Introduction to the 2018 TRI National Analysis

Industries and businesses in the United States (U.S.) use chemicals to make the products we depend on, such as pharmaceuticals, computers, paints, clothing, and automobiles. While the majority of chemicals included on the Toxics Release Inventory (TRI) chemical list are managed by industrial facilities in ways that minimize releases into the environment, releases still occur as part of their normal business operations. It is your right to know what TRI chemicals are being used in your community, and how they are managed including how much is released into the environment, and whether such quantities are increasing or decreasing over time.

TRI Reporting

Under the Emergency Planning and Community Right-to-Know Act (EPCRA) and the Pollution Prevention Act (PPA), facilities must report details about their pollution prevention and waste management activities, including releases, of TRI-listed chemicals for the prior calendar year to EPA by July 1 of each year.

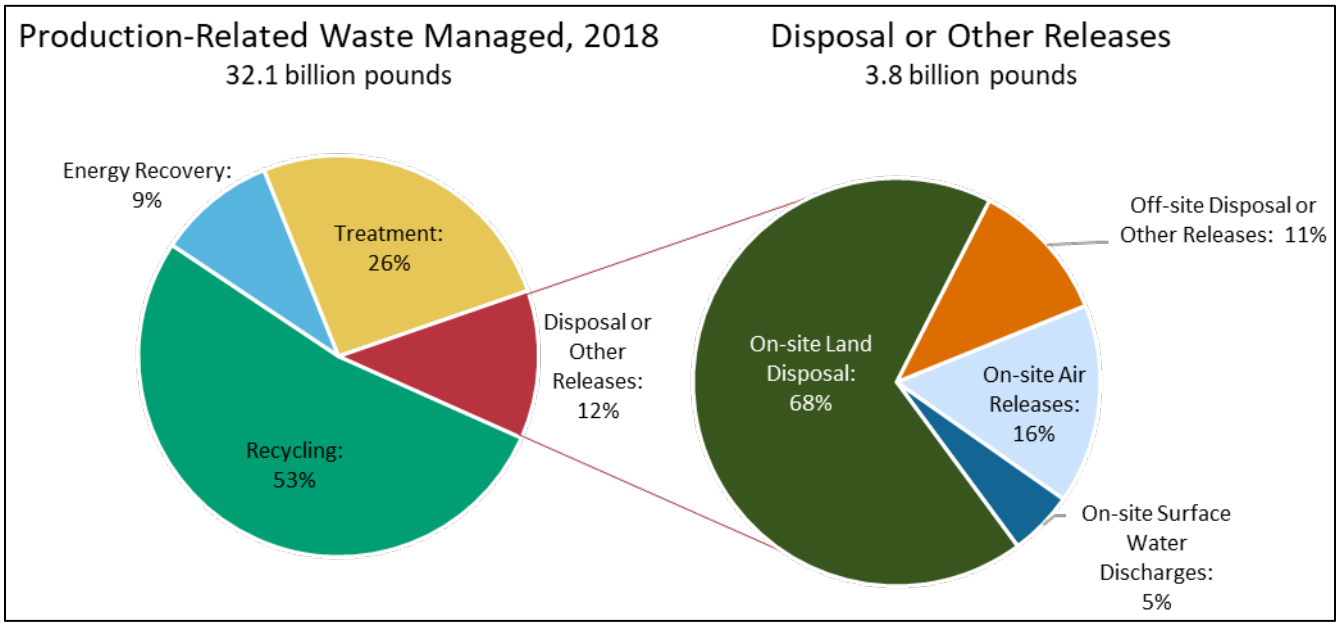
The TRI tracks the annual management of certain chemicals based on the information reported to EPA by facilities in U.S. industry sectors such as manufacturing, metal mining, electric utilities, and hazardous waste management. The data reported to TRI are compiled in a publicly available database maintained by EPA. For calendar year 2018, more than 21,000 facilities submitted TRI data to EPA.

Each year, EPA prepares and publishes the TRI National Analysis. In support of EPA's mission to protect human health and the environment, the TRI National Analysis summarizes recently submitted TRI data, explores data trends, and interprets the findings.

Watch a short video about the TRI Program and your right to know.

Overview of the 2018 TRI data

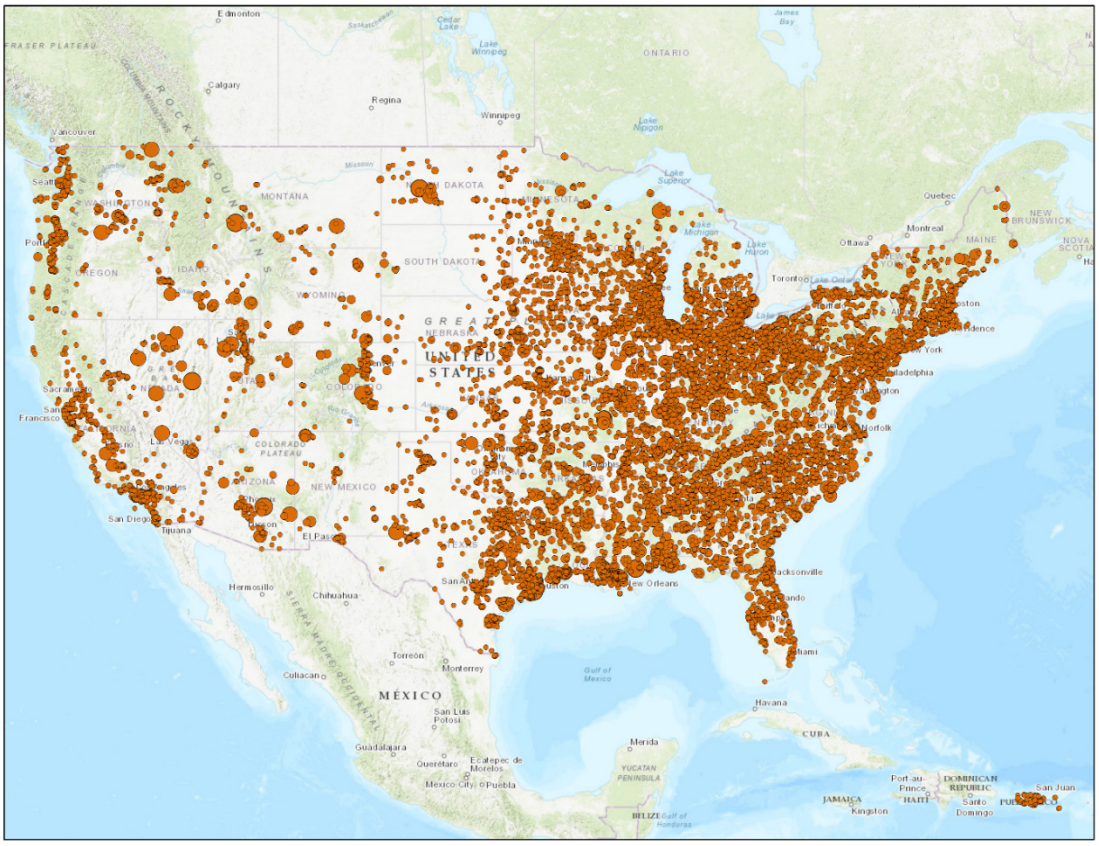
The pie charts below summarize the most recent TRI data on: 1) how production-related chemical wastes were managed in 2018; and 2) how the portion of wastes that were disposed of or otherwise released to the environment were handled.



Note: To avoid double counting, the Disposal or Other Releases pie on the right excludes quantities of TRI chemicals that are transferred off site from a TRI-reporting facility and subsequently released on site by a receiving facility that also reports to TRI.

- Facilities reported managing 32.12 billion pounds of TRI-listed chemicals as production-related waste. This is the quantity of TRI chemicals in waste that is recycled, combusted for energy recovery, treated, disposed of, or otherwise released into the environment. In other words, it encompasses the TRI chemicals in waste generated from the routine production processes and operations at the facilities.
    - Of this total, 88% was recycled, combusted for energy recovery, or treated. Only 12% was disposed of or otherwise released into the environment.
- For chemical wastes that were disposed of or otherwise released, facilities also reported where the wastes were released—into the air, water, or land (on site or off site). As shown in the pie chart on the right, most waste was disposed of to land, which includes landfills and underground injection, and other land disposal.
- To view these data in a table and for more information on why the "disposal or other releases" values differ between these two pie charts, see Quick Facts under TRI Data Considerations.

Where are TRI Facilities Located?



Click on any of the locations on the map to see facility information.

View Larger Map

TRI Data Considerations

As with any dataset, there are several factors to consider when reviewing results or using Toxics Release Inventory (TRI) data. Key factors associated with the data presented in the TRI National Analysis are summarized below; for more information see Factors to Consider When Using Toxics Release Inventory Data.

- **Covered sectors and chemicals.** TRI includes information reported by many industry sectors on the quantities of many chemicals that are released or otherwise managed as waste, but it does not contain such information on all chemicals manufactured, processed or otherwise used in the U.S., nor does it cover facilities in all industry sectors within the U.S. A list of the sectors covered by the TRI Program is available on the TRI webpage, as well as a current list of the chemicals reportable to the TRI Program. Facilities in covered sectors that manufacture, process, or use TRI-listed chemicals above threshold quantities must also employ at least ten full-time equivalent employees to be required to report to the TRI Program.
- **TRI trends**. The list of TRI chemicals has changed over the years; as a result, trend graphs in the TRI National Analysis include only those chemicals that were reportable for the entire time period presented so that the year-to-year data are comparable. Results which focus only on the year 2018 include all chemicals reportable for 2018. Thus, the results for 2018 analyses may differ slightly from results presented in trend analyses, which include 2018 and previous years.
- **Data quality.** Facilities determine the quantities of chemicals they report to TRI using best readily available data. Each year, EPA conducts an extensive data quality review that includes contacting facilities to review potential errors in reported information. This data quality review helps ensure that the National Analysis is based on accurate and useful information.
- **Risk.** The quantity of TRI chemicals released is not an indicator of health risks posed by the chemicals. Although TRI data generally cannot indicate the extent to which individuals may have been exposed to chemicals, TRI data can be used as a starting point to evaluate the potential for exposure and whether TRI chemical releases might pose risks to human health and the environment. In particular, note that:
    - The level of toxicity varies among the TRI-listed chemicals; data on quantities of the chemicals alone are inadequate to reach conclusions on health-related risks, and

- The presence of a chemical in the environment must be evaluated along with the potential and actual exposures and the route of exposures, the chemical's fate in the environment and other factors before any judgements can be made about potential risks associated with the chemical or from a release.

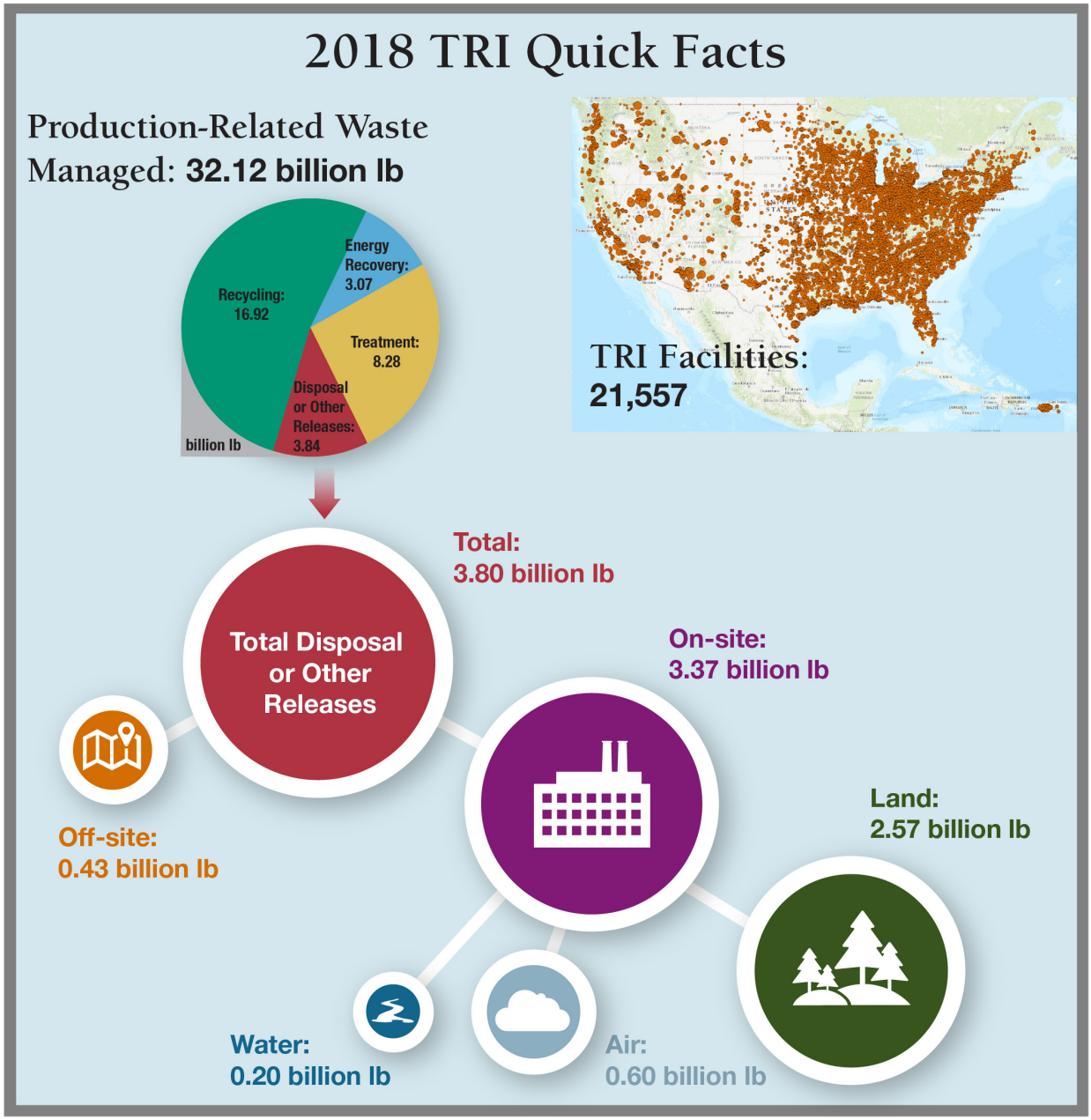
For more information on the use of TRI data in exposure and risk analyses, see Factors to Consider When Using Toxics Release Inventory Data and the Hazard and Potential Risk of TRI Chemicals in the Releases section.

- **Late submissions.** TRI reporting forms submitted to EPA after the July 1 reporting deadline may not be processed in time to be included in the National Analysis. While facilities can submit revisions after July 1, the TRI dataset used to develop the National Analysis was frozen in mid-November. Any revisions or late submissions received after this date will not be reflected in the National Analysis but will be incorporated into the TRI dataset during the spring data refresh and will be reflected in next year's National Analysis where 2018 data are referenced.
- **Double counting.** The National Analysis presents summaries of many quantitative data elements including releases to the environment, which occur on site and off site after wastes are transferred to other businesses for further waste management. When aggregating releases across facilities, such as national totals, EPA adjusts off-site releases to eliminate double counting of releases if the receiving facility also reports to TRI.

TRI Reporting is Required

Reporting to TRI is required by law for facilities that meet the reporting criteria under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA). EPA investigates cases of EPCRA non-compliance and may issue civil penalties, including monetary fines. Since the TRI Program's inception, EPA has filed more than 3,300 enforcement actions involving TRI. For more information, see the TRI Compliance and Enforcement webpage.

Quick Facts for 2018



The two metrics related to disposal or other releases are similar (3.84 and 3.80 billion pounds), but not the same. There are several reasons that these metrics differ slightly:

1. **Double counting.** Total disposal or other releases removes "double counting" that occurs when a facility that reports to the TRI Program transfers waste to another TRI-reporting facility. For example, when TRI Facility A transfers a chemical off site

for disposal to Facility B, Facility A reports the chemical as transferred off site for disposal while Facility B reports the same chemical as disposed of on site. In processing the data, the TRI Program recognizes that this is the same quantity of the chemical and includes it only once in the total disposal or other releases metric. The production-related waste managed metric in TRI, however, considers all instances where the waste is managed (first as a quantity sent off site for disposal and next as a quantity disposed of on site), and reflects both the off-site transfer and the on-site disposal. Typically, double counting accounts for most of the difference between the two metrics.

2. **Non-production related waste.** Total disposal or other releases includes quantities of non-production-related waste that are released to the environment, but these quantities are not included in the releases metric that is part of the production-related waste total.
3. **Range Codes.** Facilities may use range codes for the quantities reported that make up the total disposal or other releases (e.g., fugitive air emissions, water discharges, and releases to a landfill) if the quantity released to the medium is less than 1,000 pounds and the chemical is not designated as a persistent, bioaccumulative toxic (PBT) chemical in TRI. The three reporting range codes are: A =1 to 10 pounds; B = 11 to 499 pounds; and C = 500 to 999 pounds. EPA calculations assume the approximate midpoint for each range (i.e., A = 5 pounds; B = 250 pounds; and C = 750 pounds). For the releases metric that is part of the production-related waste total, range codes cannot be used; a numerical estimate must be provided.