Toxics Release Inventory (TRI) 2017 National Analysis

EXECUTIVE SUMMARY

THIS EXECUTIVE SUMMARY presents an overview of the most recent Toxics Release Inventory (TRI) data, and summarizes the detailed information found at EPA's TRI National Analysis website.

What is TRI?

Congress established the Toxics Release Inventory (TRI) to ensure that every community is empowered with access to information on what chemicals are being handled and released at nearby facilities. TRI includes information on chemical wastes managed, environmental releases of chemicals, and activities that reduce waste generation. These data are submitted to EPA annually by U.S. facilities in industry sectors such as mining, manufacturing, electric power generation, and commercial hazardous waste management.

TRI data are used by communities, researchers, and government

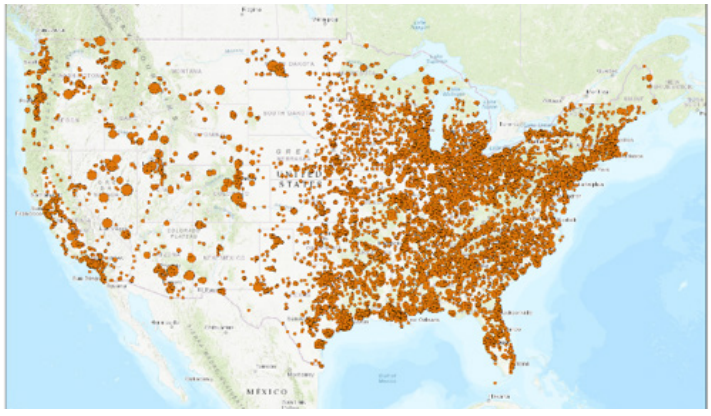
TRI data are publicly available and EPA's web-based tools allow anyone to retrieve the data and conduct their own analyses.

The TRI National Analysis is EPA's presentation of the most recent data

The National Analysis is part of EPA's commitment to transparency and enhances public understanding of the environmental challenges here in the U.S. by:

- Summarizing reported data on releases and other waste management practices of chemicals, and providing trend analyses of these data
- Providing interactive tools that support access to and exploration of TRI data

21,500 facilities located in every state reported to TRI for 2017

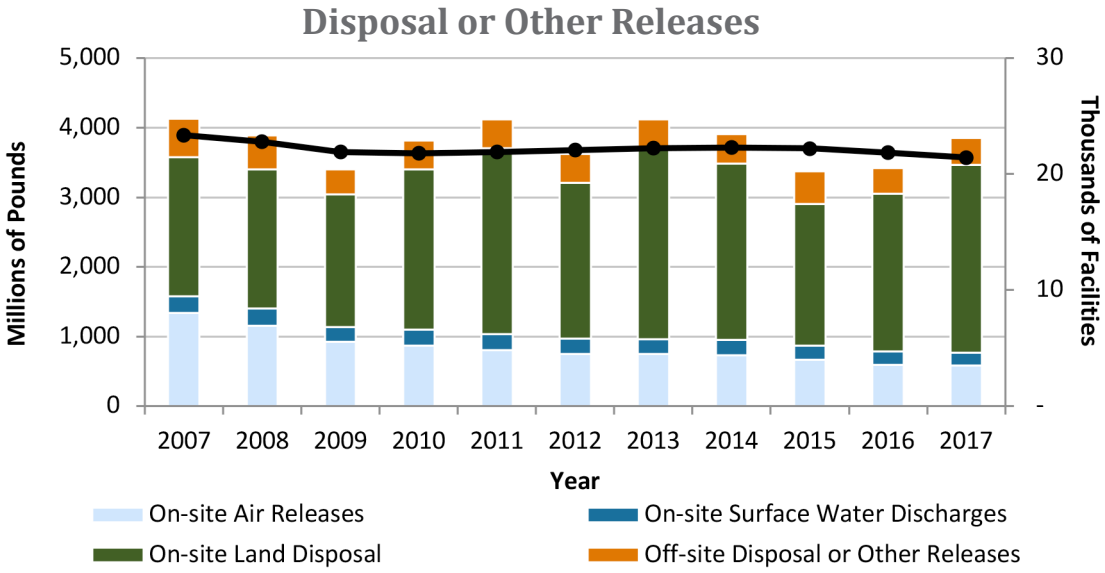


Facilities have until July 1 of each year to submit data from the previous year. These data then undergo quality reviews by EPA. The 2017 data are now ready to be explored.

Since 2007, releases to the environment have decreased by 7%

For 2017, TRI facilities reported in total 3.9 billion pounds of TRI chemicals disposed of or otherwise released to air, water, and land.

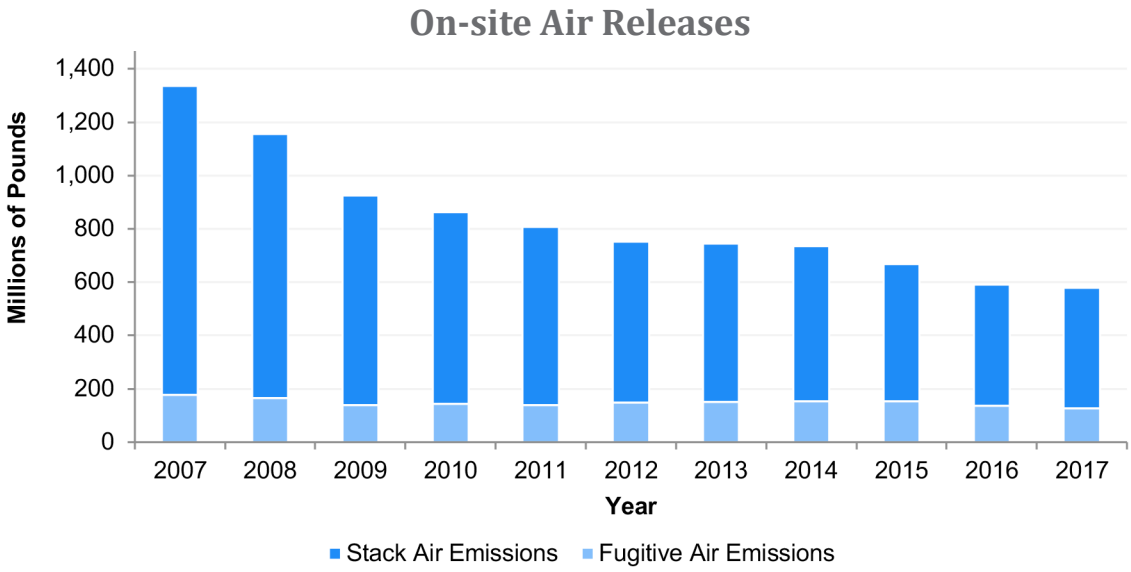
- Releases were greater than quantities reported for 2016, but 7% less than releases reported for 2007.
- On-site land disposal, largely from metal mining, accounted for 70% of total release quantities.



- As with any dataset, there are several factors to consider when using the TRI data, which are summarized in the Introduction to the 2017 National Analysis. For more information see Factors to Consider When Using Toxics Release Inventory Data, which discusses how:
  - The level of toxicity varies among the covered chemicals: data on amounts of the chemicals alone are inadequate to reach conclusions on health-related risks;
  - The presence of a chemical in the environment must be evaluated along with the potential and actual exposures and the route(s) of exposures, the chemical's fate in the environment and other factors before any statements can be made about potential risks associated with the chemical or a release;
  - Regulatory controls apply to many of the releases reported;
  - Many options for managing wastes are subject to stringent technical standards and state and federal regulatory oversight;
  - Some TRI reporters send chemicals off-site to be managed at specialized waste management facilities that are also subject to TRI reporting requirements. Since both the facilities sending waste and the facilities receiving waste report to TRI, adjustments must be made to avoid double counting.
- In the 2017 National Analysis, EPA has provided more context and enabled better interpretation of the release data submitted by metal mining facilities, including the ability to view trends in land disposal both with and without metal mining releases.

Air emission reductions are the largest part of the declining trend in release quantities

- Quantities released to air decreased by 57% (by 757 million pounds) from 2007 to 2017
- Almost every sector reduced its releases to air, with the largest reduction coming from the electric utilities sector.
  - Electric utilities have driven the decrease: a shift from coal to other fuel sources, the installation of control technologies at coal-fired power plants, and the implementation of environmental regulations have all reduced air releases of TRI chemicals from electric utilities
  - Hydrochloric acid, sulfuric acid, hydrogen fluoride, methanol, toluene, and styrene have had the greatest reductions in air releases since 2007.

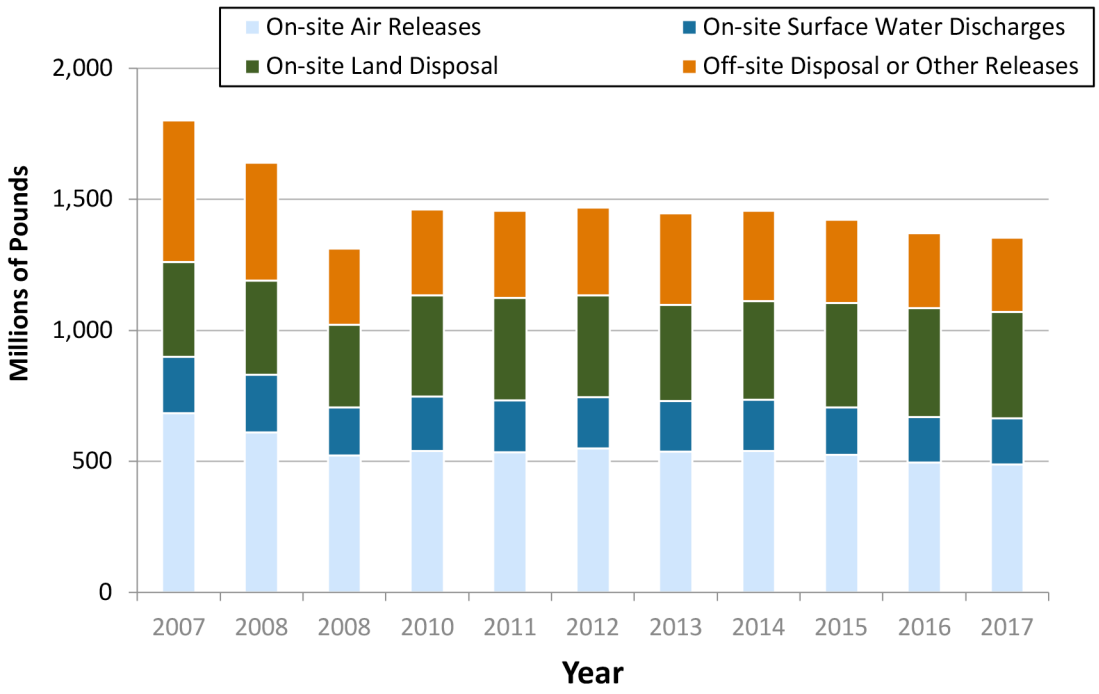


Each year, the TRI National Analysis examines key industry sectors

- This year's TRI National Analysis highlights the following sectors: manufacturing, chemical manufacturing, paint and coating manufacturing, electric utilities, metal mining, and federal facilities.
- Of these sectors, manufacturing is the broadest. It includes goods-producing industries that transform materials into products such as food, textiles, paper, chemicals, plastics, electronics, furniture and vehicles.
  - Since 2007, releases by manufacturing facilities decreased by 25%. This is primarily due to a reduction in air emissions and off-site disposal.

- Since 2010, releases have remained steady or slightly decreased even as production has increased following the economic recession.
- Manufacturing facilities reported initiating more than 3,500 source reduction activities to reduce TRI chemical use and waste generation in 2017.

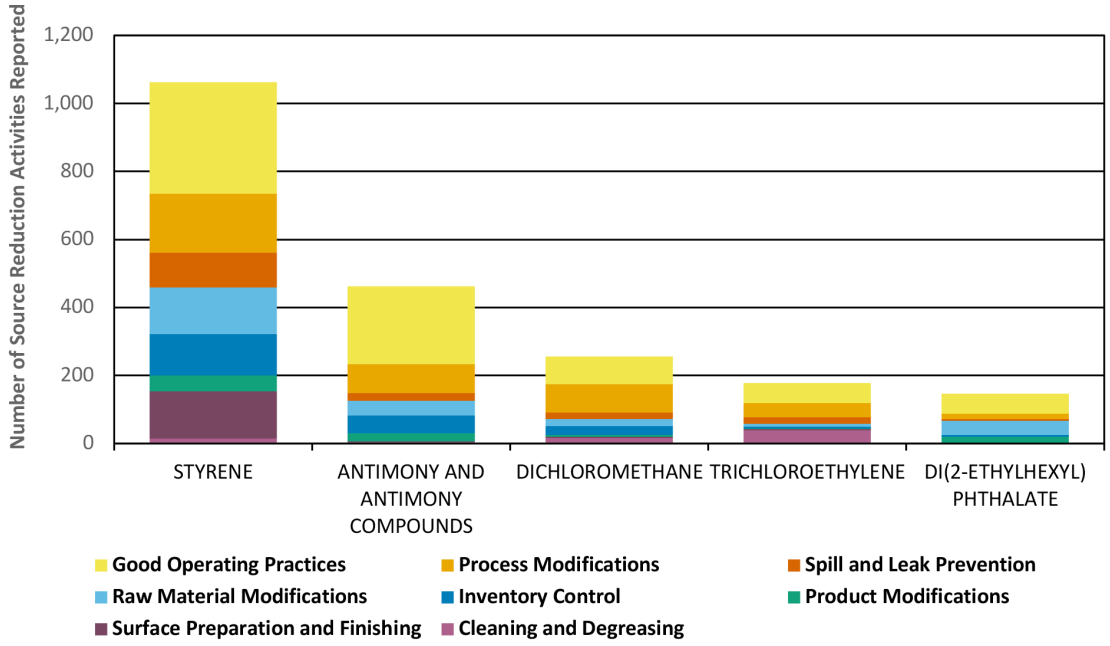
Total Disposal or Other Releases: Manufacturing Sectors



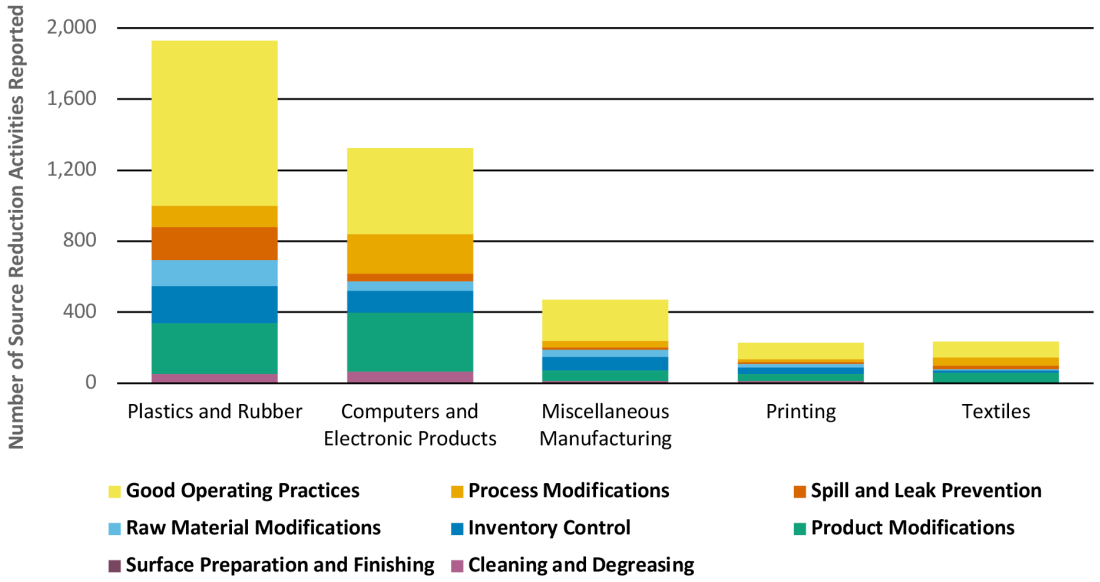
In 2017, facilities implemented nearly 4,000 new projects to reduce pollution at its source

- Facilities report any newly implemented projects that eliminate or reduce the generation of chemical waste. These projects are referred to as "source reduction activities." Source reduction success stories presented in the National Analysis highlight effective practices that other facilities can replicate. EPA's TRI Pollution Prevention Search Tool promotes these opportunities for knowledge transfer by allowing users to search for source reduction activities that might be relevant to their operations.
- The figures below summarize the most frequently reported source reduction activities for the chemicals and industry sectors with the highest source reduction reporting rates over the last 5 years. For these chemicals and industries, good operating practices and process modifications are the most frequently reported source reduction activities.

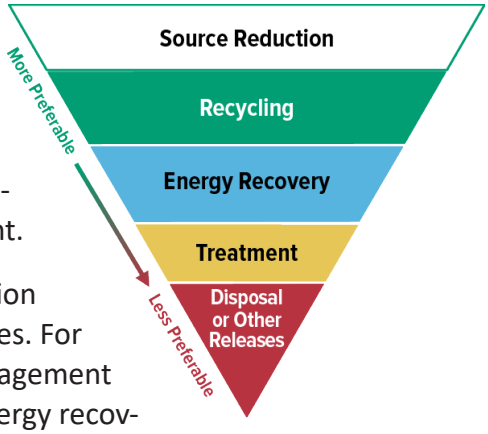
Newly Implemented Source Reduction Activities by Chemical, 2013-2017



Newly Implemented Source Reduction Activities by Industry, 2013-2017

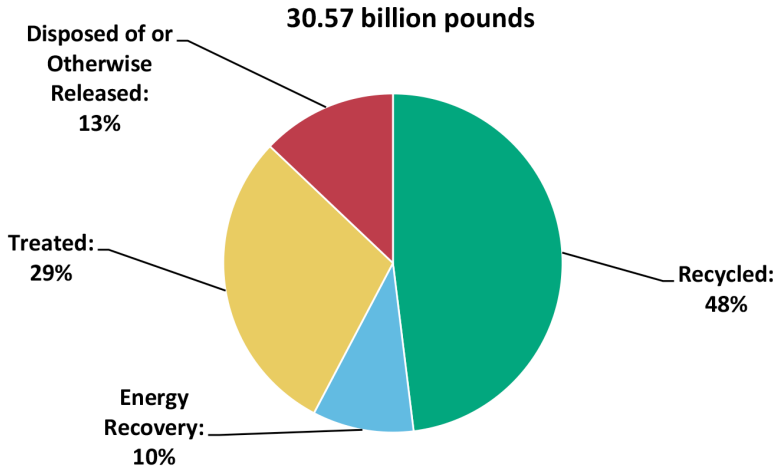


87% of the total quantity of TRI chemical waste that facilities managed was not released into the environment



- In addition to quantities released, facilities report the quantities of TRI-listed chemicals that they manage through recycling, energy recovery, or treatment.
- EPA encourages facilities to first eliminate the creation of chemical waste through source reduction activities. For wastes that are generated, the most preferred management method is recycling, followed by combustion for energy recovery, treatment, and, as a last resort, disposing of or otherwise releasing the chemical waste into the environment. This hierarchy is discussed in the Pollution Prevention Act (PPA) of 1990. One goal of the PPA is that over time facilities will shift toward the more preferred techniques. The TRI data indicate that facilities have indeed done so.
- Facilities continue to use these preferred practices to manage most (87%) of TRI-reported waste, with only 13% disposed or of otherwise released to the environment in 2017.

Production-Related Waste Managed, 2017



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