	29	266,616	305	8	266,929	287,908	994,442	773,255
toluene diisocyanate (mixed)	Yes	No	1	432	0	0	432	369	212	130
trans-1,3-dichloropropene	No	No	1	73	0	0	73	75	64	0
trichloroethylene	Yes	No	5	96,904	0	0	96,904	126,938	8,641	23,096
trichlorofluoromethane	No	No	1	1,035	0	0	1,035		41,095	
vanadium compounds	No	No	1	686	355,739	69	356,494	310,885	10,034	14,128
xylene (mixed isomers)	No	No	29	191,924	424	7	192,355	230,787	809,597	634,461
zinc compounds	No	No	21	18,560	92,443	13,225	124,229	120,295	5,492,816	4,626,690
Grand Total				12,745,107	6,408,03	1,397,182	20,550,319		16,097,619	

Appendix 4

Washington State Certification Form Reporters, 2003

Facility	City	County	Chemical
Achilles USA	Everett	Snohomish	Antimony, Barium, Cadmium and Zinc compounds
ADM Animal Health & Nutrition	Spokane	Spokane	Copper, Manganese and Selenium compounds
ADM Milling Company	Cheney	Spokane	Chlorine
Allweather Wood Treaters	Washougal	Clark	Arsenic, Chromium ¹ , and 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 ²
Brooks Manufacturing Co.	Bellingham	Whatcom	Pentachlorophenol
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.	Ferndale	Whatcom	Manganese compounds Zinc compounds
Cargill, Inc.	Burlington	Skagit	Manganese compounds Zinc compounds
Cascade Columbia Distribution	Seattle	King	Ethylene Glycol Methanol Nitric Acid Trichloroethylene
Cascade Pole & Lumber Co.	Tacoma	Pierce	Arsenic compounds Chromium compounds ¹ Copper compounds Pentachlorophenol
Cedarprime Inc.	Sumas	Whatcom	Diisocyanates

¹ Except for Chromite ore mined in the Transvaal Reg

² 1994 and after "acid aerosols" only.

Facility	City	County	Chemical
CH2O	Olympia	Thurston	Hydrogen fluoride Nitrate compounds Sodium Nitrite
Chehalis Power Generating Limited Partnerships	Chehalis	Lewis	1,2,4-Trimethylbenzene N-Hexane
Chemco, Inc.	Ferndale	Whatcom	Formaldehyde Methanol
Chevron Products Co., Richmond Beach Asphalt Refinery	Seattle	King	1,2,4-Trimethylbenzene Xylene (mixed isomers)
Columbia Machine, Inc.	Vancouver	Clark	Methanol
Connelly Skis, Inc.	Lynnwood	Snohomish	Diisocyanates
Cytec Industries, Inc.	Longview	Cowlitz	Acrylic Acid Ammonia Formaldehyde Hydrochloric Acid Methanol
Eaton Electrical	Kent	King	Copper
Exotic Metals Forming Co. LLC	Kent	King	Chromium compounds ¹ Nickel compounds
Exterior Wood, Inc.	Washougal	Clark	Arsenic compounds Copper compounds Chromium compounds ¹
Fleetwood Homes of WA #31	Woodland	Cowlitz	Diisocyanates
Foamex – Kent	Kent	King	Diethanolamine
Foamex – Lakewood	Lakewood	Pierce	Diisocyanates
Fort James Camas LLC	Camas	Clark	Catechol Diethanolamine
Gaco Western, Inc.	Tukwila	King	Toluene Diisocyanate (mixed isomers)
Genie Industries South Campus	Redmond	King	Certain glycol ethers
Goldendale Aluminum Co.	Goldendale	Klickitat	Chlorine Chromium Copper Manganese
Hobart Bakery Systems	Orting	Pierce	Chromium Manganese Nickel
J.H. Baxter & Co.	Arlington	Snohomish	Pentachlorophenol
JCI Jones Chemicals, Inc.	Tacoma	Pierce	Ammonia
Jeld-Wen Coatings	Tukwila	King	Zinc compounds

Facility	City	County	Chemical
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) Zinc compounds
Lincoln Mutual Service Inc. #1	Almira	Lincoln	1,2,4-Trimethylbenzene Benzene Ethylbenzene Toluene Xylene (mixed isomers)
Mica Brick Plant	Mica	Spokane	Manganese compounds
Mikron Industries, Inc.	Kent	King	Antimony compounds Chromium compounds ¹ Manganese compounds
Monier Life Tile LLC	Lakewood	Pierce	Chromium compounds ¹
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
Pacific Coating & Laminating	Kelso	Cowlitz	Diisocyanates
Pacific Research Laboratories	Vashon	Pierce	Diisocyanates
Pace International, LLC	Wapato	Yakima	Diphenylamine Manganese compounds Nitrate compounds
Ponderay Newsprint Co.	Usk	Pend Oreille	Potassium Dimethyldithiocarbamate
Premier Building Systems	Fife	Pierce	Diisocyanates
Purina Mills, LLC	Spokane	Spokane	Copper compounds Manganese compounds Zinc compounds
Saint-Gobain Containers	Seattle	King	Chromium compounds ¹
Savage Western Transports, Inc.	Pasco	Franklin	Ammonia
Seacast Inc.	Marysville	Snohomish	Aluminum (fume or dust)
Snokist Growers – Cannery	Yakima	Yakima	Chlorine Ammonia
Solvay Chemicals, Inc.	Longview	Cowlitz	Nitric acid

Facility	City	County	Chemical
St. John Grange Supply, Inc.	St. John	Whitman	Ammonia
Telect, Inc.	Liberty Lake	Spokane	Diisocyanates
Tessengerlo Kerley, Inc.	Kennewick	Benton	Dimethylamine Sodium Dimethyldithiocarbamate
The Oeser Co.	Bellingham	Whatcom	Pentachlorophenol
Trident Seafoods Corp.	Anacortes	Skagit	Ammonia
Tyson Fresh Meats, Pasco WA	Wallula	Walla Walla	Chlorine Chromium Nickel
U.S. Oil & Refining Co.	Tacoma	Pierce	Glycol Ethers
Univar USA, Inc. (Formerly Vopak USA, Inc.)	Kent	King	Diethanolamine Glycol Ethers Methyl Isobutyl Ketone N-Butyl Alcohol Nitric Acid Tetrachloroethylene Toluene Xylene (mixed isomers)
Van Doren Sales, Inc.	East Wenatchee	Douglas	Chromium Manganese Nickel
Western Pneumatic Tube Co.	Kirkland	King	Chromium Nickel
Western Sintering Co., Inc.	Richland	Benton	Ammonia Copper
Western Steel Casting Co.	Seattle	King	Chromium Manganese Nickel
Western Wood Preserving	Sumner	Pierce	Arsenic compounds Chromium compounds ¹ Copper compounds

Appendix 5

Washington State TRI Dioxin and Dioxin-like Compounds, 2003 (in Grams)

Facility	City	County	Air	Water	Land	Total	Transfers
Boise Cascade Paper Division	Walla Walla	Walla Walla	0.321	0.135	0.0559	0.5119	
Boise Cascade Kettle Falls Plywood Mill	Kettle Falls	Stevens	0.1261	0	0	0.1261	0.015
Boise Cascade Corp Yakima Complex	Yakima	Yakima	0.1386	0	0	0.1386	0.0146
Brooks Manufacturing Co.	Bellingham	Whatcom	0.0211	0.3238	0	0.3449	1.4923
Cascade Pole & Lumber Co.	Tacoma	Pierce	0.1271	5.0232	0	5.1503	239.5832
Conoco Phillips Ferndale Refinery	Ferndale	Whatcom	0.322	0	0	0.322	
Fort James Camas LLC	Camas	Clark	3.28	2.12	1.11	6.51	0.03
Grays Harbor Paper LP	Hoquiam	Grays Harbor	0.0	0.0234	0.0	0.0234	0.317
J. H. Baxter & Co.	Arlington	Snohomish	0.0009	0	0	0.0009	95.4472
Kaiser Aluminum & Chemical - Trentwood	Spokane	Spokane	0.284	0	0	0.284	0.038
Kimberly-Clark Worldwide, Inc.	Everett	Snohomish	0.091	6.002	0.111	6.204	46.71
LaFarge North America	Seattle	King	3.147	0	0	3.147	
Longview Fibre Company	Longview	Cowlitz	1.6	0	0	1.6	2
Nippon Paper Industries USA Co. LTD	Port Angeles	Clallam	0.12	3.54	0	3.66	4.95
Pacific Veneer	Aberdeen	Grays Harbor	0.0269	0	0	0.0269	
Port Townsend Paper Corp.	Port Townsend	Jefferson	0.39	0	0.11	0.5	
SDS Lumber Company	Bingen	Klickitat	0.14	0	0	0.14	0.0033
Simpson Tacoma Kraft Co.	Tacoma	Pierce	1.2616	0.534	0	1.7956	84.0574
Tesoro Refining & Marketing Co.	Anacortes	Skagit	0.091	3.4004	4.7473	8.2387	1.2868
The Oeser Company	Bellingham	Whatcom	0.0043	0.1766	0	0.1809	0.3344
Transalta Centralia Generation/Mining	Centralia	Lewis	2.42	0	0	2.42	
Weyerhaeuser Company	Longview	Cowlitz	1.6649	0.05	0	1.7194	3.16
Weyerhaeuser Pulp Mill	Cosmopolis	Grays Harbor	0.18	0.0186	0	0.1986	2.12
Weyerhaeuser Raymond Sawmill	Raymond	Pacific	0.0	0	0	0.0	0.02
		Grand Total	15.762	20.8664	6.1342	43.2432	481.5792

Appendix 6

Washington TRI - 2003 by County, Facility, and Chemical

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
ADAMS	McCain Foods USA, INC	Othello	Ammonia	3,140	0	0	3,140	2,500	26,860	32,813
			Chlorine dioxide	50	0	0	50	50	0	0
	Summary for McCain Foods USA, INC			3,190	0	0	3,190		26,860	
Summary for Adams County				3,190	0	0	3,190		26,860	
ASOTIN	Guy Bennett Lumber	Clarkston	Lead	4	0	0	4	126		
			Summary for Asotin County			4	0	0	4	126
BENTON	Agrium US INC Kennewick area	Kennewick	Ammonia	457,050	3,000	2,700	462,750	689,470	0	14,460
			Nitrate compounds	509	29,050	18,300	47,859	42,800	3,400	447,300
			Nitric acid	0	10	10	20	10	0	0
	Summary for Agrium US INC –Kennewick			457,559	32,060	21,010	510,629		3,400	
Benton	Framatome ANP INC	Richland	Ammonia	1,579	0	0	1,579	2,896	871	822
			Hydrogen fluoride	37	0	0	37	36	47,918	78,450
			Nitrate compounds	0	0	0	0	0	1,030,950	1,280,000
			Nitric acid	0	0	0	0	0	3,500	3,304
Summary for Framatome ANP, INC			1,616	0	0	1,616		1,083,239		
Benton	Lamb Weston INC	Richland	Chlorine	0	0	0	0	0	0	0
			Nitrate compounds	0	0	7,701	7,701	5,259	0	0
Summary for Lamb Weston, INC			0	0	7,701	7,701		0		
Benton	Pacific Eco Solutions	Richland	Lead	0	0	0	0	0	30,750	6,364
			Polychlorinated	0	0	0	0	0	5,705	0
Summary for Pacific Eco Solutions			0	0	0	0		36,455		
Benton	Richland Spec Extrusions	Richland	Copper	0	0	0	0	0	24,729	29,649
Benton	Sandvik Special Metals	Kennewick	Hydrogen fluoride	55	0	0	55	55	0	0
			Nitrate compounds	0	0	180,000	180,000	216,000	0	0
			Nitric acid	115	0	0	115	115	0	0
Summary for Sandvik Special Metals LLC			170	0	180,000	180,170		0		
Benton	Tessengerlo Kerley INC	Kennewick	Ammonia	946	0	0	946	1,968	0	7,962
			Carbon Disulfide	5	0	0	5	14	0	0
			Metham sodium	250	0	0	250	250	39	10
Summary for Tessenderlo Kerley INC			1,201	0	0	1,201		39		
Benton	Tree Top	Prosser	Polycyclic Aromatic	0	0	0	0	0	0	
Benton	US DOE Hanford Site	Richland	Ethylene Glycol	250	19	0	269		62,857	
			Lead	5	646,454	0	646,459	935,648	870	11,444
Summary for US DOE Hanford Site			225	646,473	0	646,728		63,727		
Summary for Benton County				460,801	678,533	208,711	1,348,045		1,211,590	
CHELAN	Alcoa Works Wenatchee	Malaga	Benzo(G,H,I)perylene	103	0	0	103	129	1,153	2,847
			Polycyclic aromatic	935	0	0	935	1,165	10,426	25,740
Summary for Alcoa Works Wenatchee			1,038	0	0	1,038		11,579		
Chelan	Tree Top, INC	Cashmere	Polycyclic aromatic	0	0	0	0	0	0	0
Chelan	Tree Top, INC	Wenatchee	Nitrate compounds	0	0	0	0	0	72,300	12,600
Summary for Chelan County				1,038	0	0	1,038		83,879	

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
CLALLAM	Crown Pacific	Pt Angeles	Lead	17	0	0	17	18	0	0
Clallam	Nippon Paper Industries USA	Pt Angeles	Ammonia	500	0	0	1,035	2,392	0	0
			Benzo(G,H,I)perylene	0	0	0	0	0	6	5
			Lead	59	0	440	499	508	335	286
			Methanol	17,965	0	362	18,327	16,500	0	0
			Nitrate compounds	0	0	25,836	25,836	88,722	0	0
			Polycyclic aromatic	1	0	19	21	21	66	56
	Summary for Nippon Paper Industries USA			18,542	0	27,193	45,718		407	
	Summary for Clallam County			18,542	0	27,193	45,735		407	
CLARK	International Electronics	Vancouver	Lead compounds	0	0	0	0	0	0	795
Clark	Albina Asphalt/Vancouver Ice & Fuel	Vancouver	1,2,4-Trimethylbenzene	33	33	0	66	40	0	0
			Benzene	37	37	0	74	45	0	0
			Ethylbenzene	4	4	0	8	5	0	0
			N-hexanel	66	66	0	132	80	0	0
			Toluene	53	53	0	106	65	0	0
			Xylene	20	20	0	40	25	0	0
	Summary for Albina Asphalt/Vancouver Ice & Fuel			213	213	0	426		0	
Clark	Alpha Tec Sys	Vancouver	Mercury compounds	0	0	0	0	0	0	0
Clark	Attbar, INC	Ridgefield	Styrene	81,451	0	0	81,451	71,705	0	0
Clark	Christensen Shipyards	Vancouver	Styrene	2,219	0	0	2,219	7,269	0	0
Clark	Columbia Machine	Vancouver	Manganese	16	0	0	16	15	14,000	13,000
Clark	ControlTek	Vancouver	Lead	0	0	0	0	0	932	421
Clark	Corrosion Controllers	Washougal	Styrene	11,706	0	0	11,706	18,165	0	0
Clark	Fab Products/Seafab Metals	Vancouver	Lead compounds	2	0	1	3	2	0	0

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
Clark	Fort James Camas	Camas	Acetaldehyde	29,000	3,800	250	33,050	33,917	0	0
			Ammonia	76,250	0	2,800	79,050	103,000	0	0
			Benzo(G,H,I)perylene	3	1	0	4		1	
			Chlorine	602	0	0	602	755	0	0
			Chlorine dioxide	500	0	0	500	1,350	0	0
			Formaldehyde	10,013	250	18	10,281	9,500	0	0
			Formic acid	0	0	1	1		0	
			Hydrochloric acid	9,700	0	0	9,700		0	
			Lead compounds	35	83	130	248	153	3,200	1
			Manganese compounds	250	10,800	4,600	15,650	34,250	36,000	2,200
			Mercury compounds	0	0	0	0		28	
			Methanol	635,600	11,000	0	646,600	651,000	0	0
			Methyl ethyl ketone	4,950	0	9,500	14,450	16,550	0	3,200
			Methyl isobutyl ketone	1,000	0	0	1,000		0	
			Nitrate compounds	0	0	0	0	3,600	0	0
			Phenol	1,705	250	0	1,955	1,800	0	0
			Polycyclic aromatic	93	13	23	129	119	6	0
			Sulfuric acid	22,000	0	0	22,000		0	
Summary for Fort James Camas				791,701	26,197	17,322	835,220		39,235	
Clark	Frito-Lay INC	Vancouver	Nitric acid	0	0	0	0	0	0	0
Clark	Gebetz - Washougal	Washougal	Naphthalene	500	0	0	500	10	1,255	2,010
			Nitrate compounds	0	0	0	0		5	
Summary for Gebetz - Washougal				500	0	0	500		1,260	
Clark	GL&V USA INC	Vancouver	Styrene	12,301	0	0	12,301	4,111	0	0
Clark	Glacier NW – West Batch	Vancouver	Lead	0	0	0	0		26	
Clark	Glacier NW -E Ready-mix	Vancouver	Lead	0	0	0	0	0	25	118
Clark	Glacier NW-W Ready-mix	Vancouver	Lead	0	0	0	0	0	1	8
Clark	Kemira Chemicals INC	Washougal	Carbon disulfide	221	0	3	224	272	0	0
			Dimethylamine	6	0	7	13	14	0	0
			Metham sodium	4,217	0	40	4,257	5,123	3,285	6,372
			Sodium	219	0	4	223	242	151	293
Summary for Kemira Chemicals INC				4,663	0	54	4,717		3,436	
Clark	Linear Technology Corp	Camas	Hydrogen fluoride	236	0	0	236	121	170	215
Clark	MacDermid Printing Solutions	Vancouver	Styrene	6,936	0	0	6,936	8,496	0	0
Clark	Matsushita Kotobuki Electronics Ind	Vancouver	Antimony compounds	0	0	0	0	0	23,773	19,086
			Decabromodiphenyl oxide	0	0	0	0	0	84,902	68,164
Summary for Matsushita Kotobuki Electronics Ind				0	0	0	0		108,675	
Clark	Nalco Company	Vancouver	Sodium nitrite	0	0	0	0		320	
Clark	Pacific Die Casting Corp	Vancouver	Copper	27	0	0	27		1,770	

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
Clark	Pendleton Woolen Mills	Washougal	Formic acid	0	0	0	0	0	0	0
Clark	SEH America INC	Vancouver	Hydrochloric acid	440	0	0	440		0	
			Hydrogen fluoride	205	0	0	205	165	6,610	6,010
			Nitrate compounds	0	0	0	0	0	950,000	938,000
			Nitric acid	225	0	0	225	465	160	135
Summary for SEH America INC				870	0	0	870		956,770	
Clark	Silicon Forest Electronics INC	Vancouver	Lead	0	0	0	0	0	868	308
Clark	Trim Systems	Vancouver	Diisocyanates	10	8	0	18	0	0	1,500
			N-methyl-2-pyrrolidone	0	0	0	0	0	0	0
Summary for Trim Systems LLC				10	8	0	18		0	
Clark	Varicast INC	Vancouver	Manganese	500	0	0	500	500	0	750
Clark	Wafertech	Camas	Ammonia	1,536	0	0	1,536	1,282	12,861	12,254
			Catechol	176	0	0	176	32	15,693	28,710
			Hydrogen fluoride	842	0	0	842	772	2,367	1,842
			Nitrate compounds	5	0	0	5	5	47,908	46,744
			Nitric acid	802	0	0	802	710	1,443	1,401
			N-methyl-2-pyrrolidone	488	0	0	488	1,713	112,674	118,694
Summary for Wafertech LLC				3,849	0	0	3,849		192,946	
Summary for Clark County				917,200	26,418	17,378	960,996		1,320,439	
COWLITZ	Chemtrade Chemicals	Kalama	Lead compounds	0	0	0	0	0	0	0
			Zinc compounds	103	0	0	103	79	459	11
Summary for Chemtrade Performance Chemicals				103	0	0	103		459	
Cowlitz	Cooper Oil Longview Bulk Plant	Longview	1,2,4-Trimethylbenzene	750	0	0	750		0	
			Benzene	250	0	0	250		0	
			Ethylbenzene	250	0	0	250		0	
			Toluene	750	0	0	750	0	0	0
			Xylene	750	0	0	750	0	0	0
Summary for Cooper Oil Longview Bulk Plant				2,750	0	0	2,750		0	
Cowlitz	Cytec Inds	Longview	Acrylamide	32	0	0	32	29	161	142
Cowlitz	Glacier NW Ready-mix	Longview	Lead	0	0	0	0	0	35	73
Cowlitz	Glacier NW Ready-mix	Woodland	Lead	0	0	0	0	0	29	11

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
Cowlitz	Longview Fibre Company	Longview	Acetaldehyde	26,250	0	0	26,250	17,250	0	0
			Ammonia	94,005	0	13,200	107,205	103,005	0	0
			Barium compounds	576	0	0	576	0	43,800	36,000
			Catechol	0	0	16	16	250	0	0
			Hydrochloric acid	74,005	0	0	74,005	0	0	0
			Lead compounds	202	0	0	202	0	13,020	11,000
			Manganese compounds	1,010	0	0	1,010	0	68,600	59,000
			Methanol	120,900	0	9,200	130,100	241,100	0	0
			Nitrate compounds	0	0	60,000	60,000	82,000	0	0
			Nitric acid	0	0	0	0	0	0	0
			Phenol	2,305	0	140	2,445	1,135	0	0
			Polycyclic aromatic	252	0	30	282	269	27	3
			Zinc compounds	701	0	0	701	0	41,400	129,200
Summary for Longview Fibre Company				320,206	0	82,586	402,792		166,847	
Cowlitz	Noveon Kalama INC	Kalama	Acetaldehyde	1,280	0	0	1,280	729	0	0
			Ammonia	438	62	178	678	1,627	122	99
			Benzene	24,845	0	0	24,845	15,918	9,209	6,486
			Benzo(G,H,I)perylene	0	0	0	0	0	0	0
			Biphenyl	150	0	0	150	181	6,374	6,771
			Chromium compounds	0	17	0	17	0	3,176	0
			Cobalt compounds	60	1	4	64	66	10,030	5,154
			Copper compounds	150	3	12	165	171	129,604	62,341
			Formic acid	289	0	0	289	591	0	0
			Methanol	3,315	0	0	3,315	10,086	14	7
			Phenol	852	0	1	853	937	3,817	2,684
			Polycyclic aromatic	0	0	0	0	0	0	0
			toluene	73,386	0	0	73,386	81,239	3,149	1,287
Summary for Noveon Kalama INC				104,765	0	0	73,386	81,239	3,149	1,287
Cowlitz	Solvay Chemicals INC	Longview	Naphthalene	191	0	0	191	205	497	727
			Nitrate compounds	0	0	0	0	0	160,611	142,222
Summary for Solvay Chemicals INC				191	0	0	191		161,108	
Cowlitz	Steelscape	Kalama	1,2,4-Trimethylbenzene	90	0	0	90	52	20,553	12,920
			Certain glycol ethers	93	0	0	93	0	21,460	0
			Chromium compounds	7	0	0	7	0	18,710	0
			Lead compounds	0	0	0	0	0	327	187
			Methyl ethyl ketone	43	0	0	43	33	9,911	8,378
			Methyl isobutyl ketone	8	0	0	8	0	1,668	0
			Naphthalene	35	0	0	35	31	8,038	7,602
			N-butyl alcohol	26	0	0	26	24	5,880	6,020
			Toluene	35	0	0	35	13	8,052	3,330
			Xylene	14	0	0	14	15	3,280	3,866
Summary for Steelscape				351	0	0	351		97,879	
Cowlitz	Stowe Woodward	Kelso	Lead compounds	2	0	0	2	4	334	592

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
Cowlitz	Weyerhaeuser Company	Longview	Acetaldehyde	481,857	0	4,116	485,973	450,705	14	17
			Ammonia	149,809	0	9,062	158,871	136,848	0	0
			Barium compounds	340	0	0	340	315	32,882	28,213
			Benzo(G,H,I)perylene	1	0	7	8	7	2	2
			Catechol	0	0	88	88	81	2	2
			Chlorine	507	0	21,993	22,500	21,387	0	0
			Chlorine dioxide	2,101	0	0	2,101	1,911	0	0
			Chloroform	38,280	0	5,782	44,062	36,804	7	0
			Chromium compounds	69	0	588	657		2,415	
			Cresol	1,132	0	200	1,332	1,448	0	0
			Dichloromethane	28,723	0	1	28,724	24,367	0	0
			Ethylene glycol	14	0	6,241	6,255	6,255	2	3
			Formaldehyde	85,403	0	2,808	88,211	83,563	7	0
			Hydrochloric acid	42,471	0	0	42,471		0	
			Lead compounds	53	0	199	252	231	506	468
			Manganese compounds	749	0	49,998	50,747	29,929	45,553	39,707
			Mercury compounds	31	0	2	33	28	11	9
			Methanol	1,306,344	0	8,506	1,314,850	1,012,979	537	654
			Methyl ethyl ketone	221,722	0	114	221,836	215,860	886	628
			Nickel compounds	276	0	1,369	1,645	1,080	4,889	4,523
			Nitrate compounds	0	0	388	388	356	16	19
			Phenol	74,569	0	0	74,569	72,577	2	2
			Polychlorinated	0	0	0	0	0	0	0
Polycyclic aromatic	50	0	47	97	88	30	29			
Styrene	36,544	0	102	36,646	35,665	0	0			
Sulfuric acid	49,610	0	0	49,610		0				
Zinc compounds	871	0	4,142	5,013	4,517	27,906	26,995			
Summary for Weyerhaeuser Company - Longview				2,521,526	0	115,752	2,637,279		115,667	
Summary for Cowlitz County				2,949,928	83	198,533	3,148,543		708,013	
FERRY	K2 Mine	Curlew	Lead compounds	1	2,420	0	2,421	1,491	2	0
Ferry	Kettle River Operations Mill	Republic	Copper compounds	0	2,300	0	2,300	39,002	0	0
			Cyanide compounds	0	281	0	281	4,500	0	0
			Nitrate compounds	0	3,005	0	3,005	48,005	0	0
Summary for Kettle River Operations Mill				0	5,586	0	5,586		0	
Summary for Ferry County				1	8,006	0	8,007		2	
FRANKLIN	Lamb Weston	Connell	Nitrate compounds	0	0	0	0	0	0	0
Franklin	Lamb Weston	Pasco	Chlorine	0	0	0	0	0	0	0
Franklin	NW Terminalling Company	Pasco	1,2,4-Trimethylbenzene	181	0	0	181	186	250	1,362
			Benzene	881	0	0	881	993	250	855
			Ethylbenzene	155	0	0	155	147	5	598
			Methyl tert-butyl ether	704	0	0	704	118	250	686
			N-hexane	1,763	0	0	1,763	1,422	0	860
			Toluene	1,584	0	0	1,584	1,542	250	3,419
Xylene	764	0	0	764	789	250	3,174			
Summary for NW Terminalling Company				6,032	0	0	6,032		1,255	

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
Franklin	Safety-Kleen Sys	Pasco	Ethylene glycol	32	0	0	32	26	119,451	125,393
Franklin	Tidewater Terminal Co Snake River Terminal	Pasco	1,2,4-Trimethylbenzene	70	0	0	70	73	0	0
			1,3-Dichloropropylene	151	0	0	151	157	133	0
			Ammonia	1,394	0	0	1,394	2,390	0	0
			Benzene	526	0	0	526	546	0	0
			Benzo(G,H,I)perylene	0	0	0	0	0	0	0
			Chloropicrin	6	0	0	6	5	28	0
			Ethylbenzene	70	0	0	70	73	0	0
			Metham sodium	5,115	0	0	5,115	4,881	105	8,085
			N-hexane	632	0	0	632	655	0	0
			Nitrate compounds	0	0	0	0	0	0	0
			Polycyclic aromatic	0	0	0	0	0	0	0
			Toluene	702	0	0	702	728	0	0
			Trans-1,3- Xylene	73 351	0 0	0 0	73 351	75 364	64 0	0 0
Summary for Tidewater Terminal Co - Snake River				9,090	0	0	9,090		330	
Summary for Franklin County				15,154	0	0	15,154		121,036	
GRANT	Genie Industries	Moses Lake	Lead	0	0	0	0	3	23	141
			Manganese	35	16	0	50	120	4,437	19,007
Summary for Genie Industries – Moses Lake				35	16	0	50		4,460	
Grant	Inflation Systems	Moses Lake	Nitrate Compounds	369	0	0	369	11,379	15,001	982
Grant	Moses Lake Industries INC	Moses Lake	Methanol	3,982	0	0	3,982	5,643	897	24,170
Grant	Solar Grade Silicon	Moses Lake	Chlorodifluoromethane	19,250	0	0	19,250		1	
			Hydrochloric acid	2,200	0	0	2,200		0	
			Hydrogen fluoride	0	0	0	0		0	
			Nitrate compounds	0	0	0	0		181,803	
			Nitric acid	372	0	0	372		0	
Summary for Solar Grade Silicon				21,822	0	0	21,822		181,804	
Summary for Grant County				26,208	16	0	26,223		202,162	
GRAYS HARBOR	Grays Harbor Paper	Hoquiam	Lead	117	0	29	146	621	364	467
Grays Harbor	Harold MOE Enterprises INC	Hoquiam	Styrene	2,268	0	0	2,268	2,993	0	0
Grays Harbor	Morton Intl INC	Elma	Methanol	44,067	0	0	44,067	57,952	28,351	30,770
Grays Harbor	Pacific Veneer	Aberdeen	Acetaldehyde	2,223	0	0	2,223		0	
			Lead compounds	130	0	0	130		25	
			Manganese compounds	15	2,855	0	2,870		0	
			Methanol	3,758	0	0	3,758		0	
			Polycyclic aromatic	1	0	0	1		0	
Summary for Pacific Veneer				6,127	2,855	0	8,982		25	
Grays Harbor	Westport Shipyard	Westport	Styrene	19,562	0	0	19,562	21,592	0	0

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
Grays Harbor	Weyerhaeuser Pulp Mill	Cosmopolis	Acetaldehyde	9,600	0	465	10,065	9,450	0	0
			Ammonia	500	0	2,000	2,500	2,450	0	0
			Benzo(G,H,I)perylene	0	0	3	3	0	0	0
			Chlorine Dioxide	3,394	0	0	3,394	2,205	0	0
			Formic Acid	0	0	750	750	750	0	0
			Lead compounds	52	0	98	150	140	124	67
			Manganese compounds	800	0	46,870	47,670	43,750	34,539	29,000
			Mercury compounds	2	0	0	2	0	0	0
			Methanol	52,550	0	900	53,450	50,500	0	0
			Nitrate compounds	0	0	37,600	37,000	35,000	0	0
Polycyclic aromatic	7	0	40	47	44	5	3			
Summary for Weyerhaeuser Pulp Mill				66,905	0	88,727	155,632		34,668	
Summary for Grays Harbor County				139,046	2,855	88,756	230,657		63,408	
ISLAND	Technical Svs	Oak Harbor	Lead compounds	0	0	0	0	0	2,647	0
Summary for Island County				0	0	0	0		2,647	
JEFFER- SON	Port Townsend Paper Corp	Pt Townsend	Acetaldehyde	57,100	0	7,200	64,300	72,370	0	0
			Ammonia	65,250	2	6,300	71,550	77,250	0	0
			Benzo(G,H,I)perylene	3	0	0	4	5	0	0
			Catechol	0	0	28	28	31	0	0
			Hydrochloric acid	260,000	630	0	260,000	0	0	0
			Lead compounds	57	98,000	380	1,067	923	0	0
			Manganese compounds	62	0	27,000	125,062	134,800	0	0
			Mercury compounds	1	0	0	1	1	0	0
			Methanol	110,005	0	5	110,010	113,010	0	0
			Phenol	5,002	0	0	5,002	5,000	0	0
Polycyclic aromatic	51	23	0	74	75	0	0			
Summary for Port Townsend Paper Corp				497,530	98,655	40,913	637,098		0	
Summary for Jefferson County				497,531	98,655	40,913	637,098		0	
KING	Ace Galvanizing	Seattle	Zinc compounds	1,500	0	96	1,596	1,500	307,674	221,335
King	Alaskan Copper Works	Seattle	Chromium compounds	250	0	0	250	0	755	0
			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 Intl	Auburn	Styrene	8,712	0	0	8,712	9,588	0	0
King	Art Brass Plating	Seattle	trichloroethylene	14,388	0	0	14,388	15,665	750	750
King	ASEMCO INC	Kent	Lead	0	0	0	0	0	2,618	634
King	Ash Grove Cement Co	Seattle	Chromium	44	0	0	44	58	0	0
			Lead compounds	62	0	0	62	86	0	0
			Mercury compounds	34	0	0	34	44	0	0
			Zinc compounds	185	0	0	185	236	0	0
Summary for Ash Grove Cement Co				326	0	0	326		0	
King	ASKO Processing INC	Seattle	Lead compounds	0	0	0	0	0	2,444	2,935
			Nitric acid	0	0	0	0	0	0	0
			Trichloroethylene	12,696	0	0	12,696	13,625	610	610
Summary for ASKO Processing INC				12,696	0	0	12,696		3,054	

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
King	Avtech Corp	Seattle	Lead	0	0	0	0	0	400	407
King	Ball Metal Beverage Container Corp	Kent	Certain glycol ethers	133,000	0	0	133,000		216	
			Hydrogen fluoride	122	0	0	122	98	0	
			N-Butyl alcohol	114,000	0	0	114,000	116,000	57	
			Sulfuric acid	79	0	0	79		0	
Summary for Ball Metal Beverage Container Corp				247,201	0	0	247,201		273	
King	Ballard Brass & Aluminum	Seattle	Copper compounds	250	750	0	1,000	250	3,790	6,134
King	Bardahl Mfg.	Seattle	Lead compounds	0	0	0	0	0	2	3
King	BCAG - Auburn	Auburn	Chromium compounds	20	0	0	20		56,478	
			Copper	0	0	0	0	0	224,507	334,150
			Hydrogen fluoride	0	0	0	0	0	14	1,837
			Lead	0	0	0	0	0	288	348
			Methyl ethyl ketone	15,600	0	0	15,600	23,000	11,576	12,522
			Nickel	0	0	0	0	0	13,955	7,524
			Nitrate compounds	0	0	0	0	0	150,000	190,000
			Nitric acid	0	0	0	0	0	137	13,483
			Sec-butyl alcohol	2,300	0	0	2,300	4,400	11,860	15,156
			Tetrabromobisphenol A	0	0	0	0	17	58	74
			Toluene	9,600	0	0	9,600	11,800	4,745	6,485
Summary for BCAG - Auburn				27,520	0	0	27,520		473,618	
King	Berlex Labs	Seattle	Acetonitrile	0	0	0	0	0	26,196	12,305
King	Boeing – N Boeing Field	Seattle	Certain glycol ethers	1,899	0	0	1,899		15,324	
			Diethanolamine	1,597	0	0	1,597	1,165	14,968	10,488
			Methyl ethyl ketone	12,346	0	0	12,346	11,165	11,288	10,291
			Naphthalene	500	0	0	500	250	750	1,000
Summary for Boeing North Boeing Field				16,342	0	0	16,342		42,330	
King	Boeing – Plant 2	Seattle	Certain glycol ethers	255	0	0	255		20	
			Diethanolamine	0	0	0	0	0	20	250
			Methyl ethyl ketone	500	0	0	500	500	25	250
			Naphthalene	0	0	0	0	5	0	0
Summary for Boeing Plant 2				755	0	0	755		65	
King	Boeing – Renton	Renton	Copper	0	0	0	0	0	87,331	86,386
			Manganese	0	0	0	0	0	18,015	17,840
			Methyl ethyl ketone	15,906	0	0	15,906	20,652	10,048	16,326
			Naphthalene	10	0	0	10	255	0	0
			Toluene	21,308	0	0	21,308	23,426	15,540	18,398
Summary for Boeing - Renton				37,224	0	0	37,224		130,934	
King	BP West Coast Products	Seattle	1,2,4-Trimethylbenzene	79	0	0	79	57	0	167
			Benzene	316	0	0	316	162	31	207
			Ethylbenzene	938	0	0	938	105	1	45
			Lead	0	0	0	0	0	0	0
			Mercury compounds	0	0	0	0	0	0	0
			N-Hexane	1,324	0	0	1,324	400	0	88
			Polycyclic aromatic	0	0	0	0	0	0	0
			Toluene	963	0	0	963	456	59	495
			Xylene	4,644	0	0	4,644	661	8	216
Summary for BP West Coast Products				8,264	0	0	8,264		99	

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
King	Burlington Environmental	Kent	Lead compounds	0	0	0	0	0	165,759	281,267
			Mercury compounds	0	0	0	0	0	19,070	9,600
			Polychlorinated	0	0	0	0	0	3,334	
Summary for Burlington Environmental				0	0	0	0	0	188,163	
King	Central PreMix	Kent	Lead	0	0	0	0	0	0	0
King	Circuit Services Worldwide	Bellevue	Copper	0	0	0	0	1	11,941	20,161
			Lead	0	0	0	0	0	1,435	1,383
Summary for Circuit Services Worldwide				0	0	0	0	0	13,376	
King	Conoco Phillips	Renton	1,2,4-Trimethylbenzene	167	0	0	167	2,457	10,045	52
			Benzene	460	0	0	460	429	3,119	4
			Benzo(G,H,I)perylene	0	0	0	0	0	0	0
			Cyclohexane	137	0	0	137	786	803	13
			Ethylbenzene	148	0	0	148	1,466	6,675	31
			Naphthalene	23	0	0	23	632	1,547	13
			N-Hexane	751	0	0	751	2,880	4,358	46
			Polycyclic aromatic	0	0	0	0	0	0	0
			Toluene	1,262	0	0	1,262	8,340	37,212	166
			Xylene	800	0	0	800	8,010	35,295	168
Summary for Conoco Phillips				3,748	0	0	3,748		99,054	
King	Darigold	Issaquah	Nitric acid	10	5	0	15	15	155	1,084
King	Darigold - Rainier	Seattle	Ammonia	3,032	0	0	3,032	2,147	27,293	19,325
			Nitric acid	10	5	0	15	15	133	3,497
Summary for Darigold - Rainier				3,042	5	0	3,047		27,426	
King	Davis Wire Corp	Kent	Lead	0	0	0	0		505	
King	Duwamish Shipyard	Seattle	Xylene	10,033	0	0	10,033	10,168	0	0
King	Dyno Battery	Seattle	Lead	15	0	0	15	13	0	0
King	El Dorado Stone	Carnation	Diisocyanates	0	0	0	0			1,300
King	Engineered Polymer Solutions/ Valspar Coatings	Seattle	Certain glycol ethers	250	0	0	250		1,500	
			Ethylbenzene	250	0	0	250	255	750	750
			Methanol	4,246	0	0	4,246	4,272	1,250	750
			Methyl ethyl ketone	2,187	0	0	2,187	1,848	750	1,250
			Methyl isobutyl ketone	255	0	0	255	255	1,250	750
			N-Butyl alcohol	250	0	0	250	250	1,902	1,954
			Toluene	755	0	0	755	1,000	2,601	1,500
			Xylene	755	0	0	755	755	3,899	3,444
Summary for Engineered Polymer Solutions				8,948	0	0	8,948		13,902	
King	Equilon Lubricants Plant	Seattle	1,2,4-Trimethylbenzene	0	0	0	0	500	0	0
			Benzene	0	0	0	0	500	0	0
			Benzo(G,H,I)perylene	0	0	0	0	0	0	0
			Ethylbenzene	250	0	0	250	500	0	0
			Lead	0	0	0	0	0	0	0
			N-Hexane	0	0	0	0	1,000	0	0
			Polycyclic aromatic	0	0	0	0	0	0	2
			Toluene	0	0	0	0	1,000	0	0
			Xylene	5	0	0	5	500	0	250
			Zinc compounds	0	0	5	5	5	0	0
Summary for Equilon Lubricants Plant				255	0	5	260		0	

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
King	Equilon Lubricants Terminal	Seattle	1,2,4-Trimethylbenzene	500	0	0	500	0	1,000	0
			Benzene	500	0	0	500	0	500	0
			Benzo(G,H,I)perylene	0	0	0	0	0	0	0
			Ethylbenzene	500	0	0	500	250	500	0
			Lead compounds	0	0	1	1		32	
			N-Hexane	1,000	0	0	1,000	0	255	0
			Polycyclic aromatic	0	0	0	0	0	245	0
			Toluene	1,000	0	0	1,000	0	1,840	0
			Xylene	500	0	0	500	137	2,105	0
			Zinc compounds	0	0	5	5	5	250	0
Summary for Equilon Lubricants Terminal				4,000	0	6	4,006		6,727	
King	Exotic Metals Co	Kent	Nitric acid	50	0	0	50	50	35,300	33,556
King	Farwest Paint Mfg Co	Tukwila	Lead compounds	10	0	0	10	10	0	0
			Toluene	500	0	0	500	500	2,016	0
			Xylene	500	0	0	500	500	0	0
Summary for Farwest Paint Manufacturing				1,010	0	0	1,010		2,016	
King	Foamex LP	Kent	Toluene diisocyanate	432	0	0	432	369	212	130
King	Formula Corp	Seattle	Certain glycol ethers	750	0	0	750		750	
King	GACO Western	Tukwila	Methyl isobutyl ketone	505	0	0	505	797	750	1,177
King	Genie Ind. – Main Campus	Redmond	Lead	0	0	0	0	3	106	175
			Manganese	75	22	0	97	145	20,037	22,060
Summary for Genie Ind – Main Campus				75	22	0	97		20,143	
King	Genie Ind. – South Campus	Redmond	Lead	0	1	0	1	6	1,027	829
			Manganese	313	153	0	466	600	157,624	47,840
Summary for Genie Ind – Main Campus				313	154	0	467		158,651	
King	Glacier NW E Marginal Way	Seattle	Lead compounds	0	0	0	0	0	101	92
			Nitrate compounds	0	0	5	5	1,240	0	1,000
Summary for Glacier NW – E Marginal Way Plant				0	0	5	5		101	
King	Glacier NW	Kenmore	Lead compounds	0	0	0	0	0	6	8
King	Glacier NW	Snoqualmie	Lead compounds	0	0	0	0	0	4	0
King	Hexcel Corp	Kent	Methyl ethyl ketone	4,486	0	0	4,486	10,080	818	750
			Tetrabromobisphenol A	0	0	0	0	0	27	93
Summary for Hexcel Corp				4,486	0	0	4,486		845	
King	Hot Cell Svs	Kent	Lead compounds	0	0	0	0	0	0	0
King	Hytek Finishes Co	Kent	Lead	0	0	0	0	0	1,573	3,338
			Nitrate compounds	0	0	0	0		25,020	
			Nitric acid	10	0	0	10	10	1,243	450
Summary for Hytek Finishes Co				10	0	0	10		27,836	
King	Industrial Plating Corp	Seattle	Copper compounds	116	0	0	116	116	573	340
			Lead compounds	0	0	0	0	0	38	2,022
			Zinc compounds	154	0	0	154	166	1,737	1,037
Summary for Industrial Plating Corp				270	0	0	270		2,348	

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
King	Interpoint	Redmond	Lead	0	0	0	0	0	33	48
King	Johns Manville	Kent	1,1-dichloro-1- Chlorodifluoromethane	24,749	0	0	24,749	30,988	0	0
			Disocyanates	748	0	0	748	4,236	0	0
				1	0	0	1	7	0	0
			Summary for Johns Manville	25,498	0	0	25,498		0	
King	Jorgensen Forge Corp	Tukwila	Aluminum (fume or dust)	0	0	0	0	0	93,715	73,800
			Chromium	0	0	0	0	0	24,287	23,132
			Lead	0	0	0	0	0	202	170
			Manganese	0	0	0	0	0	363,665	297,483
			Summary for Jorgensen Forge Corp	0	0	0	0		481,869	
King	Kenworth Truck	Renton	Ethylene glycol	23	0	0	23	24	18,000	14,000
King	LaFarge North America	Seattle	Benzo(G,H,I)perylene	0	0	0	0	0	0	0
			Lead compounds	1	0	0	1	5	0	0
			Mercury compounds	55	0	0	55	68	0	0
			Polycyclic aromatic	3	0	0	3	4	0	0
			Summary for LaFarge North America	59	0	0	59		0	
King	Machinist/PS Coatings	Seattle	Methyl ethyl ketone	33,000	0	0	33,000	18,004	0	250
			Xylene	21,000	0	0	21,000	21,769	750	0
			Summary for Machinist/Puget Sound Coatings	54,000	0	0	54,000		750	
King	Modine Aftermarket	Seattle	Copper	0	0	0	0	0	6,731	10,113
			Lead	1	0	0	1	1	1,413	2,964
			Summary for Modine Aftermarket Holdings INC	1	0	0	1		8,144	
King	Newcastle Brick	Renton	Hydrogen fluoride	41,773	0	0	41,773	40,523	0	0
	Non-Ferrous Metals	Seattle	Lead	31	0	0	31	31	0	0
	Nucor Steel Seattle INC	Seattle	Chromium compounds	36	0	0	36		25,215	
			Copper compounds	86	0	2	88		52,680	
			Lead compounds	783	0	0	783	544	555,080	311,429
			Manganese compounds	471	0	0	471	760	320,914	430,028
			Mercury compounds	0	0	0	0	0	57	48
			Nickel compounds	2	0	0	2	8	873	3,905
			Zinc compounds	8,288	0	0	8,288	7,958	4,761,438	4,001,253
			Summary for Nucor Steel Seattle INC	9,666	0	2	9,668		5,716,257	
King	Philips Oral Healthcare	Snoqualmie	Chromium	0	0	0	0	0	7,202	750
			Copper	0	0	0	0	0	1,835	931
			Lead	0	0	0	0	0	6,118	1,079
			Nickel	0	0	0	0	0	1,885	
			Summary for Philips Oral Healthcare	0	0	0	0		17,040	
King	Praxair Specialty Ceramics	Woodinville	Lead compounds	4	0	0	4	5	6	10
King	PRC-Desoto Intl	Woodinville	Methyl isobutyl ketone	250	0	0	250		250	
King	Precor	Woodinville	Chromium	0	0	0	0		0	
			Nickel	0	0	0	0		0	
			Summary for Precor	0	0	0	0		0	
King	Printed Circuits Assembly	Bellevue	Lead	0	0	0	0	0	500	750

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
King	Protective Coatings	Kent	Nitric acid	1,000	0	5	1,005		11,405	
King	Prototron Circuits	Redmond	Lead	0	0	0	0	0	835	949
King	Qualitel Corp	Redmond	Lead	0	0	0	0	1	2,000	50
King	Rexam Beverage Can Co	Kent	Certain glycol ethers	107,484	0	0	107,484		1,210	
			Hydrogen fluoride	133	0	0	133	26	0	0
			Manganese	0	0	0	0	0	79	68
			N-Butyl alcohol	86,114	0	0	86,114	126,336	370	523
Summary for Rexam Beverage Can Co				193,731	0	0	193,731		1,659	
King	Rudd Co INC	Seattle	Certain glycol ethers	549	0	0	549		192	
			DI(2-ethylhexyl)	54	0	0	54	39	128	111
			Ethylbenzene	384	0	0	384	443	367	277
			Methanol	1,940	0	0	1,940	875	256	223
			Methyl ethyl ketone	667	0	0	667	877	1,956	1,325
			Methyl isobutyl ketone	1,846	0	0	1,846	2,506	3,034	2,138
			N-Butyl alcohol	1,689	0	0	1,689	1,875	639	557
			Toluene	3,652	0	0	3,652	3,909	43,593	28,509
			Xylene	1,632	0	0	1,632	1,943	1,320	997
Summary for Rudd Co INC				12,413	0	0	12,413		51,485	
King	Safety-Kleen (118101)	Auburn	Ethylene glycol	25	0	0	25	28	165,813	153,086
King	Saint-Gobain Containers	Seattle	Lead compounds	485	0	0	485	432	10	13
King	Schippers & Crew	Seattle	Lead compounds	0	0	0	0	0	0	1,123
King	Scott Galvanizing Co	Seattle	Zinc compounds	0	0	0	0	0	143,392	169,430
King	Seattle Pottery Supply	Seattle	Lead compounds	0	0	0	0	0	0	0
King	Sound Propeller Svs	Seattle	Chromium	12	0	0	12	250	3,630	2,750
			Nickel	5	0	0	5	250	1,597	1,550
Summary for Sound Propeller Services INC				17	0	0	17		5,227	
King	Tayygenicom	Kent	Lead	0	0	0	0	0	78	157
King	Three-Five Systems	Redmond	Lead compounds	0	0	0	0	0	1	10,001
King	Todd Pacific Shipyards	Seattle	N-Butyl alcohol	12,546	0	0	12,546	18,722	250	250
King	Transpro INC	Seattle	Copper	0	0	0	0		7,445	
			Lead	12	0	0	12	12	906	1,640
Summary for Transpro INC				12	0	0	12		8,351	
King	Trim Systems	Seattle	Dichloromethane	962	0	0	962	3,225	1,562	2,515
			Diisocyanates	0	0	0	0	0	0	0
			Ethylene glycol	0	0	0	0	0	0	0
Summary for Trim Systems				962	0	0	962		1,562	
King	TTM Technologies INC	Redmond	Ammonia	4,308	0	0	4,308	4,099	28,925	38,805
			Copper	0	0	0	0		155,316	
			Formaldehyde	400	0	0	400	500	0	0
			Lead	0	0	0	0	0	7,197	4,508
			Nitrate compounds	0	0	0	0	0	11,665	18,480
			Nitric acid	0	0	0	0	0	0	0
Summary for TTM Technologies INC				4,708	0	0	4,708		203,103	

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
King	Univar USA (Vopa K)	Kent	Ethylene glycol	12	0	0	12		0	
			Methanol	1,589	0	0	1,589	1,729	8,416	0
			Methyl ethyl ketone	704	0	0	704	834	57	0
Summary for Univar USA INC				2,305	0	0	2,305		8,473	
King	Universal Mfg Corp	Woodinville	Copper	2	0	0	2	2	10,122	8,865
			Lead compounds	0	0	0	0	0	824	2,125
Summary for Universal Mfg Corp				2	0	0	2		10,946	
King	Viox Corporation	Seattle	Lead compounds	108	0	0	108	37	860	203
King	Western Pneumatic Tube	Kirkland	Nitrate compounds	0	0	0	0	0	19,271	19,271
			Nitric acid	0	0	0	0	0	0	0
			Trichloroethylene	30,800	0	0	30,800	30,446	3,481	3,371
Summary for Western Pneumatic Tube Co				30,800	0	0	30,800		22,752	
King	Zman Magnetics	Kent	Lead	0	0	0	0		145	
Summary for King County				803,814	936	119	804,870		8,477,333	
KITSAP	USEPA Fund- Lead Superfund Site/Wyckoff/ Eagle Harbor	Bainbridge	Creosote	0	0	0	0		250	
			Pentachlorophenol	0	0	0	0		250	
			Polycyclic aromatic	0	0	1	1		98	
Summary for USEPA Superfund /Wyckoff/Eagle Harbor				0	0	1	1		598	
Kitsap	US Navy, PSNS & IMF – Bremerton Site & Naval Base Kitsap	Bremerton	Chromium	11	0	62	73	188	3,575	3,181
			Copper	318	0	507	825	807	17,182	12,188
			Copper compounds	4,509	0	507	5,016	2,404	30,710	13,458
			Lead	2	0	590	592	596	16,869	18,289
			Manganese	59	0	47	106	200	1,266	2,711
			Methyl ethyl ketone	12,438	0	0	12,438	9,117	8,295	6,080
			N-Butyl alcohol	17,414	0	0	17,414	12,720	11,610	8,481
			Nickel	29	0	689	718	805	15,710	20,272
			Trichlorofluoromethane	1,035	0	0	1,035		41,095	
			Xylene	13,064	0	1	13,065	8,649	8,712	5,769
Zinc compounds	2,252	0	2,203	4,455	3,947	20,863	24,277			
Summary for US Navy, PSNS & IMF				51,131	0	4,606	55,737		175,887	
Summary for Kitsap County				51,131	0	4,607	55,738		176,485	
KLICK- ITAT	Goldendale Aluminum Co	Goldendale	Benzo(G,H,I)perylene	72	0	0	72	160	0	0
			Carbonyl sulfide	4,473	0	0	4,473	10,000	0	0
			Hydrogen fluoride	1,442	0	0	1,442	5,890	0	0
			Polycyclic aromatic	413	0	0	413	754	0	0
Summary for Goldendale Aluminum Co				6,400	0	0	6,400		0	
Klickitat	SDS Lumber Co	Bingen	Lead	60	0	0	60	60	100	100
Summary for Klickitat County				6,460	0	0	6,460		100	
LEWIS	Atlas Casting & Technology	Chehalis	Chromium	250	0	0	250	250	500	500
			Manganese	5	0	0	5	250	255	250
			Nickel	250	0	0	250	250	500	500
Summary for Atlas Casting & Technology				505	0	0	505		1,255	
Lewis	Chehalis Power Generating Ltd Partnership	Chehalis	Ammonia	6,141	0	0	6,141		147	

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
Lewis	Darigold - Chehalis	Chehalis	Ammonia	9,711	5	5	9,721		0	
			Nitrate compounds	0	5	43,582	43,587	5	0	0
			Nitric acid	10	5	0	15	5	0	0
Summary for Darigold -Chehalis				9,721	15	43,587	53,323		0	
Lewis	Foseco Metallurgical	Chehalis	Aluminum (fume or dust)	533	0	0	533	630	0	0
			Lead compounds	0	0	0	0		0	
Summary for Foseco Metallurgical INC				533	0	0	533		0	
Lewis	Glacier Northwest	Chehalis	Lead compounds	0	0	0	0		9	
Lewis	Hampton Lumber	Morton	Lead compounds	2	0	0	2	10	50	48
Lewis	Hampton Lumber	Packwood	Lead compounds	2	0	0	2	11	15	37
Lewis	Hampton Lumber	Randle	Lead compounds	3	0	0	3	11	101	113
Lewis	Transalta Centralia Generation/ Mining	Centralia	Ammonia	26,445	0	0	26,445	20,267	0	0
			Arsenic compounds	1	26,150	9	26,161	19,304	322	206
			Barium compounds	14	2,203,239	330	2,203,583	1,918,492	60,870	146,253
			Chromium compounds	268	264,199	6	264,473		3,547	
			Cobalt compounds	1	191,894	13	191,908	161,640	2,637	2,683
			Copper compounds	5	220,377	12	220,394	126,648	5,868	5,677
			Hydrochloric acid	5,392	0	0	5,392		0	
			Hydrogen fluoride	8,370	0	0	8,370	12,712	0	0
			Lead compounds	3	155,933	4	155,940	157,823	975	860
			Manganese compounds	183	1,603,500	77	1,603,760	1,434,634	13,444	17,272
			Mercury compounds	113	221	0	334	427	1	0
			Nickel compounds	220	158,047	26	158,293	136,225	1,992	2,427
			Sulfuric acid	170,302	0	0	170,302		0	
			Vanadium compounds	686	355,739	69	356,494	310,885	10,034	14,128
			Zinc compounds	3	91,443	15	91,461	91,175	1,927	3,412
Summary for Transalta Centralia Generation/Mining				212,000	5,270,742	562	5,483,309		101,617	
Summary for Lewis County				228,913	5,270,757	44,149	5,543,819		103,192	
MASON	Olympic Panel Products	Shelton	Formaldehyde	1,100	0	0	1,100		1,130	
			Phenol	56	0	0	56		318	
Summary for Olympic Panel Products				1,156	0	0	1,156		1,448	
Mason	Simpson Timber Co (Dayton Ops)	Shelton	Lead	0	0	0	0	0	0	0
Mason	Simpson Timber Company (NW Timber & Wood)	Shelton	Lead compounds	3	0	0	3	4	202	277
Summary for Mason County				1,159	0	0	1,159		1,650	
PACIFIC	Weyerhaeuser Raymond Sawmill	Raymond	Aluminum (fume or dust)	0	0	0	0		0	
			Aluminum oxide	5	0	0	5		0	
			Benzene	10	0	0	10		0	
			Ethylene glycol	0	0	0	0		256	
			Isopropyl alcohol	0	0	0	0		0	
			Xylene	500	0	0	500		0	
			Zinc compounds	10	0	0	10		0	
Summary for Weyerhaeuser Raymond Sawmill				525	0	0	525		256	
Summary for Pacific County				525	0	0	525		256	

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
PEND OREILLE	Ponderay	Usk	Lead	1	0	12	13	12	191	77
	Newsprint Co		Nitrate compounds	0	0	132,700	132,700	201,400	0	0
Summary for Ponderay Newsprint Co				1	0	132,712	132,713		191	
Summary for Pend Oreille County				1	0	132,713	132,713		191	
PIERCE	American Reinforced Plastics	Tacoma	Styrene	13,362	0	0	13,362	14,348	5	5
Pierce	Atlas Casting & Technology	Tacoma	Chromium	255	0	0	255	255	23,814	10,839
			Copper	255	0	0	255	15	7,477	907
			Diisocyanates	255	0	0	255		1,576	
			Lead	0	0	0	0	0	103	5
			Manganese	255	0	0	255	19	1,707	1,827
			Molybdenum trioxide	0	0	0	0	0	0	0
			Nickel	255	0	0	255	62	11,202	5,498
			Phenol	255	0	0	255		2,283	
Summary for Atlas Casting & Technology				1,530	0	0	1,530		48,162	
Pierce	BCAG - Frederickson	Puyallup	Copper	0	0	0	0	0	0	261,460
			Nitric acid	0	0	0	0	0	0	130,000
			Toluene	11,130	0	0	11,130	17,130	4,077	3,718
Summary for BCAG - Frederickson				11,130	0	0	11,130		315,855	
Pierce	Burlington Environmental	Tacoma	Lead compounds	0	0	0	0	0	1,592	1,534
			Mercury compounds	0	0	0	0	0	912	10
			Nitric acid	0	0	0	0	0	751	7,735
Summary for Burlington Environmental				0	0	0	0		3,255	
Pierce	Busby Marine & Tank	Tacoma	Styrene	5,650	0	0	5,650	12,363	0	0
Pierce	Caraustar Mill Group	Tacoma	Benzo(G,H,I)perylene	81	0	0	81		0	
			Lead compounds	1	78	0	79	77	0	0
			Polycyclic aromatic	7,550	0	0	7,550	375	0	0
Summary for Caraustar Mill Group				7,632	78	0	7,710		0	
Pierce	Cascade Pole & Lumber	Tacoma	Creosote	971	0	45	1,016	1,128	477	367
			Polycyclic aromatic	1	0	4	5	5	46	35
Summary for Cascade Pole & Lumber				972	0	49	1,021		523	
Pierce	DOD USAF McChord AFB	McChord AFB	Xylene	44	0	0	44		11	
Pierce	Dynea Overlays INC	Tacoma	Formaldehyde	12,400	0	0	12,400	12,400	1,173	9,650
			Methanol	52,300	0	0	52,300	53,050	5,051	6,360
			Phenol	7,900	0	0	7,900	7,900	885	3,530
Summary for Dynea Overlays INC				72,600	0	0	72,600		7,109	

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
Pierce	Emerald Services INC	Tacoma	1,2-Dichloroethane	62	0	0	62	48	41,697	35,545
			Acetonitrile	240	0	0	240	362	52,289	43,415
			Benzene	38	0	0	38	22	518	1,045
			Certain glycol ethers	0	0	0	0		40,043	
			Chloroform	75	0	0	75	59	1,921	836
			Cyclohexane	90	0	0	90	244	25,813	21,425
			Dichloromethane	90	0	0	90	115	47,657	30,181
			Ethylbenzene	62	0	0	62	60	143,459	119,079
			Ethylene glycol	20	0	0	20	16	81,881	113,8125,417
			Lead compounds	35	0	0	35	12	6,669	108,828
			Methanol	662	0	0	662	601	131,062	259,458
			Methyl ethyl ketone	978	0	0	978	1,076	332,474	221,673
			Methyl isobutyl ketone	290	0	0	290	334	266,079	20,288
			Methyl tert-butyl ether	48	0	0	48	28	24,489	26,043
			N,N-dimethylformamide	112	0	0	112	79	31,438	112,043
			N-butyl alcohol	187	0	0	187	171	135,282	18,130
			N-hexane	83	0	0	83	265	21,842	22,158
			N-methyl-2-pyrrolidone	324	0	0	324	376	26,643	26,874
	Pyridine	113	0	0	113	88	32,431	21,361		
	Tert-butyl alcohol	0	0	0	0	51	25,779	604,785		
	Toluene	2,305	0	0	2,305	2,324	718,479	598,538		
	Xylene	1,842	0	0	1,842	837	713,492			
Summary for Emerald Services INC				7,656	0	0	7,656		2,901,437	
Pierce	General Plastics	Tacoma	Dichloromethane	14,003	0	0	14,003	14,183	719	1,074
			Diisocyanates	1	0	0	1	1	0	0
Summary for General Plastics				14,004	0	0	14,004		719	
Pierce	Glacier NW Dupont Plant	Dupont	Lead compounds	0	0	0	0	0	11	7
Pierce	Glacier NW Narrows Plant	Gig Harbor	Lead compounds	0	0	0	0		2	
Pierce	Glacier NW Tacoma Plant	Tacoma	Lead compounds	0	0	0	0	0	48	21
			Nitrate compounds	0	0	5	5		0	
Glacier Northwest INC – Tacoma Plant				0	0	5	5		48	
Pierce	Graymont Western US	Tacoma	Lead	0	0	0	0	0	0	0
			Mercury compounds	1	0	0	1	1	0	0
Summary for Graymont Western US INC				2	0	0	2		0	
Pierce	Hanson Pipe	Tacoma	Lead	0	0	0	0	0	0	0
Pierce	JCI Jones Chemicals	Tacoma	Chlorine	1	0	0	1	1	0	0
Pierce	Monier Life Tile	Lakewood	Lead	2	0	0	2	2	0	0
Pierce	NW Etch Tech	Tacoma	Hydrochloric acid	750	0	0	750		2,586	
Pierce	Parker Paint Mfg	Tacoma	Ethylene glycol	3,663	0	0	3,663	2,655	133	0
Pierce	Pioneer Americas Bleach Plant	Tacoma	Chlorine	0	0	0	0	0	0	0

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
Pierce	Pioneer Americas	Tacoma	Hydrochloric acid	39	0	0	39		0	
Pierce	Professional Coatings	Tacoma	Xylene	0	0	0	0	27,121	750	950
Pierce	Rainier Ballistics LLC	Tacoma	Antimony	21	0	0	21	22	129	183
			Copper	21	0	0	21	15	8,576	6,382
			Lead compounds	698	0	0	698	701	3,943	2,929
Summary for Rainier Ballistics LLC				740	0	0	740		12,648	
Pierce	Range Facility for Fort Lewis	Fort Lewis	Copper	0	105,905	0	105,905	78,600	0	0
			Lead compounds	200	83,000	0	83,200	78,700	0	0
			Nitroglycerin	0	0	0	0	0	0	0
Summary for Range Facility at Fort Lewis				200	188,905	0	189,105		0	
Pierce	Simpson Tacoma Kraft Co	Tacoma	Acetaldehyde	41,025	0	1,000	42,025	39,996	0	0
			Ammonia	40,650	0	938	41,588	49,390	0	0
			Barium compounds	328	0	0	328	343	27	16
			Benzo(G,H,I)perylene	1	0	5	5	5	6	6
			Catechol	0	0	5	5	6	0	0
			Chlorine	248	0	0	248	219	0	0
			Chlorine dioxide	2,541	0	0	2,541	2,495	0	0
			Diethanolamine	371	0	730	1,101		0	
			Formaldehyde	16,809	0	5,100	21,909	21,109	0	0
			Formic acid	0	0	2,510	2,510	2,430	0	0
			Hydrochloric acid	183,200	0	0	183,200		0	
			Lead compounds	306	0	135	441	170	3	15
			Manganese compounds	168	0	19,040	19,208	14,162	106	92
			Mercury compounds	16	0	1	17		23	
			Methanol	555,830	0	90,200	649,030	568,300	0	0
			Methyl ethyl ketone	7,946	0	665	8,611	8,314	0	0
			Phenol	18,100	0	0	18,100	17,800	0	0
			Polychlorinated	0	0	0	0	0	0	0
			Polycyclic aromatic	95	0	19	114	113	59	57
			Sulfuric acid	32,400	0	0	32,400		0	
Summary for Simpson Tacoma Kraft Co				900,033	0	120,348	1,020,381		224	
Pierce	Simpson Timber	Tacoma	Lead	0	0	0	0	0	0	0
Pierce	Superior Wood Treating	Sumner	Arsenic compounds	0	0	5	5	10	250	250
			Chromium compounds	0	0	250	250		250	
			Copper compounds	0	0	5	5	10	250	250
Summary for Superior Wood Treating				0	0	260	260		750	
Pierce	Temtco Steel Washington Division	Tacoma	Chromium	178	0	0	178	100	40	20
			Copper	20	0	0	20		5	
			Manganese	15	0	0	15	150	25	25
			Nickel	90	0	0	90		20	
Summary for Temtco Steel Washington Division				303	0	0	303		90	
Pierce	Toray Composites (America)	Tacoma	Diuron	0	0	0	0	0	0	0
			Methanol	3,500	0	0	3,500	4,000	51,000	26,700
			Methyl ethyl ketone	20,000	0	0	20,000	31,000	63,000	92,000
			N-Methyl-2-pyrrolidone	10,000	0	0	10,000	2,500	159,000	107,000
			Toluene	8,300	0	0	8,300	7,350	112,000	59,000
Summary for Toray Composites (America)				41,800	0	0	41,800		385,000	

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
Pierce	US Oil & Refining Co	Tacoma	1,2,4-Trimethylbenzene	996	0	0	996		24	
			Benzene	2,031	0	0	2,031	2,319	13	20
			Benzo(G,H,I)perylene	1	0	0	1		0	
			Cyclohexane	2,308	0	0	2,308	3,181	5	18
			Ethylbenzene	719	0	0	719	705	15	60
			Lead	1	0	1	2	7	51	8
			Naphthalene	145	0	0	145	110	24	42
			N-Hexane	4,710	0	0	4,710	6,826	3	10
			Polycyclic aromatic	0	0	0	0	0	1	0
			Toluene	4,640	0	0	4,640	5,045	59	231
			Xylene	4,357	0	0	4,357	4,223	85	321
Summary for US Oil & Refining Co				19,908	0	1	19,909		281	
Pierce	US DOD US Army Fort Lewis	Fort Lewis	Ethylene glycol	8	23	0	31	7	37,935	91,866
Pierce	Wilcox Dairy	Roy	Nitric acid	10	0	0	10	5	0	0
Summary for Pierce County				1,102,027	189,006	120,663	1,411,697		3,717,533	
SKAGIT	Fibrex Corp	Burlington	Styrene	8,920	0	0	8,920	6,507	0	0
	General Chemical LLC	Anacortes	Lead	0	0	0	0	91	100	91
			Mercury	0	0	0	0	1	15	1
			Sulfuric acid	13,401	0	0	13,401		0	
Summary for General Chemical LLC				13,401	0	0	13,401		115	
Skagit	Hallmark Refining	Mount Vernon	Silver	0	0	0	0	0	164,567	186,370
Skagit	Janicki Industries INC	Sedro Wooley	Cyanide compounds	472	0	0	472		0	
			Styrene	3,517	0	0	3,517		0	
Summary for Janicki Industries INC				3,989	0	0	3,989		0	
Skagit	March Point Cogeneration Co	Anacortes	Ammonia	6,200	0	0	6,200	6,300	0	0
			Ethylene	31	0	0	31	31	0	0
			Propylene	46	0	0	46	46	0	0
Summary for March Point Cogeneration Co				6,277	0	0	6,277		0	
Skagit	Nordic Tug INC	Burlington	Styrene	11,838	0	0	11,838		0	

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
Skagit	Puget Sound Refinery	Anacortes	1,2,4-Trimethylbenzene	660	77	0	737	1,061	139	12
			1,3-Butadiene	40	0	0	40	37	0	0
			Ammonia	1,870	120	4,700	6,690	7,750	0	0
			Anthracene	0	0	0	0	0	6	6
			Benzene	6,600	22	0	6,622	4,700	78	44
			Benzo(G,H,I)perylene	0	1	1	2	1	2	59
			Carbonyl sulfide	690	0	0	690	690	0	0
			Cresol	1,330	0	0	1,330	750	0	0
			Cyanide compounds	420	0	110	530	16,120	0	0
			Cyclohexane	2,080	19	0	2,099	3,460	36	27
			Ethylbenzene	1,200	29	0	1,229	1,210	147	121
			Ethylene	40	0	0	40	761	0	0
			Hydrochloric acid	41,000	0	0	41,000	0	0	0
			Hydrogen cyanide	440	0	110	550	16,120	0	0
			Lead compounds	160	24	8	192	133	99	11
			Manganese compounds	3	212	0	215	0	0	0
			Mercury compounds	10	26	1	37	39	7	8
			Methanol	250	0	0	250	250	0	0
			Molybdenum trioxide	250	0	0	250	250	85,000	1,600
			Naphthalene	7	27	0	34	10	530	120
			N-Hexane	6,700	5	0	6,705	6,203	51	26
			Nickel compounds	353	460	110	923	549	11,935	451
			Phenanthrene	1	0	0	1	1	0	2
			Phenol	118	0	200	318	270	0	0
			Polycyclic aromatic	6	18	1	25	7	46	1,661
			Propylene	205	0	0	205	1,830	0	0
			Styrene	160	0	0	160	64	0	0
			Sulfuric acid	210,000	0	0	210,000	0	0	0
			Tetrachloroethylene	250	0	0	250	250	0	0
			Toluene	7,400	100	0	7,500	6,701	970	508
			Xylene	6,800	131	0	6,931	7,101	1,106	862
Summary for Puget Sound Refinery				289,043	1,271	5,241	295,554		100,152	

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers	
Skagit	Tesoro Refining Co	Anacortes	1,2,4-Trimethylbenzene	1,921	0	0	1,921	1,893	0	0	
			1,3-Butadiene	76	0	0	76	86	0	0	
			Ammonia	11,329	918	1,401	13,648	60,020	0	0	
			Anthracene								
			Benzene								
			Benzo(G,H,I)perylene								
			Biphenyl								
			Carbon disulfide								
			Carbonyl sulfide								
			Chlorine								
			Cresol								
			Cumene								
			Cyclohexane								
			Ethylbenzene								
			Ethylene								
			Hydrochloric acid								
			Lead compounds								
			Mercury compounds								
			Methanol								
			Methyl tert-butyl ether								
			Molybdenum trioxide								
			Naphthalene								
			N-Hexane								
Phenanthrene											
Phenol											
Polycyclic aromatic											
Propylene											
Sulfuric acid											
Tetrachloroethylene											
Toluene											
Xylene											
Summary for Tesoro Refining & Marketing Co				706,719	1,042	1,422	709,182		1,178		
Summary for Skagit County				1,040,187	2,312	6,663	1,049,162		266,012		
SNOHO- MISH	Achilles USA INC	Everett	Di(2-Ethylhexyl)	86	0	0	86	86	255	255	
			Phenol	18,000	0	0	18,000	6,127	0	0	
Summary for Achilles USA INC				18,086	0	0	18,086		255		
Snohomish	Aerocell INC	Marysville	Phenol	607	0	0	607	642	4,387	1,033	
Snohomish	Applied Technical Svs	Bothell	Lead	3	0	0	3	3	3,825	3,611	

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
Snohomish	Boeing Commercial Airplane Group - Everett	Everett	Certain glycol ethers	22,200	0	0	22,200		42,502	
			Chromium compounds	55	0	11	66		38,342	
			Copper	1	0	101	102	76	142,749	88,013
			Dichloromethane	12,607	0	0	12,607	9,370	498	740
			Diethanolamine	27,000	0	0	27,000	21,000	0	0
			Manganese compounds	5	0	0	5	0	35,682	31,079
			Methanol	422	0	0	422	1,560	260	240
			Methyl ethyl ketone	88,960	0	0	88,960	128,000	27,740	59,400
			Methyl isobutyl ketone	13,400	0	0	13,400	25,500	7,416	10,900
			Naphthalene	10	0	0	10	8	0	140
			Phenol	4,000	0	0	4,000	2,670	191	109
			Sec-butyl alcohol	5,450	0	0	5,450	13,300	4,460	4,780
			Tetrabromobisphenol A	0	0	0	0	700	26	0
			Toluene	36,700	0	2	36,702	42,201	7,870	8,631
			Trichloroethylene	35,800	0	0	35,800	60,000	3,800	8,000
Summary for Boeing Commercial Airplane Group - Everett				246,610	0	114	246,724		311,536	
Snohomish	Canyon Creek Cabinet Co	Monroe	Formaldehyde	167	0	0	167	255	0	0
			Methanol	11,608	0	0	11,608	16,048	817	1,123
Summary for Canyon Creek Cabinet Co				11,775	0	0	11,775		817	
Snohomish	Chevron Products Co Richmond Beach Asphalt Terminal	Seattle	Benzene	2,305	0	250	2,555		10	
			Benzo(G,H,I)perylene	0	0	0	0	0	0	0
			Polycyclic aromatic	0	0	0	0	0	0	0
Summary for Chevron Products Co, Richmond Beach Asphalt				2,305	0	250	2,555		10	
Snohomish	Contour Aerospace Corp	Everett	Copper	0	0	0	0	0	32,035	35,712
			Manganese	0	0	0	0	0	12,013	11,017
			Nickel	0	0	0	0	0	12,013	9,725
Summary for Contour Aerospace Corp				0	0	0	0		56,061	
Snohomish	Cook Composites & Polymers Co	Arlington	Methyl methacrylate	1,324	0	0	1,324	1,196	4,773	3,929
			Styrene	3,836	0	0	3,836	3,466	29,475	22,181
Summary for Cook Composites & Polymers Co				5,160	0	0	5,160		34,248	
Snohomish	Crown Pacific	Marysville	Lead	0	0	0	0		0	
Snohomish	Eaton Electrical ICD Sensors	Everett	Lead compounds	0	0	0	0	0	6	145
Snohomish	Eldec Corp – Martha Lake	Lynnwood	Lead compounds	0	0	0	0	0	262	338
Snohomish	Eldec Corp – North Creek	Bothell	Lead compounds	0	0	0	0	200	1,437	1,328
Snohomish	Fluke Corp – Seaway	Everett	Lead compounds	0	0	0	0	0	346	306
Snohomish	Fluke Corp - Evergreen	Everett	Lead compounds	0	0	0	0	0	26,878	5,836
Snohomish	Glacier Bay Catamarans	Monroe	Methyl ethyl ketone	755	0	0	755		0	
			Methyl methacrylate	9,750	0	0	9,750	5,505	0	0
			Styrene	320,250	0	0	320,250	192,250	0	0
			Toluene	255	0	0	255		0	
Summary for Glacier Bay Catamarans				331,010	0	0	331,010		0	

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
Snohomish	Glacier Northwest	Everett	Lead compounds	0	0	0	0	0	1	1
Snohomish	Hampton Lumber Mills - Arlington	Arlington	Lead compounds	1	0	0	1	1	0	0
Snohomish	Hampton Lumber Mills - Darrington	Darrington	Lead compounds	3	24	0	27	3	0	12
Snohomish	Industrial Finishings / Calvert Industries	Snohomish	Methyl ethyl ketone Xylene	19,108 17,759	0 0	0 0	19,108 17,759	32,057	6,418 4,137	6,962
Summary for Industrial Finishings LLC/Calvert Industries				36,867	0	0	36,867		10,555	
Snohomish	JH Baxter & Co	Arlington	Hexachlorobenzene Polycyclic aromatic	0 1	0 0	0 0	0 1	0 1	0 0	0 0
Summary for JH Baxter & Co				1	0	0	1		0	
Snohomish	Kimberly-Clark Worldwide	Everett	Ammonia Barium compounds Chlorine Chlorine dioxide Formic acid Hydrochloric acid Lead compounds Manganese compounds Mercury compounds Methanol Nitrate compounds Zinc compounds	3,870 4 0 0 0 366,608 6 5 1 35,780 0 33	0 0 0 0 0 0 0 0 0 0 0 0	40,040 4,220 0 0 0 0 439 27,479 0 96,575 150,531 6,251	43,910 4,224 0 0 0 366,608 445 27,484 2 132,355 150,531 6,284	35,092 4,919 0 250 0 0 430 22,256 3 129,956 139,470 6,001	0 24,584 0 0 0 0 9,967 55,266 10 0 0 31,562	0 19,916 0 0 0 0 6,564 62,598 44 0 0 44,970
Summary for Kimberly-Clark Worldwide				406,307	0	325,535	731,843		121,389	
Snohomish	Neuvant Aerospace	Everett	Lead	0	0	0	0	0	0	0
Snohomish	Philips Ultrasound	Bothell	Lead	0	0	0	0	0	703	1,387
Snohomish	Plexus Corp	Bothell	Lead compounds	0	0	0	0		1,051	
Snohomish	Romac Industries	Bothell	Chromium Manganese Nickel	5 5 5	0 0 0	0 0 0	5 5 5	5 5 5	255 0 10	5 5 5
Summary for Romac Industries INC				15	0	0	15		265	
Snohomish	Seacast INC	Marysville	Chromium Nickel	10 10	0 0	0 0	10 10		0 0	
Summary for Seacast INC				20	0	0	20		0	
Snohomish	Spectrum Glass	Woodinville	Lead compounds Zinc compounds	0 100	0 0	0 59	0 159	0 74	0 429	0 307
Summary for Spectrum Glass Co				100	0	59	159		429	
Snohomish	Tone Commander Sys	Mukilteo	Lead	0	0	0	0	0	0	0
Snohomish	US Marine/ Brunswick Family Boat	Arlington	Dimethyl phthalate Styrene	139 129,479	0 0	0 0	139 129,479	111,970	0 0	0 0
Summary for Brunswick Family Boat				129,618	0	0	129,618		0	
Summary for Snohomish County				1,188,489	24	325,959	1,514,471		574,460	
SPOKANE	ADM Animal Health	Spokane	Zinc compounds	3	0	0	3	7	1,933	3,173
Spokane	Agilent Technologies	Liberty Lake	Lead	0	0	0	0	1	9,810	3,015

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
Spokane	Apollo Plastics	Spokane	Styrene	140	0	0	140	97	0	0
Spokane	Central Premix	Spokane	Lead	0	0	0	0	0	0	0
Spokane	Columbia Paint & Coatings	Spokane	Ethylene glycol	3,731	0	0	3,731	3,388	0	0
			Methanol	711	0	0	711		0	
			Toluene	2,738	0	0	2,738	3,280	0	0
Summary for Columbia Paint & Coatings				7,180	0	0	7,180		0	
Spokane	Conco Phillips	Spokane	1,2,4-Trimethylbenzene	613	0	0	613	311	14,406	5,155
	Spokane-Parkwater Terminal		Benzene	864	0	0	864	801	8,477	3,712
			Benzo(G,H,I)perylene	0	0	0	0	0	1	0
			Biphenyl	2	0	0	2	1	469	0
			Cumene	134	0	0	134	79	2,451	1,031
			Cyclohexane	277	0	0	277	343	971	0
			Ethylbenzene	379	0	0	379	226	6,519	2,887
			Naphthalene	102	0	0	102	45	4,156	0
			N-Hexane	1,078	0	0	1,078	1,314	4,217	2,062
			Phenol	12	0	0	12	6	497	0
			Polycyclic aromatic	0	0	0	0	0	6	0
			Styrene	0	0	0	0	0	137	0
			Toluene	2,224	0	0	2,224	1,752	27,242	12,990
			Xylene	1,781	0	0	1,781	1,076	25,771	13,403
Summary for Conco Phillips Spokane – Parkwater Terminal				7,466	0	0	7,466		95,320	
Spokane	Exxon Mobil Corp	Spokane	1,2,4-Trimethylbenzene	87	0	0	87		104	
			Benzene	696	0	0	696		83	
			Benzo(G,H,I)perylene	0	0	0	0		0	
			Ethylbenzene	104	0	0	104		75	
			Lead compounds	0	0	0	0		0	
			N-Hexane	1,206	0	0	1,206		116	
			Polycyclic Aromatic	0	0	0	0		0	
			Toluene	1,079	0	0	1,079		229	
			Xylene	488	0	0	488		291	
Summary for Exxon Mobil Corp – Spokane Terminal				3,660	0	0	3,660		898	
Spokane	Fiber Tech Industries	Spokane	Methyl methacrylate	14,904	0	0	14,904	6,180	0	0
			Styrene	91,340	0	0	91,340	77,460	840	1,391
Summary for Fiber Tech Industries				106,244	0	0	106,244		840	
Spokane	Goodrich Carbon Ops	Spokane	Benzene	250	0	0	250	250	250	0
			Ethylene	750	0	0	750	750	0	0
Summary for Goodrich Carbon Operations				1,000	0	0	1,000		250	
Spokane	Honeywell Electronic Mats	Cheney	Copper	0	0	0	0	0	53,221	43,105
			Lead	0	0	0	0	0	0	202
Summary for Honeywell Electronic Materials INC - Cheney				0	0	0	0		53,221	
Spokane	Honeywell Electronic Materials	Spokane	Copper compounds	10	0	0	10	10	177,066	71,740
			Lead	1	0	0	1	1	13,510	5,002
			N-Hexane	14,000	0	0	14,000	11,000	2,500	1,700
			Nickel compounds	10	0	0	10	10	11,100	13,700
			Nitrate compounds	10	0	0	10	10	40,000	40,000
			Nitric acid	500	0	0	500	1,000	0	0
Summary for Honeywell Electronic Materials INC - Spokane				14,531	0	0	14,531		244,176	

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
Spokane	Huntwood Industries	Spokane	Ethylbenzene	7,832	0	0	7,832		2,525	
			Methyl ethyl ketone	27,879	0	0	27,879	39,912	4,192	0
			Toluene	13,837	0	0	13,837	1,651	3,740	0
			Xylene	47,769	0	0	47,769	37,297	2,740	0
Summary for Huntwood Industries				97,317	0	0	97,317		13,197	
Spokane	Inland Empire Paper Co	Spokane	Lead compounds	12	0	5	17	10	119	94
			Methanol	14,401	0	250	14,651	14,856	250	250
Summary for Inland Empire Paper Co				14,413	0	255	14,668		369	
Spokane	Inland Foundry	Mead	Lead compounds	119	96	0	215	430	7	1,331
Spokane	Kaiser Aluminum & Chemical Corp – Trentwood Works	Spokane	Chlorine	6,648	0	0	6,648	29,635	0	0
			Chromium	63	0	1	63	44	35	65
			Copper	69	0	0	70	34	162	253
			Hydrochloric acid	2,266	0	0	2,266		0	
			Lead	51	0	0	51	53	1	2
			Manganese	21	0	449	21	48	13	96
			Zinc compounds	14	0	450	463	276	181	290
Summary for Kaiser Aluminum & Chemical Corp				9,132	0	450	9,582		392	
Spokane	Koch Materials Co – Spokane Hillyard Facility	Spokane	Benzo(G,H,I)perylene	0	0	0	0	0	0	0
			Lead	0	0	0	0		6	
			Polycyclic aromatic	0	0	0	0	0	36	0
Summary for Koch Materials Co – Spokane Hillyard Facility				0	0	0	0		43	
Spokane	Melcher Mfg Co	Spokane	Styrene	13,145	0	0	13,145	9,252	0	0
Spokane	Mica Brick Plant	Mica	Hydrogen fluoride	21,939	0	0	21,939	25,671	0	0
Spokane	Monaco Enterprises INC	Spokane	Lead	0	0	0	0		217	
Spokane	Northern Technologies INC	Liberty Lake	Lead	0	0	0	0		1,114	
Spokane	Quarry Tile Co	Spokane	Lead compounds	20	0	0	20	2	1	0
			Zinc compounds	0	0	0	0		18	
Summary for Quarry Tile Co				20	0	0	20		19	
Spokane	Safety-Kleen Systems (118301)	Spokane	Ethylene glycol	24	0	0	24	22	215,351	177,150
Spokane	Servatron INC	Spokane	Lead	0	0	0	0	0	0	24
Spokane	Spokane Galvanizing INC	Airway	Zinc compounds	1,268	0	0	1,268	1,274	150,693	0
Spokane	Spokane Industries INC	Spokane	Chromium	14	0	0	14	10	12,406	250
			Manganese	76	0	0	76	255	4,210	1,943
			Molybdenum Trioxide	4	0	0	4		188	
			Nickel	4	0	0	4	10	6,319	250
Summary for Spokane Industries INC				98	0	0	98		23,123	
Spokane	Telect INC	Liberty Lake	Lead compounds	0	0	0	0	0	771	857
Spokane	Travis Pattern & Foundry INC	Spokane	Copper	0	0	0	0	0	0	0
			Lead	0	0	0	0		0	
			Trichloroethylene	3,220	0	0	3,220	7,200	0	0
Summary for Travis Pattern & Foundry INC				3,220	0	0	3,220		0	

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
Spokane	United Coatings Mfg Co	Spokane	Diisocyanates	0	0	0	0	0	0	500
			Ethylbenzene	100	0	0	100	474	142	128
			Lead compounds	0	0	0	0	0	0	0
			Xylene	1,291	0	0	1,291	1,901	424	385
Summary for United Coatings Mfg. Co.				1,391	0	0	1,391	566		
Summary for Spokane County				302,310	96	706	303,111	812,312		
STEVENS	Boise Cascade Corp	Kettle Falls	Lead	12	0	0	12	83	463	280
Stevens	Boise Cascade Corp Plywood Mills	Kettle Falls	Lead	43	0	0	43	164	779	220
			Methanol	44,418	0	0	44,418	29,493	0	0
Summary for Boise Cascade Corp –Plywood Mill				44,461	0	0	44,461	779		
Stevens	Hearth & Home Technologies	Colville	Chromium	2	0	0	2		0	
Stevens	Northwest Alloys	Addy	Lead	0	0	0	0	0	0	0
Stevens	Stimson Lumber Co Arden Ops	Colville	Lead compounds	11	0	0	11	10	114	140
Summary for Stevens County				44,486	0	0	44,486		1,356	
Thurston	Amtech Corp – Yelm Ops	Yelm	Styrene	94,899	0	0	94,899	50,515	0	0
Thurston	Crown Beverage Packaging	Olympia	Certain glycol ethers	123,000	0	0	123,000		0	
			Hydrogen fluoride	0	0	0	0	0	0	0
			Manganese compounds	0	0	0	0	0	315	5
			N-butyl alcohol	187,000	0	0	187,000	133,000	0	0
Summary for Crown Beverage Packaging				310,000	0	0	310,000	315		
Thurston	Lasco Bathware	Yelm	Styrene	335,000	0	0	335,000	354,400	2,142	1,618
Summary for Thurston County				739,899	0	0	739,899		2,457	
WALLA WALLA	Boise Cascade Paper Division	Wallula	Acetaldehyde	52,467	0	14,214	66,681	35,928	0	0
Ammonia			120,500	0	17,000	137,500	136,698	0	0	
Barium compounds			123	12,000	0	12,123	0	0	0	
Catechol			0	1	59	60	59	0	0	
Cresol			19	0	41	60	60	0	0	
Formaldehyde			33,726	24	1	33,751	37,104	0	0	
Formic acid			0	0	2,187	2,187	2,333	0	0	
Hydrochloric acid			557,927	0	0	557,927	0	0	0	
Lead			139	952	71	1,162	828	0	0	
Manganese compounds			1,000	45,450	41,000	87,450	78,518	0	0	
Methanol			223,730	785	17,000	241,515	28,994	0	0	
Methyl ethyl ketone			7,805	0	280	8,085	8,550	0	0	
Nitrate compounds			559	0	0	559	26,000	0	0	
Phenol			559	24	0	583	630	0	0	
Polycyclic aromatic Sulfuric acid	73	15	12	100	104	0	0			
	136,000	0	0	136,000	0	0	0			
Summary for Boise Cascade Paper Division				1,134,627	59,251	91,865	1,285,734	0		

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
Walla Walla	Key Technology INC	Walla Walla	Chromium	0	0	0	0	0	54,904	33,986
			Chromium	0	0	0	0	0	36,853	22,907
			Manganese	0	0	0	0	0	3,378	2,070
			Manganese	0	0	0	0	0	5,064	3,105
			Nickel	0	0	0	0	0	24,998	15,439
			Nickel	0	0	0	0	0	16,699	10,376
Summary for Key Technology INC				0	0	0	0		141,896	
Walla Walla	Nelson Irrigation Corp	Walla Walla	Copper	70	0	0	70	80	236,858	221,920
			Lead	15	0	0	15	15	13,655	12,388
Summary for Nelson Irrigation Corp				85	0	0	85		250,513	
Walla Walla	Tyson Fresh Meats, Pasco	Walla Walla	Ammonia	23,387	0	0	23,387	25,300	554,200	56,500
			Nitrate compounds	0	0	0	0	15,600	174,000	0
Summary for Tyson Fresh Meats, Pasco				23,387	0	0	23,387		228,200	
Walla Walla	Walla Walla Foundry INC	Walla Walla	Copper	0	0	0	0	0	8,226	4,244
Summary for Walla Walla County				1,158,099	59,251	91,865	1,309,215		628,835	
WHAT- COM	BP Cherry Point Refinery	Blaine	1,2,4-Trimethylbenzene	510	7	0	517	2,090	0	0
			1,3-Butadiene	170	0	0	170	130	0	0
			Ammonia	210	0	6,800	7,010	7,919	0	0
			Benzene	11,900	7	6	11,913	5,805	49	100
			Benzo(G,H,I)perylene	0	6	0	6	2	0	0
			Carbon disulfide	7	0	0	7	7	0	0
			Cresol	18	22	0	40	17	0	0
			Cumene	118	2	0	120	359	0	0
			Cyclohexane	3,800	1	0	3,801	1,710	0	0
			Diethanolamine	240	0	6,100	6,340	3,300	0	0
			Ethylbenzene	2,150	8	6	2,164	2,205	0	0
			Ethylene	190	0	0	190	220	0	0
			Hydrochloric acid	32	0	0	32		0	
			Lead compounds	141	0	0	141	179	13	27
			Manganese compounds	380	0	2,200	2,580	963	64,000	64,000
			Mercury compounds	15	0	0	15	4	2	7
			Methanol	3,500	0	0	3,500	9,400	4	4
			Molybdenum trioxide	0	0	0	0	0	0	0
			Naphthalene	359	2	0	361	590	0	0
			N-Hexane	11,900	21	0	11,921	7,800	0	0
			Nitrate compounds	0	0	27,000	27,000	24,000	0	0
			Phenanthrene	1	0	0	1	2	0	0
			Phenol	310	0	580	890	850	0	0
Polycyclic aromatic	2	900	0	902	125	0	0			
Propylene	1,004	0	0	1,004	712	0	0			
Sulfuric acid	85,000	0	0	85,000		0				
Tetrachloroethylene	270	0	0	270	22	0	0			
Toluene	13,600	37	6	13,643	7,005	0	0			
Xylene	8,000	38	6	8,044	8,005	0	10			
Summary for BP Cherry Point Refinery				143,827	1,051	42,704	187,582		64,068	

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
Whatcom	Brooks Mfg Co	Bellingham	Hexachlorobenzene	0	0	0	0	0	0	0
			Polycyclic aromatic	0	0	0	0	0	0	0
Summary for Brooks Mfg Co				0	0	0	0	0	0	0
Whatcom	Conocophillips Refinery	Ferndale	1,2,4-Trimethylbenzene	235	14	0	249	456	2,459	849
			1,3-Butadiene	1,074	0	0	1,074	279	0	0
			Ammonia	175	0	13,633	13,808	2,540	0	0
			Benzene	3,097	47	0	3,144	2,785	1,460	95
			Benzo(G,H,I)perylene	36	1	0	37	14	0	13
			Cresol	11	0	0	11	18	0	0
			Cumene	612	26	0	638	655	251	274
			Cyclohexane	5,854	90	0	5,944	7,017	4,865	381
			Diethanolamine	103	0	0	103	933	0	0
			Ethylbenzene	1,960	41	0	2,001	2,075	986	424
			Ethylene	1,827	0	0	1,827	1,750	0	0
			Hydrogen fluoride	465	0	0	465	465	0	0
			Lead compounds	5	0	4	9	45	261	0
			Manganese	0	0	419	419	451	0	0
			Mercury compounds	0	0	1	1	1	137	5
			Methanol	7	0	0	7	10	0	0
			Molybdenum trioxide	0	0	0	0		27,972	
			N,N-Dimethylformamide	5	0	0	5	1,185	0	
			Naphthalene	995	29	0	1,024	1,899	251	236
			N-Hexane	1,847	41	0	1,888	30,867	7	189
			Nitrate compounds	0	0	31,429	31,429	63	0	0
			Phenol	2	0	60	62	1,909	0	0
			Polycyclic aromatic	279	8	0	288	1,726	3	104
			Propylene	3,737	0	0	3,737		0	0
			Sulfuric acid	29,692	0	0	29,692	7	0	
			Tetrachloroethylene	8	0	0	8	13,084	430	0
			Toluene	9,979	115	0	10,094	5,932	513	610
			Xylene	5,816	235	0	6,051		4,916	1,274
Summary for Conocophillips Refinery - Ferndale				67,822	648	45,546	114,015		44,511	
Whatcom	Darigold - Lynden	Lynden	Nitrate compounds	0	5	0	5	5	78,437	72,012
			Nitric acid	10	5	0	15	15	80	7
			Polycyclic aromatic	0	0	0	0	0	0	0
Summary for Darigold - Lynden				10	10	0	20		78,517	
Whatcom	Encogen NW	Bellingham	Ammonia	56,010	0	0	56,010	66,234	17,420	0
Whatcom	Ershigs INC	Bellingham	Chromium	0	0	0	0	0	6,758	7,592
			Styrene	44,665	0	0	44,665	44,641	233	1,952
Summary for Ershigs INC				44,665	0	0	44,665		6,991	
Whatcom	IKO Pacific INC	Sumas	Polycyclic aromatic	0	0	0	0	0	51	66
Whatcom	Intalco Aluminum Corp	Ferndale	Carbonyl sulfide	280,000	0	0	280,000	155,531	0	0
			Copper	187	0	0	187	104	0	0
			Hydrogen fluoride	93,000	0	0	93,000	93,616	0	0
			Lead	57	0	0	57		0	
			Lithium carbonate	1,300	0	0	1,300	1,051	0	0
			Manganese	84	0	0	84	52	0	0
			Polycyclic aromatic	980	0	0	980	8,570	0	800
Summary for Intalco Aluminum Corp				375,608	0	0	375,608		0	

County	Facility	City	Chemical	Air	Land	Water	2003 Releases	2002 Releases	2003 Transfers	2002 Transfers
Whatcom	Maax Hydroswirl Mfg	Bellingham	Methyl methacrylate	492	0	0	492	492	0	0
			Styrene	45,969	0	0	45,969	49,198	3,200	0
Summary for Maax Hydroswirl Mfg				46,461	0	0	46,461		3,200	
Whatcom	Oceanus Plastics	Ferndale	Styrene	4,604	0	0	4,604	7,977	957	1,110
Whatcom	Praxair INC	Ferndale	Ammonia	20,926	0	0	20,926	19,060	0	0
Whatcom	Sea Sport Boats	Bellingham	Styrene	12,638	0	0	12,638	10,909	0	0
Summary for Whatcom County				772,571	1,709	88,251	862,530		215,716	
WHIT- MAN	Schweitzer Engineering Laboratories	Pullman	Copper	0	0	0	0	0	830	0
			Diisocyanates	0	0	0	0	0	0	250
			Lead	0	0	0	0	0	8,971	4,210
Summary for Schweitzer Engineering Laboratories INC				0	0	0	0		9,801	
Summary for Whatcom County				0	0	0	0		9,801	
YAKIMA	AMTech Corp	Wapato	Styrene	60,822	0	0	60,822		0	
Yakima	Bay Zinc Co INC	Moxee	Lead compounds	2	0	0	2	2	0	0
			Zinc compounds	2,575	0	0	2,575	1,574	0	0
Summary for Bay Zinc Co INC				2,577	0	0	2,577		0	
Yakima	Boise Cascade Corp Yakima Complex	Yakima	Lead	50	0	0	50	166	966	401
			Manganeso	4,061	0	0	4,061		23,273	
			Methanol	39,588	0	0	39,588		0	
Summary for Boise Cascade Corp Yakima Complex				43,699	0	0	43,699		24,239	
Yakima	Darigold - Sunnyside	Sunnyside	Ammonia	338	5	0	343	10	814	53
			Benzoyl peroxide	0	5	0	5	5	0	0
			Chlorine	5	5	5	15		5	
			Nitrate compounds	0	5	0	5	5	841,542	868,095
			Nitric acid	10	5	0	15	15	8,632	42,505
Summary for Darigold - Sunnyside				353	25	5	383		850,993	
Yakima	Jeld-Wen	White Swan	Formaldehyde	37,400	0	0	37,400	36,400	5	5
			Lead	134	0	0	134	134	0	0
			Methanol	70,800	0	0	70,800	70,800	5	5
Summary for Jeld-Wen				108,334	0	0	108,334		10	
Yakima	Pace Intl LLX	Wapato	Zinc compounds	500	1,000	0	1,500	1,500	1,000	1,000
Yakima	Trail Wagons	Yakima	Styrene	56,721	0	0	56,721	36,762	0	3
Yakima	Tree Top INC	Selah	Nitrate compounds	0	0	0	0	0	39,800	43,000
Yakima	Welch's	Grandview	Benzo(G,H,I)perylene	34	0	0	34	38	0	0
			Polycyclic aromatic	3,147	0	0	3,147	3,519	0	0
Summary for Welch's				3,181	0	0	3,181		0	
Yakima	Yakima Bait Co/Worden's Lure	Granger	Lead	0	0	0	0	0	0	0
Yakima	Yakima Training Center Range Ops	Yakima	Copper	0	52,750	0	52,750	72,300	0	0
			Lead compounds	200	15,600	0	15,800	14,090	0	
Summary for Yakima Training Center – Range Operations				200	68,350	0	68,550		0	
Summary for Yakima County				276,386	69,375	5	345,766		916,042	
GRAND TOTAL				12,745,107	6,408,030	1,397,182	20,550,319		19,648,448	