Toxics Right-To-Know Program
Five-Year Database Summary Report (2005-2009)
Compiled by Oregon Toxics Alliance
www.oregontoxics.org
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This is a brief summary of the air pollution information available to the public via the **Toxics Right-To-Know Program** database, which includes data for reporting years 2005 through 2009. Some data from the **Environmental Protection Agency's Toxic Release Inventory** is included for comparisons.

Toxic right-to-know is based on the simple belief that all of us have the right to breathe clean air, live in areas free from toxic pollution, and consume safe food and water. In order to guarantee this right to communities the public must have the ability to learn about the toxic materials emitted and released. To understand this problem it is important to realize that there are over 72,000 synthetic chemicals currently in use today. Many of these chemicals are released into the environment. Many of these chemicals have been shown to cause cancer, birth defects, and reproductive disorders.

The city of Eugene, Oregon is the only city to host a toxics right-to-know website and database. Eugene's Toxics Database is unique in that it provides information about local use and emissions of pollutants in a mass balance format (inputs and outputs must balance). Local voters adopted the Eugene Toxics Right-to-Know program in November 1996 as an amendment to the city's charter. It was included on the ballot via the citizen initiative process. The initiative was a response to the perception that information concerning the use of hazardous substances in the community, and in particular the releases of those substances into the local environment, was not readily accessible to citizens under existing reporting regulations. Information can be searched by chemical, industry, or facility.

Air pollution can affect our health in many ways with both *short-term* and *long-term* effects. Different groups of individuals are affected by air pollution in different ways. Some individuals are much more sensitive to pollutants than are others. Young children and elderly people often suffer more from the effects of air pollution. People with health problems such as asthma, heart and lung disease may also suffer more when the air is polluted. The extent to which an individual is harmed by air pollution usually depends on the total exposure to the damaging chemicals, i.e., the *duration of exposure* and the *concentration of the chemicals* must be taken into account.

Examples of short-term effects include irritation to the eyes, nose and throat, and upper respiratory infections such as bronchitis and pneumonia. Other symptoms can include headaches, nausea, and allergic reactions. Short-term air pollution can aggravate the medical conditions of individuals with asthma and emphysema.

Long-term health effects can include chronic respiratory disease, lung cancer, heart disease, and even damage to the brain, nerves, liver, or kidneys. Continual exposure to air

pollution can affect the lungs of growing children and may aggravate or complicate medical conditions in the elderly.

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1. Total Hazardous Substances Released to Air

The City of Eugene's Toxics Program therefore requires that all hazardous substance users within the city limits (definition requires an annual input of more than 2640 pounds of hazardous substances and 10 or more full time employees) file an annual materials balance report listing inputs and outputs of all hazardous substances obtained, used or generated.

Total in pounds reported for the City of Eugene (2005-2008) Toxics Right to Know

Output to Air	3,313,622

The Environmental Protection Agency's Toxic Release Inventory has similar criteria for companies that are required to report and is statewide.

Total in pounds reported in Eugene (2005-2008) EPA Toxic Release Inventory

Output to Air	
Fugitive	230,568
Point Source	970,852

Total	1,201,420

Fugitive air emissions are all releases to air that are not released through a confined air stream. Fugitive emissions include equipment leaks, evaporative losses from surface impoundments and spills, and releases from building ventilation systems.

Stack or point source air emissions occur through confined air streams such as stack, vents, ducts, or pipes.

2. Hazardous Substance Release by Zip Code (Toxic Right To Know)

In 2008 34 of the 36 businesses reporting use of hazardous substances were located in the 97402 area (west Eugene) calculating out to 94.4% of air releases. This area is defined as approximately bounded by the Northwest Expressway and Chambers to the east, and 18th street to the south until Bailey Rd.

Total percentage over 4 yrs

	Percentage of total output
97402	**94.4 %**
97401	**5.6%**

3. Air Emissions of Hazardous Substances (Toxic Right To Know)

3.1 The Top Nine Chemicals Emitted to Air

	Total pounds over 4 yrs	% total output
1. Acetone (2-propanone)	796,071	24.0%
2. Methanol (methyl alcohol)	652,764	19.7%
3. Ethanol (ethyl alcohol)	416,149	12,6%
4. Formaldehyde	69,448	8.8%
5. Xylene/Xylenes (isomers & mixtures)	149,824	4.5%
6. Toluene (methylbenzene)	118,318	3.6%
7. Phenol, hydroxybenzene	39,181	1.2%
8. Ethylbenzene	36,595	1.1%
9. MEK (methyl ethyl ketone)	29,758	0.9%

These nine chemicals make up 80% of the total output to air over the four-year period.

3.2 The Ten Top Emitters to Air from the Toxics Right to Know Database

	Total pounds over 4 yrs	% total output

1.	Lanz Cabinet Shop Inc.	757,357	22.9%
2.	Flakeboard America Ltd.	637,645	19.2%
3.	VeneerTechnologies	404,290	12.2%
4.	Forest Paint Company	297,323	9.0%
5.	Emerald Forest Products	252,610	7.6%
6.	Western Pneumatics Inc.	176,769	5.3%
7.	Oregon Tread Rubber	123,252	3.7%
8.	Whittier Wood Products	92,553	2.8%
9.	Bulk Handling Systems	88,063	2.7%
10.	Newood Display Fixtures Inc.	66.797	2.0%

Emissions from these ten companies account for over 80% of the total reported air emissions over the four-year period (2005-2008)

4. Air Emissions of Hazardous Substances (EPA Toxic Release Inventory)

Some of the above companies also are required to report to the TRI database. All of these companies except one reports very close to the same data to the TRK database as to the EPA TRI. Only J.H. Baxter does not report the same to both databases. What Baxter reports to TRI:

		Total pounds over 4 years (2005-2009)
J. H. Baxter	Ammonia	101,956
	Creosote	6,443
	Pentachlorophenol	1,502

As per the TRI database in 2008, Baxter emitted over 39,000 lbs. of toxic chemicals into the air in Eugene. By contrast the 2008 Eugene Toxics Right-to-Know database lists only 92 lbs. of toxic chemicals into the air. The above chemicals that are required for reporting under EPA TRI Right-to-Know were not reported to the Eugene program.. If these numbers were reported to the TRK it would put Baxter around the 7th place in the top ten of polluting companies.

Other companies of interest that report to EPA TRI but are not required to report to the Eugene TRK. These companies are just outside of the boundary of the city limits of Eugene but within the UGB (97402 zip code). They are in close enough proximity to have an impact on the air quality, especially in West Eugene.

Murphy Plywood Company		Total pounds over 4 years
	Methanol	45,054
	Formaldehyde	25,970
	Ammonia	20

Georgia-Pacific Chemicals LLC

Methanol	15,470
Epichlorohydrin	6,680
Ammonia	3,886
Formaldehyde	1,283

The last company of interest is the Senenca plant, which again is outside the city boundaries but within the UGB (97402 zip code). They are building a biomass fuel power generating addition to their plant and will be an additional significant contributor to more pollutants in the West Eugene area. Again this company is located outside of the boundary of the City limits of Eugene but is in close enough proximity to have an impact on the air quality of West Eugene. They most likely will have to report to the EPA TRI.

5. What we know about the above chemicals

Acetone
Suspected[1] cardiovascular or blood toxicant, gastrointestinal and liver toxicant, neurotoxicant, kidney toxicant, respiratory toxicant, skin or sense organ toxicant.

Ammonia
Exposure to high levels of ammonia in air may be irritating to your skin, eyes, throat, and lungs and cause coughing and burns. Lung damage may occur after exposure to very high concentrations of ammonia. Some people with asthma may be more sensitive to breathing ammonia than others.

Creosote
Creosote is a complex mixture of polycyclic aromatic hydrocarbons (PAHs) and their methyl and polymethyl derivatives, phenols, heterocyclic oxygen, sulfur, and nitrogen compounds, of which over 100 components have been identified. Breathing vapors of the creosotes, coal tar, coal tar pitch, or coal tar pitch volatiles can cause irritation of the respiratory tract (United States Agency for Toxic Substances and Disease Registry). The International Agency for Research on Cancer (IARC) and EPA has determined that coal tar creosote is probably carcinogenic to humans. It is listed as an OSHA carcinagen. In animals studies have shown that when pregnant animals breathe creosote, it may cause harmful effects to the developing fetus.

Epichlorohydrin
EPI causes cancer in laboratory animals and is considered a probable human carcinogen by the International Agency for Research on Cancer (IARC). EPI is considered genotoxic because it has been shown to cause cell mutations and to damage chromosomes. Contact with liquid and vaporous EPI should be avoided. EPI may be fatal if inhaled at high enough concentrations. Lung injury, which may be delayed, can result from inhalation of EPI vapor. Liver and kidney injury can result from respiratory exposure or prolonged skin contact.

Ethanol

Suspected[1]carcinogen, cardiovascular or blood toxicant, gastrointestinal and liver toxicant, neurotoxicant, developmental toxicant, endocrine toxicant, reproductive toxicant, respiratory toxicant, skin or sense organ toxicant.

Ethylbenzene
Hazardous Air Pollantant (HAP) and an OSHA Carcinogen[3]
Recognized carcinogen. Suspected[1] cardiovascular or blood toxicant, gastrointestinal or liver toxin, kidney toxicant, reproductive toxicant, respiratory toxicant, and skin or sense organ

Formaldehyde
Hazardous Air Pollantant (HAP) and an OSHA Carcinogen[3]
Considered an Extremely Hazardous Substance (EHS)[2]. Known carcinogen. Suspected[1] gastrointestinal and liver toxicant, immunotoxicant, neurotoxicant, reproductive toxicant, respiratory toxicant, skin or sense organ toxicant.

MEK
Suspected[1] cardiovascular or blood toxicant, gastrointestinal and liver toxicant, neurotoxicant, immunotoxicant, kidney toxicant, reproductive toxicant, respiratory toxicant, skin or sense organ toxicant.

Methanol
Hazardous Air Pollutant (HAP) [3]
Suspected[1] gastrointestinal and liver toxicant, neurotoxicant, developmental toxicant, kidney toxicant, respiratory toxicant, skin or sense organ toxicant.

Phenol, hydroxybenzene
Considered an Extremely Hazardous Substance (EHS)[2]. Suspected[1] carcinogen.

Toluene
Hazardous Air Pollantant (HAP)[3]
Known developmental toxicant. Suspected[1] cardiovascular or blood toxicant, gastrointestinal and liver toxicant, neurotoxicant, immunotoxicant, kidney toxicant, reproductive toxicant, respiratory toxicant, skin or sense organ toxicant.

Xylene/Xylenes (isomers & mixtures)
Hazardous Air Pollantant (HAP)[3]
Recognized to cause neurological effects.

1- suspected: means there is scientific evidence of probable cause, but not direct evidence of certain cause.
2- EHS: Extremely Hazardous Substance refers to all substances listed in Section 30 of the Emergency Planning and Community Right-To-Know Act.
3-From the EPA TRI web page

6. What we know about these emitters

Bulk Handling Systems
Recycling processing equipment, including anaerobic digestion systems.
Their big releases to air are 20% Acetone, 7.8% Ethylbenzene, 35% Toulene, 33% Xylenes and lesser amount of other chemicals.
They have a Simple Low Air Contamination Discharge Permit from LRAPA.

Emerald Forest Products
Plywood and softwood manufacturer.
Releases to air include 20% Methanol, 14% Formaldehyde, 12% Ethylbenzene Phenol and lesser amounts of a few other chemicals.
They have a Standard Air Contamination Discharge Permit from LRAPA.

Forrest Paint
Paint and Coating Manufacturing
EPA TRI designates the company as a Paint and Coating Manufacturer.
Their big releases to air are 19% Acetone, 17% Toulene, and 14% Xylene Mixtures, followed by lesser amounts of Ethanol, Ethylbenzene, Isopropyl alcohol, Methyl Ethyl Ketone, and Naphtha Solvents and a few other chemicals.
They have a Standard Air Contamination Discharge Permit from LRAPA

Flakeboard America Ltd.
Reconstituted Wood Product Manufacturing
EPA TRI designates the company as a Reconstituted Wood Product Manufacturer.
The bulk of their emissions to air are 62% Methanol and 38% Formaldehyde as well as a few other chemicals.
They have a title 5^1 operating permit from LRAPA.

J.H. Baxter
Wood Preservation Plant
EPA TRI designates the company as a Wood Preservation.
Their greatest emission is Ammonia, followed by creosote and pentachlorophenol.
They have a Standard Air Contamination Discharge Permit from LRAPA.

Lanz Cabinet Shop Inc.
Custom Cabinetry Manufacturing
There big emitter is 67% Acetone with lesser amounts of Ethanol, Formaldehyde and other chemicals. They have a title 5^1 operating permit from LRAPA.

Newood Display Fixtures Inc.
Display Fixture Mfg. Co
Largest chemical emission is 42.3% Acetone followed by lesser amounts of Ethanol, Ethylbenzene, Formaldehyde, Methanol, MEK, Toulene, Xylene Mixtures, and a few others. They have a Simple High Air Contamination Discharge Permit from LRAPA.

Oregon Tread Rubber
Synthetic Rubber Manufacturing and tire retreading
EPA TRI designates the company as a Synthetic Rubber Manufacturer.

100% of their output to air is Naphtha Solvents or Petroleum Ethers (suspected carcinogen, neurotoxicant, respiratory toxicant, reproduction toxicant, and skin or sense organ toxicant.)

Veneer Technologies
Engineered Wood Member (except Truss) Manufacturing
EPA TRI designates the company as a Engineered Wood Member (except Truss) Manufacturer.
76% of emissions come from Ethanol with smaller amounts of Acetone, Formaldehyde, and Hydroxylbenzene phenol, in that order, as well as a few other chemicals.
They have a title 5^1 operating permit from LRAPA.

Western Pneumatics Inc.
Sawmill and Woodworking Machinery Manufacturing.
Major portion at 54.7% is Acetone and then 19.5% Xylene Mixtures followed by smaller amounts of Ethanol, Methanol, MEK, and a few others.
They have a Standard Air Contamination Discharge Permit from LRAPA.

Whittier Wood Products
Wood Furniture Manufacturing
Greatest amount of air emissions is 27.3% Acetone followed by decreased amounts of Ethanol, MED, Toulene, Xylene Mixtures, EthylBenzene, Formaldehyde, Methanol and lesser amounts of a few other chemicals.
They have a Simple Low Air Contamination Discharge Permit from LRAPA.

7. Trends (Toxics Right to Know)

Trends were from years 2005 to 2009 of companies that were in business during that time.

Companies that have increased air emissions more than 50% from 2005 to 2009

Bulk Handling Systems

This company had a level amount of emissions until 2009 then this large increase occurred. Bulk Handling Systems has experienced dramatic growth in the last few years. This is what probably accounts for this increase.

Companies that have decreased air emissions more than 50% from 2005 to 2009

Flakeboard America
Forest Paint
Lanz Cabinets
Veneer Technologies
Western Pneumatics Inc.

Only Forrest Paint shows a steady decrease in emissions over the five-year period. This is likely due to better manufacturing which reduces amounts of toxics in their products and that they invested and have implemented an innovative high tech air handling system called a bio-filter, to clean air emissions. The bio-filter reduces toxic air pollutants by a

significant amount. All the other companies seem to hold their emissions steady until a large drop off in 2008-2009. This reduction in air emissions is most likely to a poor economy and a reduction in manufacturing.

8. Conclusions

1. The Toxic Right to know web page is very difficult to access. Persistent citizen interactions and demands were the only reason the web access was corrected. Many times, when trying to access the web page, it would not load at all. Sometimes when it comes up it has a survey page on the front that you cannot get past. Once the web page is loaded and working properly it is user friendly and easy to navigate. It contains an amazing amount of relevant information for the citizens of Eugene.

2. Local voters adopted the Eugene Toxics Right-to-Know program in November 1996 as an amendment to the Eugene City Charter, Section 54. It is my understanding that it was modeled after the Environmental Protection Agency's Toxic Release Inventory. The Eugene Toxics Right-to-Know Charter amendment follows reporting requirements under the federal Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 that established the Toxics Release Inventory (TRI). This program requires manufacturing companies in certain industrial sectors (SIC codes 20-39) to publicly report environmental releases and transfers of chemicals on a list established by Section 313. EPCRA is also known as SARA Title III, because the right-to-know program was created as part of the Superfund Amendments and Reauthorization Act of 1986. EPCRA requires toxics reporting based on an original list of approximately 300 substances. Chemicals are listed if they are known to cause or can reasonably be anticipated to cause significant adverse acute effects on health at concentrations likely beyond facility boundaries; cancer, teratogenic effects, reproductive effects, neurological effects, heritable genetic mutations, or other chronic effects on health; or significant damage to the environment.

3. Some companies of interest that meet the criteria to report to the TRI data base and also report to TRK data base include Oregon Rubber Company, Western Pneumatics Inc., Ghreen Irrigation Works Inc., Forrest paint Company, Flakeboard America, Pierce Fittings, Veneer Technologies, and J.H. Baxter. All of these companies except one reports very close to the same data to the TRK database as to the EPA TRI. Only J.H. Baxter does not report the same to both databases. As per the TRI database in 2008, Baxter emitted over 39,000 lbs. of toxic chemicals into the air in Eugene. By contrast the 2008 Eugene Toxics Right-to-Know database lists only 92 lbs. of toxic chemicals into the air. This does not give the citizens of Eugene an accurate picture based on data from the TRK. Baxter claims the chemicals are pesticides are therefore exempt from reporting. The results of the lawsuit *Advocates for Effective Regulation et al. vs. City of Eugene and Toxics Right to Know Committee* (Case No. 16-96-11202 Lane County Circuit Court, 1/3/2000, Judge Darryl Larsen) makes it impossible, at this point and time, for the City of Eugene to collect emissions data from JH Baxter on any chemical substance that Baxter claims it uses as a pesticide.

9. Recommendations

1. Require all reporting industries to file their toxics emissions reduction plans as part of the TRK database, and incentivize efforts to reduce toxics emissions.

2. Compel J. H. Baxter to report all chemical releases by challenging the court decision that they are using chemicals that are distinguished as pesticides. The TRI characterizes these chemicals as wood preservatives, not pesticides.

3. Include toxics reporting for companies in Springfield as part of the Eugene-Springfield Fire Department merger.

4. Work with Lane County to expand the reporting area to include industries emitting toxic pollutants inside the Eugene urban growth boundary. This would require a charter amendment that the City of Eugene could initiate.

5. There are many smaller companies within the city of Eugene that emit the same air pollutants listed above. These include companies like dry cleaners and auto paint and repair shops. Individually they are insignificant but collectively they add a noteworthy amount of pollution to an already polluted area. A long-term goal would be to include information about their emissions as reported to the state or federal agencies on the Toxics Right-to-Know database.

6. The City of Eugene should require that industries that report to the TRK program prepare an Emergency Preparedness Plan, including how they will notify neighbors immediately in the case of a release and what evacuation plans are in place.

7. The TRK program should require industries to report all fugitive emissions.

8. The TRK program should require industries to report malfunctions, equipment failures, start-ups and shut-downs, etc. that result in higher-than-normal toxic releases on the website.

Research conducted by Joann Ernst – Volunteer for OTA