Toxics Release Inventory (TRI) 2016 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.

TRI provides data on chemical releases

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 is a publicly available database with web-based tools that allow anyone to retrieve the data and conduct their own analyses. Information on chemical wastes managed, environmental releases of chemicals, and activities that reduce waste generation is submitted to EPA annually by U.S. facilities in industry sectors such as mining, manufacturing, electric power generation, and commercial hazardous waste management.

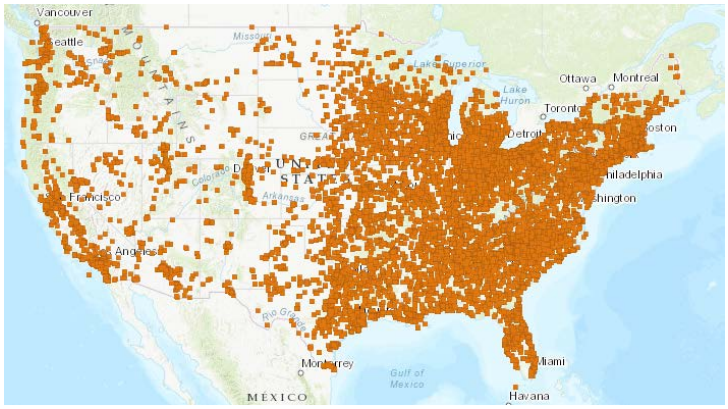
The TRI National Analysis is EPA's presentation of the most recent data

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 chemical releases and trends
- Providing interactive tools that support access to and exploration of TRI data

21,600 facilities located in every state reported to TRI for 2016

Facilities have until July 1 of each year to submit data from the previous year. These data then undergo quality reviews by EPA and the reporting facilities. The 2016 data are now ready to explore.



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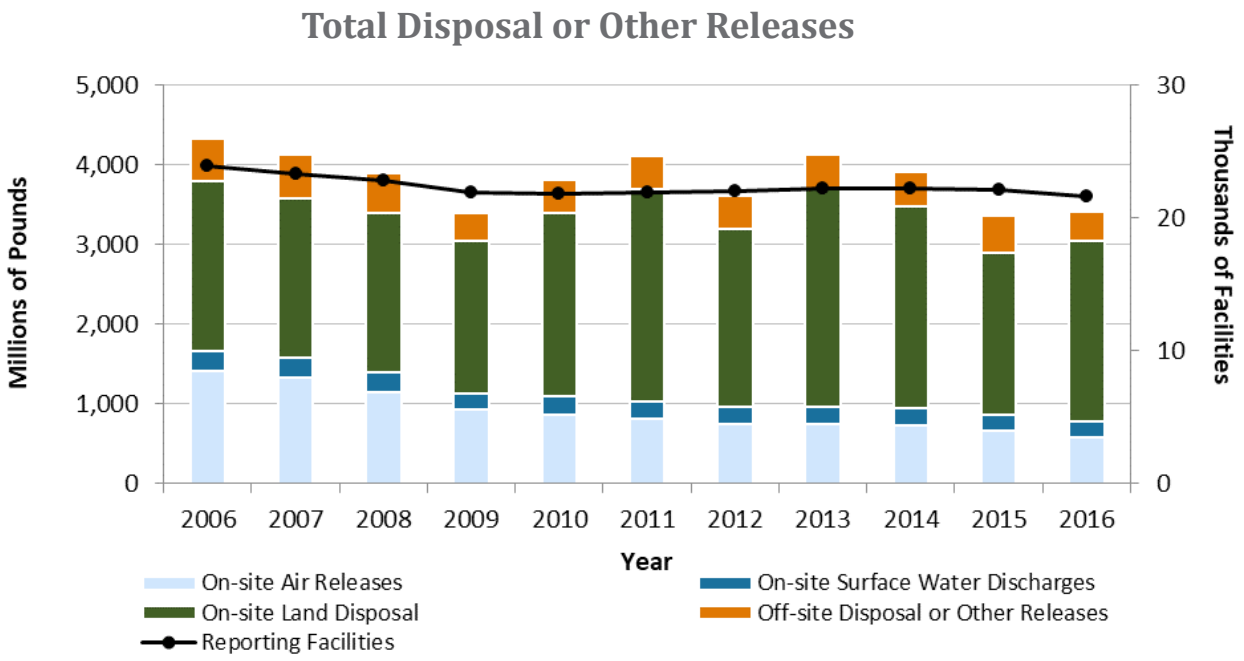
Since 2006, releases to the environment have decreased by 21%

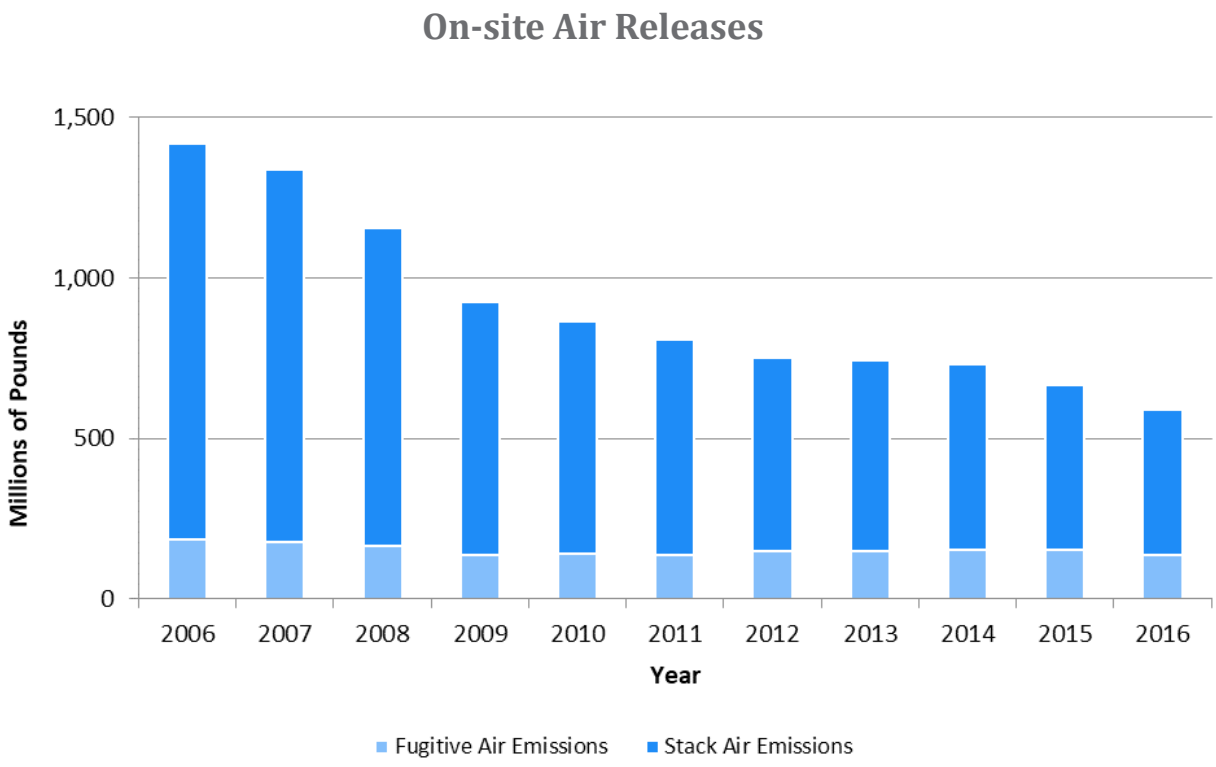
For 2016, TRI facilities reported 3.4 billion pounds of releases to air, water, and land

- Releases were similar to quantities reported last year, but 21% less than releases reported for 2006.
- Land disposal, largely from metal mining, accounted for 66% of releases.



The declining trend in releases is driven by continued reductions in air emissions

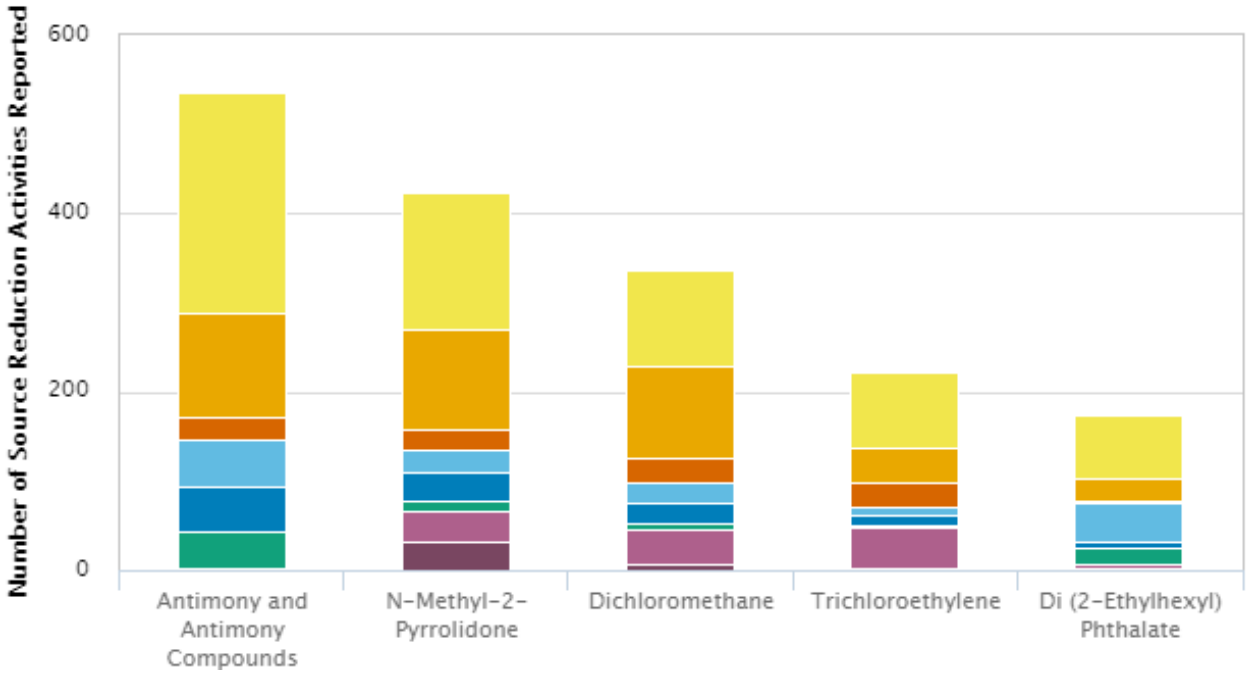
- Air releases decreased by 58% (by 829 million pounds) from 2006 to 2016
- Almost every sector reduced its air releases, with the largest reduction coming from the electric utilities sector
  - Electric utilities have driven the decrease: a shift from coal to other fuel sources, the installation of control technologies at coal-fired power plants, and the implementation of environmental regulations.
  - Hydrochloric acid, sulfuric acid, hydrogen fluoride, methanol, toluene, and styrene have had the greatest reductions in air releases since 2006.



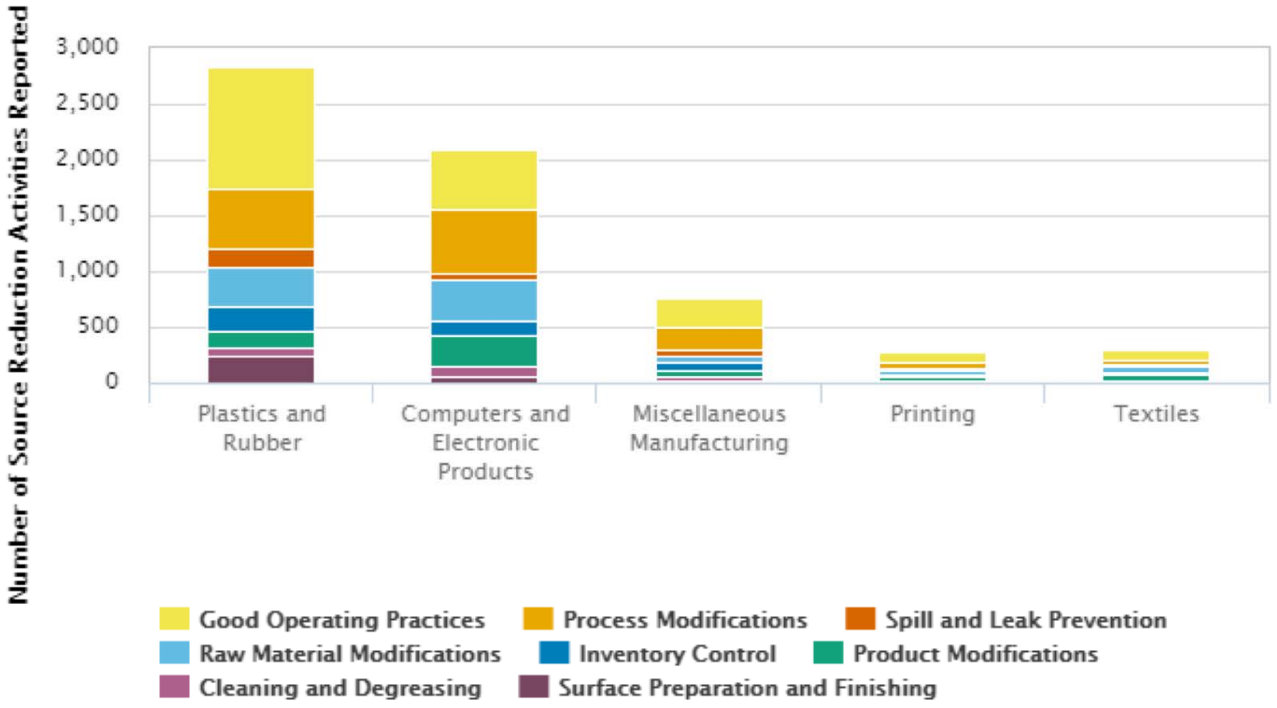
TRI facilities implemented nearly 5,900 new source reduction activities in 2016 that eliminated or reduced the generation of chemical waste

- 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 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 account for almost one-half of reported source reduction activities.

Newly Implemented Source Reduction Activities by Chemical, 2012-2016

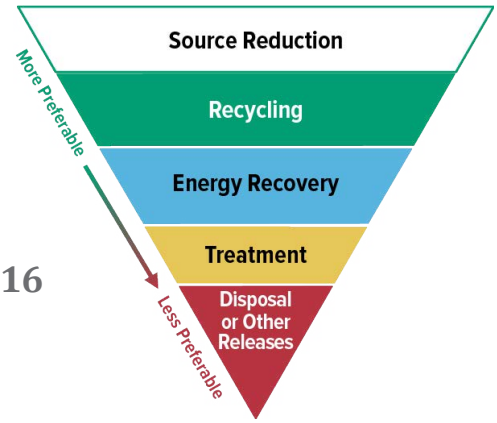


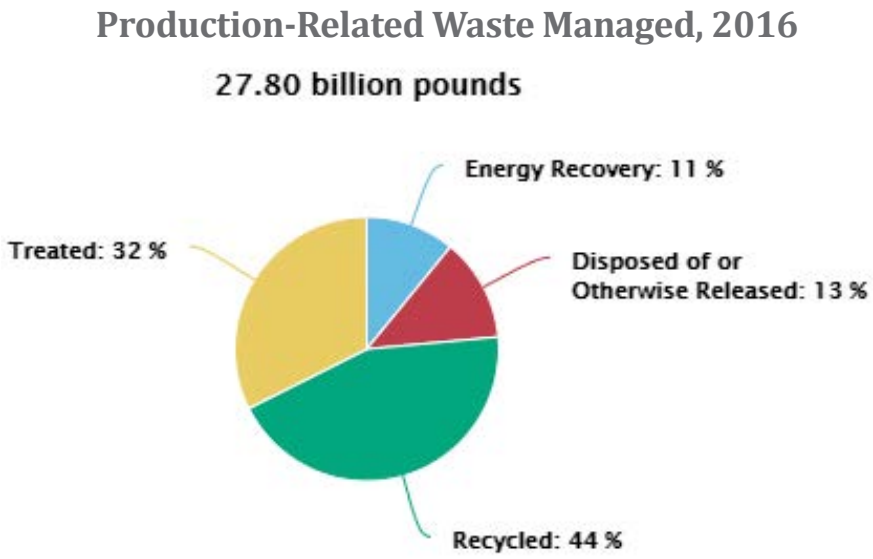
Newly Implemented Source Reduction Activities by Industry, 2012-2016



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

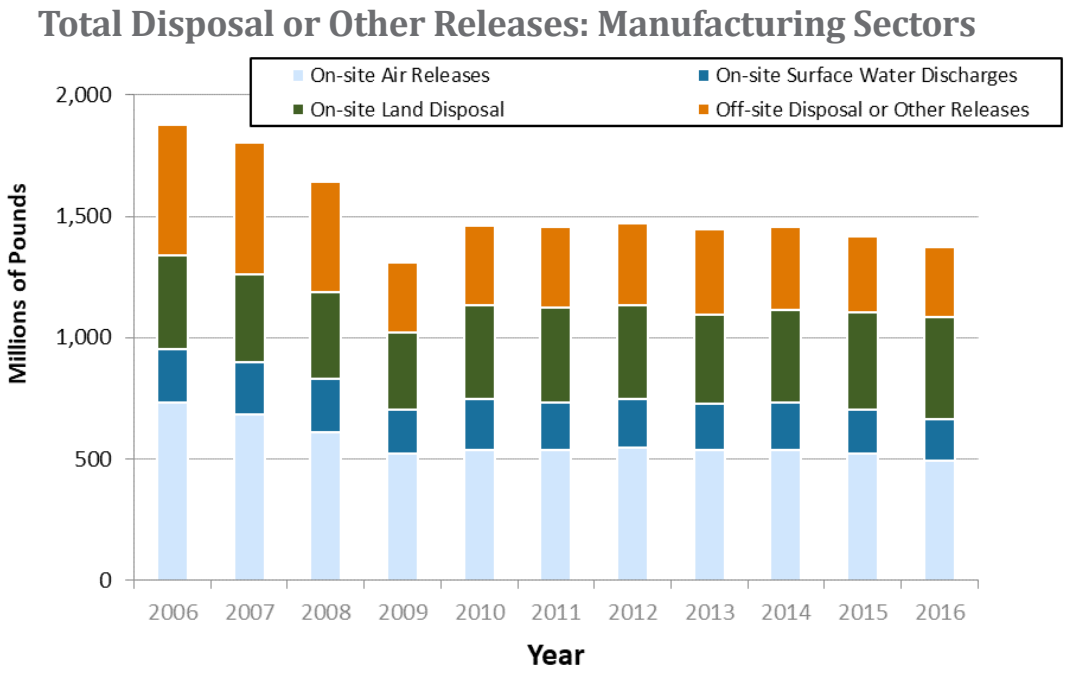
- In addition to quantities released, facilities report the quantities of TRI-listed chemicals that they manage through recycling, energy recovery, or treatment.
- EPA encourages facilities to first eliminate the creation of chemical waste through source reduction activities. For wastes that are generated, the most preferred management method is recycling, followed by burning 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.
- 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 2016.





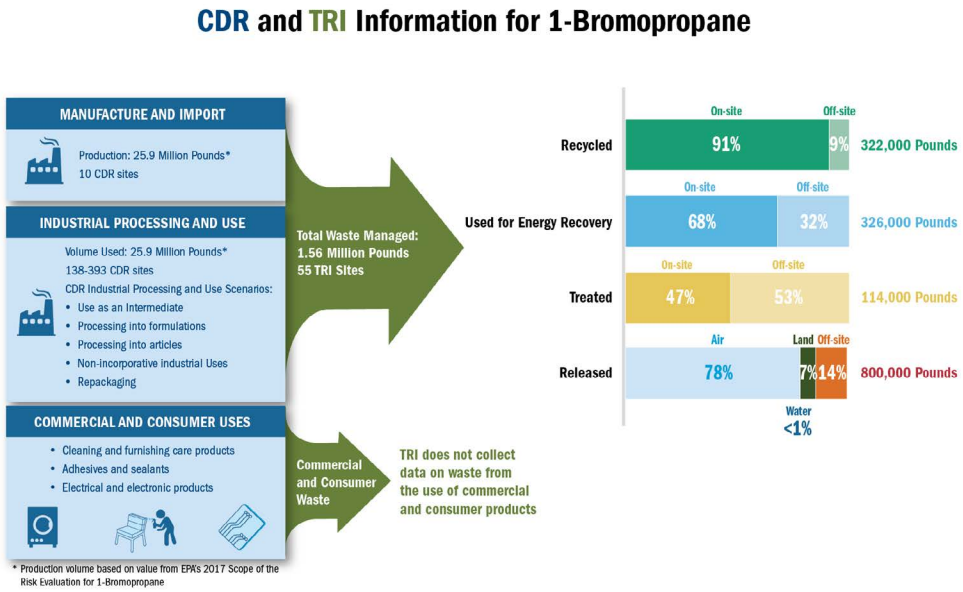
Each year, the TRI National Analysis examines key industry sectors

- Since 2006, releases by manufacturing facilities decreased by 27%. This is primarily due to a reduction in air emissions and off-site disposal.
- Since 2010, released have remained steady even as production has increased following the economic recession.
- Manufacturing facilities reported initiating more than 5,000 source reduction activities to reduce TRI chemical use and waste generation in 2016.



TRI data is used for analyses by communities, researchers, and government

- TRI data are analyzed on their own, or used in conjunction with other data to provide a more complete picture of a chemical's lifecycle.
- For example, the TRI National Analysis shows how TRI waste generation data can be combined with chemical manufacturing data from another EPA reporting program - Chemical Data Reporting (CDR).
- This example shows TRI and CDR data for one chemical: 1-bromopropane.



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