

Introduction to the 2019 TRI National Analysis

Industries and businesses in the United States (U.S.) use many chemicals to make the products we depend on, such as pharmaceuticals, computers, paints, clothing, and automobiles. While most chemicals on the [Toxics Release Inventory \(TRI\) chemical list](#) are managed by these facilities in ways that minimize releases into the environment, releases still occur as part of normal business operations.

TRI Reporting

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

It is your right to know what TRI chemicals are being used in your community, how chemical waste is managed including how much is released into the environment, and whether such quantities are increasing or decreasing over time.

The TRI tracks the management of certain chemicals from the information reported to EPA each year by facilities located in the U.S. in industry sectors such as manufacturing, metal mining, electric utilities, and hazardous waste management. The data reported to TRI are compiled in a publicly available EPA database. For calendar year 2019, more than 21,000 facilities reported to EPA's TRI Program. Please note that the

most recent TRI dataset reflects chemical waste management information, including releases, that occurred during calendar year 2019, and therefore does not indicate any potential impacts from the COVID-19 pandemic, which began in the U.S. in early 2020.

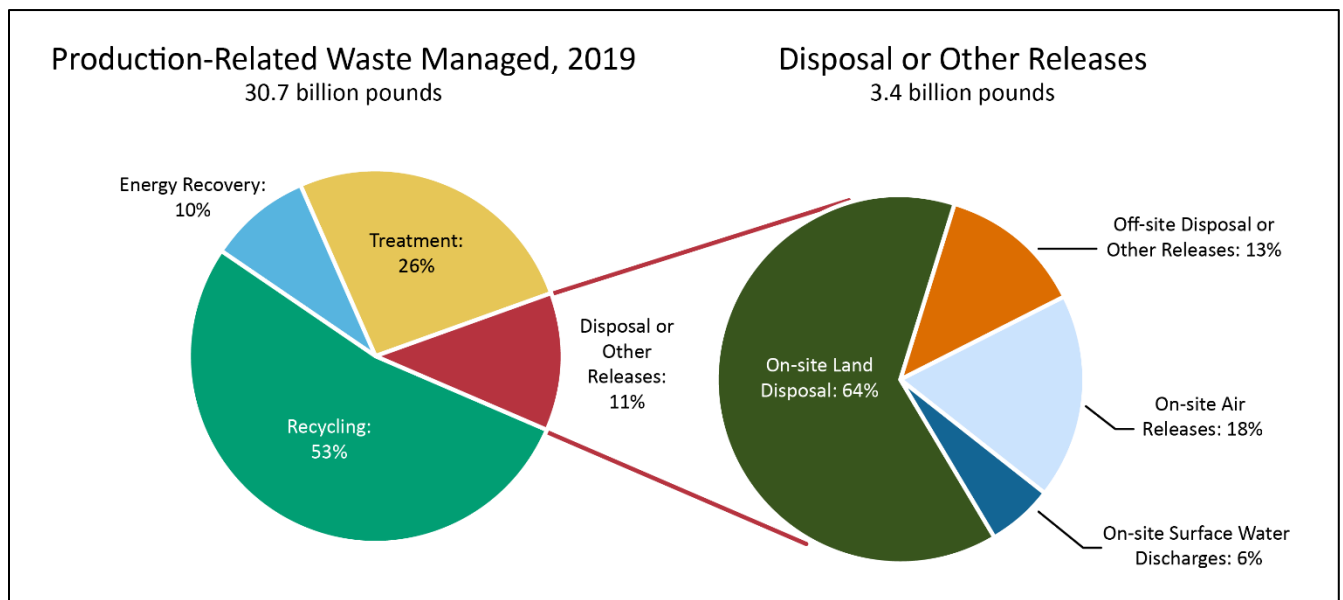
Each year, in support of its mission to protect human health and the environment, EPA analyzes the most recent TRI data and publishes its findings in the TRI National Analysis.



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

Overview of the 2019 TRI data

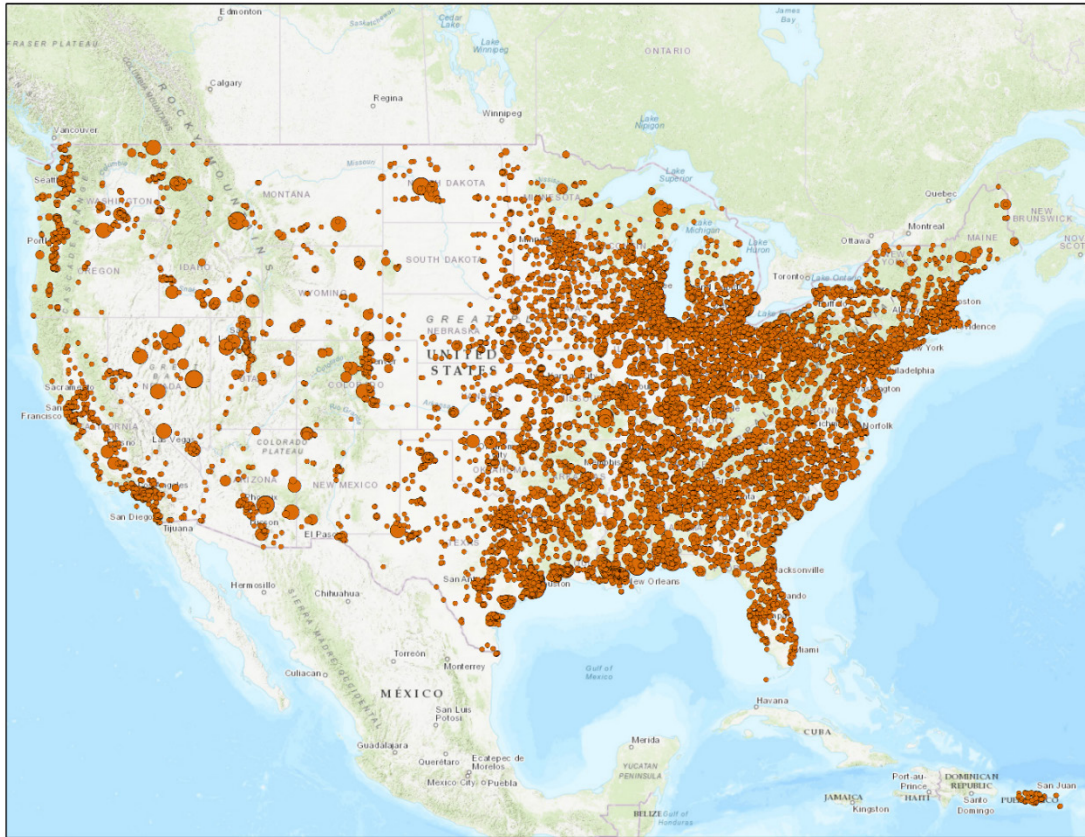
The two pie charts below summarize the most recent TRI data: 1) on how facilities managed production-related TRI chemical wastes through recycling, energy recovery, treatment, and disposal or other releases; and 2) for the quantities of the TRI chemical wastes released to the environment, the proportions released to air, water, and land.



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. Percentages do not sum to 100% due to rounding.

- Facilities reported managing a total of 30.7 billion pounds of TRI-listed chemicals as production-related waste during 2019. Production-related waste is the quantity of TRI chemicals in waste generated from routine operations at facilities. This includes TRI chemicals in wastes that are recycled, combusted for energy recovery, treated, disposed of, or otherwise released into the environment.
 - Of this total, 89% was recycled, combusted for energy recovery, or treated. Only 11% was disposed of or otherwise released into the environment.
- For chemical wastes that were disposed of or otherwise released, facilities also reported whether the wastes were released to air, water, or land, the quantities released, and the locations of the releases. Most releases occur on site at facilities, but chemical waste may also be shipped off site for disposal, such as to a landfill. As shown in the pie chart on the right, most waste was disposed of to land, which includes landfills, underground injection, and other land disposal.
- To view these data in a table, see Quick Facts under [TRI Data Considerations](#).

Where are the Facilities that Reported to TRI for 2019 Located?



Click on any of the locations to see a facility's TRI 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 chemicals and sectors.** TRI includes information reported by many industry sectors on the quantities of certain chemicals that are released into the environment or otherwise managed as waste through recycling, combustion for energy recovery, or treatment. However, the TRI does not contain information on all chemicals, nor is every facility or every industry sector within the U.S. required to disclose information on TRI chemicals. A [list of the chemicals reportable to the TRI Program as well as a list of the sectors covered by the TRI Program](#) is available on the TRI webpage. Facilities in covered sectors that manufacture, process, or otherwise use TRI-listed chemicals above listed threshold quantities must also employ at least ten full-time equivalent employees to be required to report to the TRI Program. For most TRI chemicals, the thresholds are 25,000 pounds of the chemical manufactured or processed, or 10,000 pounds of the chemical otherwise used during a calendar year.
- **TRI trends.** The TRI chemical list has changed over the years. To make sure year-to-year data are comparable, trend graphs in the TRI National Analysis include only chemicals that were reportable for the entire time period presented. Results which focus only on the year 2019 include all chemicals reportable for 2019. Thus, results for the 2019 analyses may differ slightly from the results presented in trend analyses, which include 2019 and previous years.
- **Data quality.** Facilities use the best readily available data to determine the quantities of chemicals they report to TRI. [Each year, EPA conducts an extensive data quality review](#) that includes contacting facilities concerning potential errors in reported information. This data quality review process helps ensure that the TRI National Analysis is based on accurate and complete information.

TRI Reporting is Required

TRI reporting is required 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 creation, EPA has taken more than 3,400 TRI-related enforcement actions. For more information, see the [TRI Compliance and Enforcement](#) webpage.

- **Risk.** TRI data can be a useful starting point to evaluate whether TRI chemical releases pose a risk to human and environmental health. However, the quantity of a TRI chemical released is not necessarily an indicator of exposure to the chemical, or the health or environmental risks posed by the chemical after its release. In particular, note that:
 - The extent of human and environmental exposure to a chemical depends on many factors such as the where the chemical is released, the environmental media to which it is released (i.e., air, water, or land), the chemical's properties, and the chemical's environmental fate and movement, and
 - TRI-listed chemicals vary in their toxicity

Therefore, judgements about the potential health risks of chemical releases must consider all this information, in addition to the quantity released. For more information on the use of TRI data in exposure and risk evaluations, see the [TRI and Estimating Potential Risk webpage](#) and [Hazard and Potential Risk of TRI Chemicals](#) in the Releases section.

- **COVID-19.** The most recent TRI dataset reflects chemical waste management activities, including releases, that occurred during calendar year 2019. Therefore, none of the trend information or changes in waste management or release quantities from 2018 to 2019 indicate any potential impacts of the COVID-19 pandemic, which began in the U.S. in early 2020.

- **Late submissions, revisions and withdrawals.**

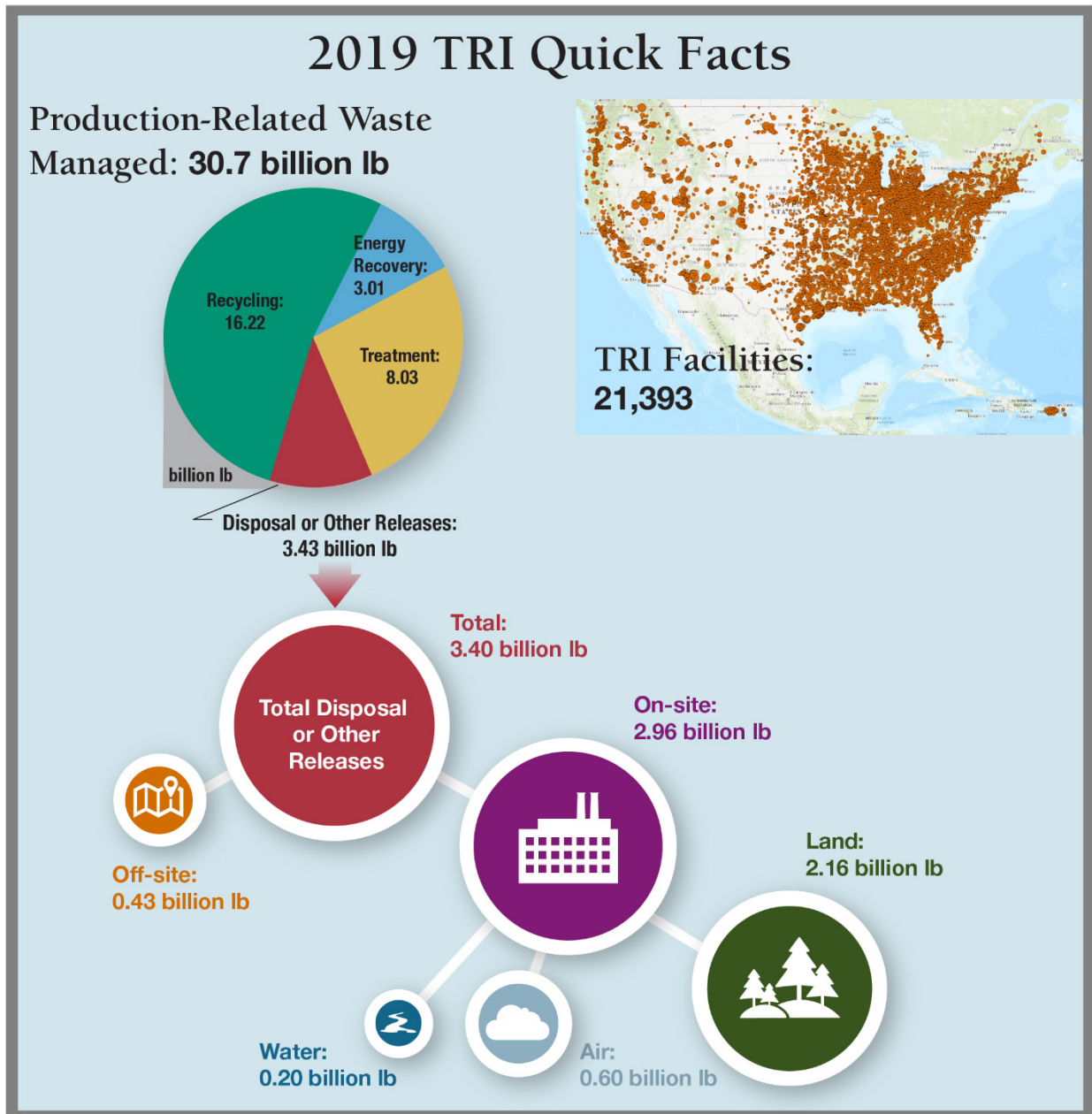
TRI reporting forms submitted to EPA or revised after the July 1 reporting deadline may not be processed in time to be included in the National Analysis. After EPA's data quality review, the TRI data are frozen in October and this dataset is used to develop the National Analysis. Any revisions or late submissions received after this date, or withdrawals made after this date, will not be reflected in the National Analysis but are incorporated into the TRI dataset during the spring data refresh and will be reflected in next year's National Analysis where the data for that reporting year 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 chemical 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.

Impact of Late Submissions and Revisions on the National Analysis

Comparing the 2018 TRI data available in October 2020 to those that were available a year earlier when the 2018 dataset was frozen reveals the impact on the 2018 TRI National Analysis from facilities that submitted late or revised TRI reporting forms after the data freeze. With the updated data, waste managed and release quantities are **lower** than originally reported: releases are 2.0% lower (primarily driven by one mining facility's revisions) and waste managed is 0.5% lower than was shown in the 2018 TRI National Analysis. While overall totals are lower when the updated data are considered, looking at the data by environmental medium reveals that releases to air are 3.5% (21 million lb) **higher** with the updated data. This increase is primarily due to two facilities' revisions to their air releases of ammonia—one with a 14.5-million-pound increase and the other with a 5-million-pound increase.

Quick Facts for 2019



In the figure, the value for "Disposal or Other Releases" in the production-related waste managed pie chart (3.43 billion lb) is greater than the value for "Total Disposal or Other Releases" (3.40 billion lb). There are several reasons that these quantities differ slightly, including:

- **Double counting.** Total disposal or other releases (3.40 billion pound value in the figure) removes "double counting" that occurs when a facility that reports to the TRI Program transfers waste to another TRI-reporting facility. For example, when 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 release quantities in the 2019 TRI Quick Facts figure.

- **Non-production related waste.** Non-production-related waste refers to quantities of TRI chemical wastes that result from one-time events, rather than standard production activities. These events may include remedial actions, catastrophic events, or other events not associated with normal production processes. Non-production-related waste is included in a facility's total disposal or other releases but is not included in its production-related waste managed.

For more information on TRI, the chemicals and industry sectors it covers, the reporting requirements, and to access TRI data, [visit the TRI website](#).