

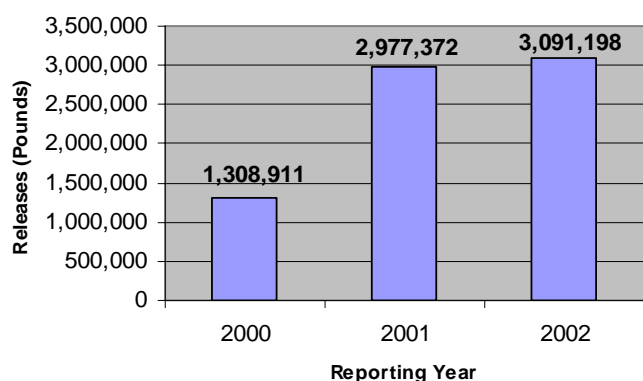


Hawaii Report: 2002 Toxics Release Inventory

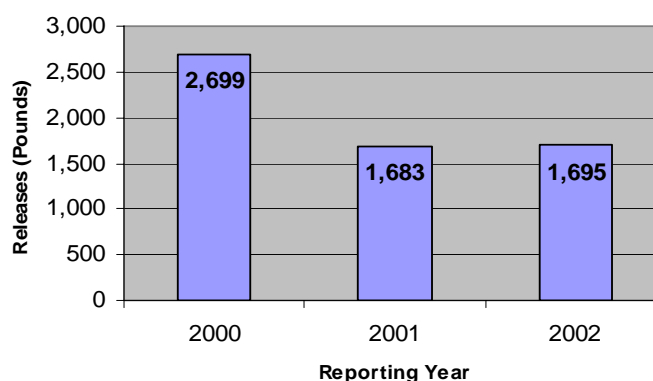
U.S. EPA Region 9
Arizona, California,
Hawaii, Nevada, the
Pacific Islands, and
Tribal Nations

Toxic Chemical Releases: 2000 – 2002

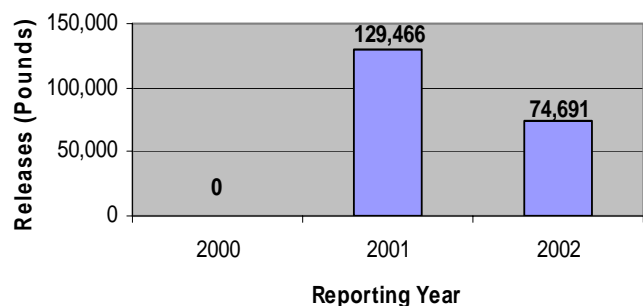
**Total On- and Off-Site Releases
Excluding PBTs and Lead**



**Total On- and Off-Site Releases
PBT Chemicals**



**Total On- and Off-Site Releases
Lead and Lead Compounds**



Total Releases for Reporting Years 2000 – 2002

Year	Air	Water	On-Site Land	Under-ground Injection	Off-Site
2000	1,057,090	1,224	31,833	7,284	214,180
2001	2,379,969	29,770	224,400	2,071	472,311
2002	2,427,152	91,594	228,501	3.6	420,334

The 2002 Public Data Release

EPA has just made public the 2002 data on toxic chemicals that were released to Hawaii's air, water and land. This information comes from the Toxics Release

Inventory (TRI), a federal community right-to-know program. In Hawaii, 39 facilities reported a total of 3.2 million pounds of toxic chemical releases*.

It is important to note that release should not be directly equated with risk. To evaluate risk, release

* Release is defined as the amount of a toxic chemical released on-site (to air, water, underground injection, landfills and other land disposal), and the amount transferred off-site for disposal. Year to year data comparisons do not reflect changes in reporting requirements.

data must be combined with information about chemical toxicity, site-specific conditions, and exposure. In addition, these data do not indicate whether a facility is violating environmental laws. Many of the substances reported through this program are subject to state and federal regulations designed to protect human health and the environment.

Industries

A facility is subject to TRI reporting requirements if it: has 10 or more full-time employees; is classified under a reportable Standard Industrial Classification (SIC) code; and manufactures, processes, or otherwise uses any of the listed toxic chemicals in amounts greater than the threshold quantities. For most chemicals (excluding PBTs) the thresholds are 25,000 pounds for manufactured or processed, and 10,000 pounds for otherwise used.

Manufacturing industries have been reporting their releases since 1987, and federal facilities started reporting in 1994. In 1998, an additional seven industry sectors began reporting their toxic chemical releases for the first time. These sectors are metal and coal mining, electricity generation, commercial hazardous waste treatment, solvent recovery, petroleum bulk terminals, and wholesale chemical distributors.

Releases

Hawaii's total reported on- and off-site releases increased approximately 2% when compared to 2001 data. Leading the trend was an increase of nearly 62 thousand pounds in reported releases to water. This is due primarily to an increase in reported releases from the U.S. Navy Pearl Harbor Naval Complex, which reported nitrate compounds for the first time in 2002.

Both land and air releases increased by approximately 2%. Reported releases to air were 47 thousand pounds greater than in 2001, primarily due to increases at electric generating facilities. Reported releases to land increased by approximately 4,000 pounds primarily at federal facilities.

Transfers off-site for disposal and other waste management decreased by nearly 52 thousand pounds,

an 11% decrease. The largest decrease resulted from electric generating facilities.

Persistent, Bioaccumulative, and Toxic Chemicals

In the year 2000, TRI was expanded to include additional persistent, bioaccumulative and toxic (PBT) chemicals, and to require reporting for these chemicals at lower thresholds, ranging from 0.1 grams to 100 pounds. PBT pollutants are toxic chemicals that persist in the environment and bioaccumulate in food chains, thus posing risks to human health and ecosystems.

In Hawaii, 76,387 pounds of total on-and off-site releases of PBT chemicals were reported. Below is a table of the PBT release in Hawaii ranked by total on-and off-site releases. The data is in pounds for all chemicals except dioxin, which is given in grams.

Table of PBT Chemical Releases in Hawaii

Chemical	Total On- and Off-Site Releases		Percent Change
	2001	2002	
Lead	120,023.70	70,453.90	-41
Lead Compounds	9,442.68	4,237.40	-55
Polycyclic Aromatic Compounds (PACs)	1,475.69	1,403.22	-5
Mercury Compounds	200.27	285.9	43
Benzo (g,h,i) Perylene	0.89	0.95	7
Dioxin and Dioxin-like Compounds (in grams)	6.11	5.33	-13

* Releases of persistent, bioaccumulative and toxic (PBT) chemicals in pounds. Dioxin and dioxin-like compounds data are not in Toxicity Equivalence (TEQ).

Lead and Lead Compounds

Starting in the year 2001, lead and lead compounds were reported as persistent, bioaccumulative and toxic (PBT) chemicals. While lead and lead compounds have been on the list of reportable chemicals since 1987, for the year 2001 the reporting threshold was drastically lowered (from 25,000 pounds manufactured or processed, and 10,000 pounds otherwise used to 100 pounds manufactured, processed or otherwise used). As a result, additional facilities are required to report releases of lead and lead compounds.

Nearly 75 thousand pounds of total on- and off-site releases of lead and lead compounds were reported in Hawaii in 2002. Federal facilities released to land nearly 99% of the lead releases in Hawaii. Nearly 86% of the lead compounds reported were released to air by electric generating facilities. Federal facilities and oil refineries also released lead compounds to air.

Polycyclic Aromatic Compounds (PACs)

Electric generating facilities released more than 80% of the PACs reported in 2002, to the air. The oil refining industry released over 250 pounds of PACs to water.

Other PBT Chemical Releases

The electric services industry released nearly 98% of the mercury, and nearly 95% of dioxin and dioxin-like compounds reported in Hawaii in 2002.

Top Facilities for Releases

The top 10 facilities for total on- and off-site releases, for all chemicals, in Hawaii are:

- ① Hawaiian Electric Inds. Inc. Kahe Generating Station (Kapolei, Honolulu County) with 897 thousand pounds.
- ② U.S. Army Schofield Barracks/Wheeler Army Airfield (Schofield Barracks, Honolulu County) with 420 thousand pounds.
- ③ Hawaiian Electric Co. Inc. Waiau Generating Station (Pearl City, Honolulu County) with 366 thousand pounds.
- ④ Chevron Prods. Co. Hawaii Refy. (Kapolei, Honolulu County) with 232 thousand pounds.
- ⑤ Hawaii Electric Light Co. Inc. Hill Generating Station (Hilo, Hawaii County) with 230 thousand pounds.
- ⑥ Maui Electric Co. Ltd. Kahului Generating Station (Kahului, Maui County) with 220 thousand pounds.
- ⑦ U.S. Army Schofield Barracks Range Facility (Schofield Barracks, Honolulu County) with 133 thousand pounds.
- ⑧ Hawaiian Electric Light Co. Inc. Puna Generating Station (Keaau, Hawaii County) with 97 thousand pounds.

- ⑨ U.S. Navy Pearl Harbor Naval Complex (Pearl Harbor, Honolulu County) with 95 thousand pounds.
- ⑩ Ball Metal Beverage Container Corp. (Kapolei, Honolulu County) with 77 thousand pounds.

The top 10 facilities for total on- and off-site releases, for PBT chemicals, in Hawaii are:

- ① Maalaea Generating Station (Kihei, Maui County) with 894 pounds.
- ② Chevron Prods. Co. Hawaii Refy. (Kapolei, Honolulu County) with 284 pounds.
- ③ Hawaiian Electric Inds. Inc. Kahe Generating Station (Kapolei, Honolulu County) with 158 pounds.
- ④ Maui Electric Co. Ltd. Palaau Generating Station (Kaunakakai, Maui County) with 82 pounds.
- ⑤ Hawaiian Electric Co. Inc. Waiau Generating Station (Pearl City, Honolulu County) with 78 pounds.
- ⑥ Maui Electric Co. Ltd. Miki Basin Generating Station (Lanai City, Maui County) with 59 pounds.
- ⑦ Hawaiian Electric Light Co. Inc. Keahole Generating Station (Kailua Kona, Hawaii County) with 55 pounds.
- ⑧ Hawaiian Electric Light Co. Inc. Puna Generating Station (Keaau, Hawaii County) with 38 pounds.
- ⑨ Hawaii Electric Light Co. Inc. Hill Generating Station (Hilo, Hawaii County) with 25 pounds.
- ⑩ Maui Electric Co. Inc. Kahului Generating Station (Kahului, Maui County) with 16 pounds.

The top 10 facilities for total on- and off-site releases, for lead and lead compounds, in Hawaii are:

- ① U.S. Army Schofield Barracks Range Facility (Schofield Barracks, Honolulu County) with 58 thousand pounds.
- ② U.S. Marine Corps Base Hawaii Puuloa Training Facility (Ewa Beach, Honolulu County) with 6,200 pounds.
- ③ U.S. Army Pohakuloa Training Area Range Facility (Hilo, Hawaii County) with 4,667 pounds.
- ④ Hilo Coast Power Co. (Pepeekeo, Hawaii County) with 1,966 pounds.
- ⑤ Hawaiian Electric Inds. Inc. Kahe Generating Station (Kapolei, Honolulu County) with 1,171 pounds.
- ⑥ U.S. Army Makua Military Reservation (Waianae, Honolulu County) with 871 pounds.

- ⑦ Hawaiian Electric Co. Inc. Waiiau Generating Station (Pearl City, Honolulu County) with 504 pounds.
- ⑧ Kalaeloa Cogeneration Plant (Kapolei, Honolulu County) with 483 pounds.
- ⑨ Maalaea Generating Station (Kihei, Maui County) with 264 pounds.
- ⑩ Chevron Prods. Co. Hawaii Refy. (Kapolei, Honolulu County) with 149 pounds.

On-line Access

For national information on data releases, see:

<http://www.epa.gov/tri>

The TRI data is available through Envirofacts Warehouse, EPA's premier internet site for distributing environmental information at:

<http://www.epa.gov/enviro>

or the TRI Explorer tool:

<http://www.epa.gov/triexplorer>

For general information on the Toxics Release Inventory, including reporting requirements for businesses, go to:

<http://www.epa.gov/region09/toxic/tri>

For additional information on dioxin, go to:

<http://www.epa.gov/ncea/dioxin.htm>

For more information on the EPA's PBT Chemicals Program, go to:

<http://www.epa.gov/opptintr/pbt/>

Information and Assistance

We are happy to answer your questions and assist you in learning more about the TRI Program in Region 9.

U.S. EPA Region 9
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