



State of Oregon Department of Environmental Quality
SUMMARY OF 2018 TOXIC RELEASE INVENTORY
DATA FOR OREGON

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1.0 Executive Summary

This summary describes 323 Toxics Release Inventory facilities emitting 145 TRI pollutants in 2018 statewide in Oregon, and is useful mainly for Oregon Department of Environmental Quality Air Quality staff who want a broad picture of which TRI facilities are emitting which pollutants. Again, TRI emissions estimates are just that: estimates. Therefore, any information in this summary may be used by DEQ to identify emissions from facilities that suggest further evaluation.

1.1 Source of Toxics Release Inventory Data

The 2018 TRI data discussed in this report was pulled from EPA's Envirofacts System Data Search <https://www.epa.gov/enviro/tri-ez-search> website. The TRI is developed via data reported by facilities directly to the EPA by July of each year. This TRI was developed by U.S. EPA TRI staff using inventory methods and estimation procedures, quality assurance and quality control protocols and then imported into the EPA's Emission Inventory System (EIS) database.

Thus, in some cases, data reported by facilities directly to the EPA may not match the Toxic Release Inventory pulled from the Envirofacts system. Some facilities may report inaccurate data to the TRI program and corrections of the data occur between August and October of the same year. Therefore, the inventory developed by U.S. EPA TRI staff insures that the TRI emissions data is correct before releasing the inventory to the public. The TRI data discussed in this report also was compared against the Oregon Department of Environmental Quality air toxics reporting.

1.2 Forty-one percent decrease in total TRI emissions over past 12 years in Oregon

In EPA's TRI National Analysis for 2018 (EPA 2020), it states that a 56% decrease in TRI emissions for the U.S. as a whole occurred based on TRI emissions documented in 2007 versus 2018. TRI emissions dropped significantly during the years 2007 and 2008.

Comparison of the total emissions in 2018 (6,031,743 pounds per year, or lbs/yr) to the highest emissions which occurred in 2007 (10,233,545 lbs/yr) reveals a 41 percent reduction overall in emissions of TRI pollutants in Oregon statewide over the past 12 years. Statewide TRI emissions which occurred in 2007 were obtained from the TRI website in October 2020, and are presented in comparison to the national EPA data.

The Oregon decrease of 41% is smaller than the national TRI decrease of 56%, but can be explained in part if not entirely by the fact that the national TRI report states that the 56% decrease in emissions nationally is due to three factors (TRI National Analysis, 2020, accessible at www.epa.gov/trinationalanalysis):

1. The decrease was driven by electric utilities due to: decreased emissions of Hazardous Air Pollutants (HAPs) such as hydrochloric acid; a shift from coal to other fuel sources (e.g., natural gas); and the installation of control technologies at coal-fired power plants.
2. Hydrochloric acid, sulfuric acid, hydrogen fluoride, methanol, toluene, and styrene were the chemicals with the greatest reductions in air releases since 2007.
3. Electric utilities accounted for 93% of nationwide reductions in air releases of hydrochloric acid and sulfuric acid from 2007 to 2018.

Unlike in other parts of the country, Oregon has had very little in the way of emissions from coal-burning facilities at any time in the recent past. The last remaining operational source in Oregon, Portland General Electric's Boardman Generating Station in eastern Oregon's Morrow County, was permanently shuttered on Oct. 15, 2020. Therefore, it is highly unlikely that Oregon's decrease in TRI emissions over that 12-year period would be expected to be as high as the national decrease over that same time period, based on the lack of coal-burning facilities in Oregon. To go a bit further, it could be said that Oregon has been more successful than the U.S. as a whole in decreasing TRI emissions over the period from 2007 through 2018, as Oregon's 41% reduction had little to do with a decreasing use of coal, while the national decrease of 56% was due almost entirely (93%) to a decreasing use of coal.

2.0 Additional Information

TRI data can be evaluated in many different ways; another way to say this is that the same TRI data can be grouped in different ways, with each option emphasizing a different facet of the data.

2.1 How 2018 TRI chemicals can be ranked

TRI chemicals in Oregon can be ranked most simply by identifying the top ten that are emitted at the highest amounts, in pounds per year (lbs/year). TRI can also be used to indirectly consider cancer and noncancer effects on human health.

In order to streamline the process of further evaluation of TRI emissions to those of most concern, the 20 top-ranked chemicals in each of three categories are shown in the tabled list below, as follows:

- A ranked list based on highest-to lowest weighted cancer potency as compared to mass (or amounts) of emissions.
- A ranked list based on highest to lowest weighted noncancer potency as compared to mass of emissions.
- A list arranged based only on masses of pollutants emitted, ranked highest to lowest.

Table 1: Ranked Categories of Oregon 2018 Toxics Release Inventory Data			
Rank	Weighted by cancer potency and amount	Weighted by noncancer potency and amount	Amounts only
1.	Dioxins and dioxin-like compounds	Dioxins and dioxin-like compounds	Methanol
2.	Chromium	Chromium	Ammonia
3.	Polycyclic aromatic hydrocarbons	Hydrogen sulfide	Methyl isobutyl ketone
4.	Formaldehyde	Chlorine dioxide	Formaldehyde
5.	Acetaldehyde	Nickel	Hydrogen sulfide
6.	Arsenic	Manganese	Hydrochloric acid
7.	Nickel (if all insoluble forms)	Chlorine	Acetaldehyde
8.	Trichloroethylene	Arsenic	Styrene
9.	Epichlorohydrin	Formaldehyde	Xylene (mixed isomers)
10.	Ethylbenzene	Trichloroethylene	Toluene
11.	Benzene	Hydrogen fluoride	n-Butyl alcohol
12.	1,4-Dichlorobenzene	Hydrochloric acid	Phenol
13.	Naphthalene	Lead	Chlorine dioxide
14.	Tetrachloroethylene	Toluene diisocyanate	Trichloroethylene
15.	1,3-Butadiene	Cobalt	Nitric acid
16.	Benzo(g,h,i)perylene	Ammonia	Hydrogen fluoride
17.	Toluene diisocyanate	Phosgene	Cresol (mixed isomers)
18.	Methyl tert-butyl ether (MTBE)	Epichlorohydrin	Ethylbenzene
19.	Di(2-ethyl hexyl)phthalate	Acetaldehyde	Certain glycol ethers
20.	Vinyl chloride	Acrolein	Copper

2.2 Ten most highly-emitted 2018 TRI chemicals in Oregon

One way to look at 2018 TRI data is to identify those chemicals which were most highly emitted in Oregon, in terms of lbs/yr. For the first 10 chemicals listed in the last column of the table above, DEQ created bar charts for each one, including Oregon facilities that emitted the bulk of each of the 10 chemicals. For more information on the facilities which have emitted each chemical charted, you can use this link to EPA's facility locator tool:

2.3 Oregon facilities with highest total emissions of TRI chemicals in 2018

Another way to look at TRI data is to sum all TRI chemicals being emitted by each facility, and then focus on the top 10, or top 20, or top 100, facilities in this category that

are emitting the highest total amounts of TRI chemicals. Table 2, shown below, presents the names, locations, and total lbs/year of the top 20 facilities in Oregon in this category.

2.4 Oregon facilities emitting TRI chemicals based on amount emitted and human health toxicity of each compound

Although TRI data is not used to estimate human health risks, DEQ weighted the Oregon TRI data by comparing emissions amounts to chemical-specific risk-based concentrations. Risk-based concentrations indicate the potency of carcinogenic chemicals and noncarcinogenic chemicals (refer to Table 4-Risk-Based Concentrations available in Cleaner Air Oregon program rules, OAR 340-245-8040). DEQ did this in order to consider the amount of a chemical being emitted as compared to how toxic the chemical being emitted is. For example, a highly toxic chemical emitted in small amounts could be of more concern than a less toxic chemical emitted in large amounts.

To make a comparison possible, chemical-specific emission amounts were divided by the risk-based value for that chemical. The result of each such division is a very rough indicator that allows DEQ to rank which TRI chemicals reported for Oregon are likely to be of the most concern. These results can allow DEQ to rank TRI chemicals based on both their amounts of emissions and on chemical toxic potency.

Dioxins and dioxin-like compounds have the highest ranking as related to both cancer and noncancer potency per amount emitted. The chemical which is emitted in highest amounts is methanol; but this toxic air contaminant has relatively low toxic potency. Only the top 20 chemicals from the cancer risk-weighted list and the top 20 chemicals from the noncancer risk-weighted list were used to create Table 2, and there was some overlap between these two lists. As a result, 30 chemicals in total are further described in Table 2, below.

2.5 Permitted facilities that emitted majority of risk-weighted TRI pollutants in 2018 in Oregon

Important conclusions about 2018 TRI data in Oregon can be drawn from Table 2, which presents the facilities estimated to emit the highest percentages of the 30 top TRI pollutants identified from a cancer risk-weighted and the noncancer risk-weighted pollutant ranking system used by DEQ. These facilities are referred to here as Majority Emitters. A rough ranking system was used that divided the mass (in pounds) of an emitted chemical by its toxicity reference value; details can be found in Section 2.1. In some cases, facilities contributing only a small percentage of the emissions for a chemical are also included in order to provide some context in addition to the majority emissions of that chemical. Facilities that appear for more than one chemical are presented in the same color font, to make them more easily discernable. In addition, brief summaries of the health effects related to each of the 30 pollutants in Table 2 are provided.

Emissions of each chemical emitted vary widely. For example, ammonia was estimated to be emitted by more than six facilities for a total of 1,309,155 lbs released statewide in 2018, while dioxins and dioxin-like compounds were only emitted at a total of 3.79 lbs statewide in 2018. The amount of dioxins and dioxin-like compounds appears to be comparatively very small, but these compounds are known to be dramatically more toxic

than ammonia. This is why the mass of an emitted chemical is not the only parameter to consider when looking at TRI data.

Some facilities may at first appear more concerning due to either emissions of a high number of chemicals, or high amounts of emissions of a few chemicals. Chemical Waste Management of the Northwest, located in Arlington, Oregon is a facility that emits significant amounts of 11 of the 30 chemicals in Table 2; however, this is not unexpected, as this facility is a hazardous waste landfill. Most of the emission numbers shown in Table 2 are a function of the kinds of operations that are occurring at the facilities that emit these pollutants.

Table 2 - Majority Emitters¹ of Toxic Release Inventory Pollutants in Oregon for 2018

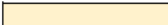
Toxic Air Contaminant	Health Effects	2018 lbs/yr	Percentage of total annual statewide emissions	Facility number	Facility name and location	County	2011-2018 trends
Acetaldehyde	Has both cancer and noncancer effects. Designated as H13 for noncancer effects. Main chronic effects are on the respiratory system; but can also cause developmental/reproductive effects.	66,412.8	33%	21-0005	Georgia-Pacific Toledo LLC, Toledo	Lincoln	Stable.
		42,023	21%	10-0025	Roseburg Forest Products Dillard Complex, Dillard	Douglas	
		26,224	13%	22-3501	Cascade Pacific Pulp Halsey Pulp Mill, Halsey	Linn	
		21,620	11%	LRAPA	International Paper, Springfield	Lane	
		14,009	7%	25-0006	Pacific Ethanol Columbia LLC, Boardman	Morrow	
Acrolein	Has noncancer effects. Designated as H15 for noncancer effects. Main chronic effects are on the respiratory system.	300	100%	25-0006	Pacific Ethanol Columbia LLC, Boardman	Morrow	Zero until 2018.
Ammonia	Has noncancer effects. Designated as H13 for noncancer effects. Main chronic effect is on the respiratory system.	664,000	51%	05-2042	Dyno Nobel - St. Helens Plant, Deer Island	Columbia	Increasing.
		180,500	14%	04-0004	Georgia-Pacific Consumer Operations LLC, Clatskanie	Clatsop	
		115,606	9%	21-0005	Georgia-Pacific Toledo LLC, Toledo	Lincoln	
		75,664	6%	26-2968	Mondelez Global LLC, Portland	Multnomah	
		74,300	6%	LRAPA	International Paper, Springfield	Lane	
		64,171	5%	22-3501	Cascade Pacific Pulp Halsey Pulp Mill, Halsey	Linn	
Arsenic	Has both cancer and noncancer effects. Designated as H13 for noncancer effects. Nervous system main chronic effect; also can also affect the skin, cardiovascular, respiratory, developmental systems.	7	100%	11-0002	Chemical Waste Management of the Northwest Inc., Arlington	Gilliam	Increasing.
Benzene	Has both cancer and noncancer effects. Blood system most affected during chronic exposure; but can also affect the eyes, immune, respiratory, and developmental systems.	540	33%	26-2026	Phillips 66 Portland Terminal, Portland	Multnomah	Mixed.
		410	25%	26-2027	Chevron Willbridge Terminal, Portland	Multnomah	
		374.5	23%	11-0002	Chemical Waste Management of the Northwest Inc., Arlington	Gilliam	
		317	19%	26-2478	Shell Portland Distribution Terminal, Portland	Multnomah	
Benzo(g,h,i)-perylene	Has noncancer effects. Designated as H13 under the group Polycyclic aromatic hydrocarbons (PAHs).	6	100%	11-0002	Chemical Waste Management of the Northwest Inc., Arlington	Gilliam	Increasing.
1,3-Butadiene	Has both cancer and noncancer effects. Designated as H13 for noncancer effects. Main chronic effects are to reproductive system; but can also affect the kidney, liver, blood, cardiovascular, and respiratory systems.	52	100%	26-2478	Shell Portland Distribution Terminal, Portland	Multnomah	Zero until 2018.
Chlorine	Has noncancer effects. Designated as H13 for noncancer effects. Main chronic effects to respiratory system; but can also affect the eyes.	4,790	56%	22-3501	Cascade Pacific Pulp Halsey Pulp Mill, Halsey	Linn	Decreasing, then increasing.
		2,618.9	30%	22-0547	TDY Industries Inc. DBA Wah Chang, Albany	Linn	
		978	11%	15-0028	Linde Gas NA LLC Medford, White City	Jackson	
Chlorine dioxide	Has noncancer effects. Designated as H13 for noncancer effects. Main chronic effects are to respiratory system; but can also affect the eyes.	43,515	81%	22-3501	Cascade Pacific Pulp Halsey Pulp Mill, Halsey	Linn	Stable.
		10,005	19%	04-0004	Georgia-Pacific Consumer Operations LLC, Clatskanie	Clatsop	

Cobalt	Has noncancer effects. Designated as HI3 for noncancer effects. Main chronic effects to respiratory system; also to blood, endocrine, developmental reproductive, and kidney systems.	327	97%	03-2505	Orchid Orthopedic Solutions Oregon Inc., Oregon City	Clackamas	Stable.
1,4-Dichloro-benzene	Has both cancer and noncancer effects. Designated as HI3 for noncancer effects. Main chronic effect is to respiratory system; but can also affect the nervous system, kidney, and liver.	454	100%	11-0002	Chemical Waste Management of the Northwest Inc., Arlington	Gilliam	Zero until 2017.
Chromium	Has both cancer and noncancer effects. Designated as HI3 for noncancer effects. Main chronic effect is on the respiratory system and the eyes; but can also affect the immune system and reproductive system.	5,540	87%	26-2204	Boeing Co. of Portland, Portland	Multnomah	Chromium compounds increasing; slight increases for Chromium.
		143	2%	03-2505	Orchid Orthopedic Solutions Oregon Inc., Oregon City	Clackamas	
		97.8	2%	11-0002	Chemical Waste Management of the Northwest Inc., Arlington	Gilliam	
		85	1%	26-1865	Evraz Portland, Portland		
Di(2-ethylhexyl)phthalate aka Bis(2-ethylhexyl)phthalate	Has cancer effects.	60	100%	Not a DEQ source; operating status unknown.	Loxscreen Co. Inc., Woodburn	Marion	Mixed.
Dioxins and dioxin-like compounds	This group of chemicals has both cancer and noncancer effects. Designated as HI3 for noncancer effects. Main chronic effects to liver, blood, immune, and respiratory systems; but can also affect skin, and endocrine, developmental, and reproductive systems.	1.4	37%	25-0016	Boardman Plant, Boardman	Morrow	Decreasing.
		0.6	16%	21-0005	Georgia-Pacific Toledo LLC, Toledo	Lincoln	
		0.5	13%	04-0004	Georgia-Pacific Consumer Operations LLC, Clatskanie	Clatsop	
		0.5	13%	10-0025	Roseburg Forest Products Dillard Complex, Dillard	Douglas	
		0.3	8%	LRAPA	International Paper, Springfield	Lane	
		0.2	5%	LRAPA	McFarland Cascade Pole & Lumber Co., Eugene	Lane	
		0.1	3%	06-0010	Roseburg Forest Products Co.-Coquille Plywood, Coquille	Coos	
		0.1	3%	10-0078	Roseburg Forest Products Co. - Riddle Plywood #4, Riddle	Douglas	
Epichlorohydrin	Has both cancer and noncancer effects. Designated as HI3 for noncancer effects. Main effect is on respiratory system; but can also affect the kidney, eyes, and the developmental system.	3,365	71%	28-1814	Solenis LLC, Portland	Multnomah	Stable.
		1,400	29%	LRAPA	Georgia Pacific Chemicals, LLC, Eugene	Lane	
Ethylbenzene	Has both cancer and noncancer effects. Designated as HI3 for noncancer effects. Main chronic effects are on the kidney; but can also affect the liver, blood, endocrine, developmental, reproductive, and nervous systems.	10,546.2	41%	26-3224	Vigor Industrial, Portland	Multnomah	Stable.
		9,707	38%	27-0005	Elkay Wood Products Co., Independence	Polk	
		1,261	5%	LRAPA	Forrest Paint Co, DBA Forrest Technical Coatings, Eugene	Lane	
Formaldehyde	Has both cancer and noncancer effects. Designated as HI3 for noncancer effects. Main chronic effects are to respiratory system; but can also affect eyes and skin.	91,538	34%	15-0073	Roseburg Forest Products Co. Medford MDF, Medford	Jackson	Increase from 2011-2015, then decreasing.
		52,002	19%	10-0025	Roseburg Forest Products Dillard Complex, Dillard	Douglas	
		27,668	10%	22-0143	Arauco NA Inc.-Duraf Flake Particleboard, Albany	Linn	
		16,634.2	6%	21-0005	Georgia-Pacific Toledo LLC, Toledo	Lincoln	
		10,529	4%	LRAPA	Murphy Plywood Company, Eugene	Lane	
		10,413	4%	31-0002	Woodgrain Millwork Island City Particleboard, LaGrande	Union	
		10,359	4%	18-0013	Collins Products, LLC, Klamath Falls	Klamath	
Hydrochloric acid	Has noncancer effects. Designated as HI3 for noncancer effects. Main chronic effect is to respiratory system; but can also affect kidney, liver, immune system, and	110,000	47%	04-0004	Georgia-Pacific Consumer Operations LLC, Clatskanie	Clatsop	Decrease from 2011-2016, then increasing.
		85,229	36%	22-3501	Cascade Pacific Pulp Halsey Pulp Mill, Halsey	Linn	
		28,994	12%	LRAPA	International Paper, Springfield	Lane	

Hydrogen fluoride	Has noncancer effects. Designated as H13 for noncancer effects. Main chronic effect is on musculoskeletal system; but can also affect kidney, blood, skin, respiratory, and reproductive systems. Exposure to hydrogen fluoride can cause skeletal fluorosis, which is a painful, severe bone disease.	11,005	41%	34-2681	Intel Corp. - Ronler Acres Campus, Hillsboro	Washington	Mixed.
		8,467	31%	34-0152	Quantumclean, Hillsboro	Washington	
		2,171	8%	26-0027	On Semiconductor, Gresham	Multnomah	
		1,505	6%	34-2681	Intel Corp. - Aloha Campus, Aloha	Washington	
		841	3%	Not DEQ source	Cascade Columbia Distribution, Sherwood	Washington	
		750	3%	22-8041	Selmet, International, Albany	Linn	
Lead	Has noncancer effects. Designated as H13 for noncancer effects. Main chronic effect is on developmental system, resulting in low-IQ children; but can also affect the kidney, blood, endocrine, musculoskeletal, nervous, cardiovascular, immune, and reproductive systems.	584.4	35%	21-0005	Georgia Pacific Toledo LLC, Toledo	Lincoln	Lead - decreasing. Lead & lead compounds - zero until 2018. Lead compounds - decreasing.
		370.3	22%	04-0004	Georgia-Pacific Consumer Operations LLC, Clatskanie	Clatsop	
		229.9	14%	26-1876	Owens-Brockway Glass Container Inc. Plant 21, Portland	Multnomah	
		104.6	6%	08-0003	Pacific Wood Laminates Inc., Brookings	Curry	
Manganese	Has noncancer effects. Designated as H13 for noncancer effects. Main chronic effect is on the nervous system; but can also affect respiratory, developmental, and reproductive systems. A Parkinson-like disease called manganism can occur after months or years of toxic inhalation of manganese.	1,490.2	29%	26-2944	Gunderson LLC, Portland	Multnomah	Mixed.
		900	17%	26-1865	Evrax Portland, Portland	Multnomah	
		409.6	8%	11-0002	Chemical Waste Management of the Northwest Inc., Arlington	Gilliam	
		407	8%	26-1869	Columbia Steel Casting Co. Inc., Portland	Multnomah	
		317.9	6%	05-2085	Armstrong World Industries, Inc., St. Helens	Columbia	
		312.3	6%	LRAPA	Peterson Pacific Corp., Eugene	Lane	
Methyl tert-butyl ether (MTBE)	Has both cancer and noncancer effects. Designated as H13 for noncancer effects. Main chronic effect is on eyes and the	2,900	73%	22-6009	W.R. Grace & Co., Albany	Linn	Stable.
		1,068	27%	09-9508	Suterra LLC, Bend	Deschutes	
Naphthalene	Has both cancer and noncancer effects. Designated as H13 for noncancer effects. Main chronic effects are on the nervous system and respiratory system; but can also affect blood and eyes.	52	51%	26-2027	Chevron Willbridge Terminal, Portland	Multnomah	Decreasing.
		28	28%	26-2026	Phillips 66 Portland Terminal, Portland	Multnomah	
		17.5	17%	11-0002	Chemical Waste Management of the Northwest Inc., Arlington	Gilliam	
Nickel	Has both cancer and noncancer effects. Designated as H13 for noncancer effects. Main chronic effects are on the immune and respiratory systems; some nickel compounds also cause developmental and reproductive effects.	461.8	48%	22-0547	TDY Industries Inc. DBA Wah Chang, Albany	Linn	Mixed.
		323	34%	26-2204	Boeing Co. of Portland, Portland	Multnomah	
		50	5%	26-2068	Esco Group, Portland	Multnomah	
Phosgene	Has noncancer effects. Designated as H13 for noncancer effects. Main chronic effects are on the respiratory system; also affects the immune system. Phosgene is an acutely toxic material, and was used in World War 1 as a deadly nerve gas.	579.8	100%	22-0547	TDY Industries Inc. DBA Wah Chang, Albany	Linn	Decreasing.
Polycyclic aromatic hydrocarbons	This chemical groups contains individual PAHs that have cancer and/or noncancer effects. Overall, an H13 is used for noncancer effects of PAHs. One of the PAHs, benzo(a)pyrene, causes developmental and reproductive effects.	152	56%	21-0005	Georgia-Pacific Toledo LLC, Toledo	Lincoln	Decreasing.
		50	19%	26-2027	Chevron Willbridge Terminal, Portland	Multnomah	
		49.6	18%	11-0002	Chemical Waste Management of the Northwest Inc., Arlington	Gilliam	
Tetrachloroethylene	Has both cancer and noncancer effects. Designated as H13 for noncancer effects. Main chronic effects are on the nervous system; but can also affect the kidney, liver, endocrine, respiratory, developmental, and reproductive systems.	8,371	95%	26-2204	Boeing Co. of Portland, Portland	Multnomah	Decreasing.
		462	5%	11-0002	Chemical Waste Management of the Northwest Inc., Arlington	Gilliam	

Toluene diisocyanates	Has both cancer and noncancer effects. Designated as H13 for noncancer effects. Main chronic effect is on the respiratory system, but can also affect the immune and developmental systems.	101	100%	26-3266	FXI, Inc. Portland	Multnomah	Increase to 2014, then decreasing.
Trichloroethylene	Has both cancer and noncancer effects. Designated as H13 for noncancer effects. Primary chronic effects are on the immune and developmental systems, but the eyes	43,552	99.8%	22-6024	Entek International LLC, Lebanon	Linn	Decreasing.
		76	0.2%	11-0002	Chemical Waste Management of the Northwest Inc., Arlington	Gilliam	
Vinyl chloride	Has both cancer and noncancer effects. Designated as H13 for noncancer effects. Primary chronic effects are on the liver, but the kidney and immune systems can also be affected.	63.4	100%	11-0002	Chemical Waste Management of the Northwest Inc., Arlington	Gilliam	Zero until 2015, then stable.

¹ = In some cases, percentages of a pollutant from non-majority emitters are presented in order to provide context for the remainder of the pollutant's emissions (for example, acetaldehyde, ammonia, chlorine, chromium, dioxins, formaldehyde, hydrogen fluoride, lead, manganese, nickel), and/or if the chemical has been a publicly visible or controversial one (for example, trichloroethylene and tetrachloroethylene).

 These facilities are on the Group 1 or Group 2 Prioritization lists of facilities being called in by Cleaner Air Oregon to assess health risks.

Additional Resources

For additional information on Oregon 2018 TRI data, please review the following EPA Toxics Release Inventory resources:

- [Learn About TRI Facilities in Your Community](#)
- [Overview of TRI Fact Sheet](#)
- [TRI and Toxic Releases: What you can do](#)

If you have specific questions for DEQ, please contact Sue MacMillan, Air Toxics Science and Policy Analyst, at (503) 229-6458 or susan.macmillan@deq.state.or.us.