



The Toxics Release Inventory (TRI) and Pollution Prevention (P2)

P2 Data in TRI

The PPA requires industrial facilities to provide P2 details about each chemical they report to EPA's Toxics Release Inventory (TRI), such as:

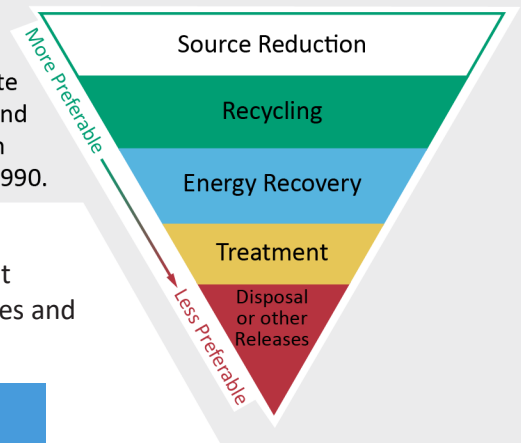
- Information about source reduction and other activities that have reduced environmental releases of the chemical
- Quantities of chemical waste managed through recycling, energy recovery, treatment, or releases, referred to as production-related waste managed
- A production or activity ratio to provide context for reported chemical quantities.

TRI P2 data helps track industry progress in reducing waste generation and moving toward preferred waste management methods. Making the information publicly available helps promote the sharing of best practices among individual facilities and companies and showcase facilities' achievements in improving environmental performance.

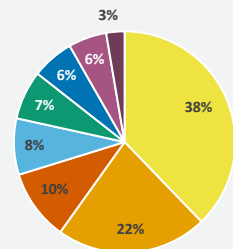
The Waste Management Hierarchy

EPA encourages facilities to first eliminate the creation of chemical waste through source reduction activities. For waste that is generated, the most preferred management method is recycling, followed by combusting for energy recovery, treatment and, as a last resort, disposing of or releasing the waste into the environment.

These waste management practices are illustrated in the waste management hierarchy and discussed in the Pollution Prevention Act (PPA) of 1990.

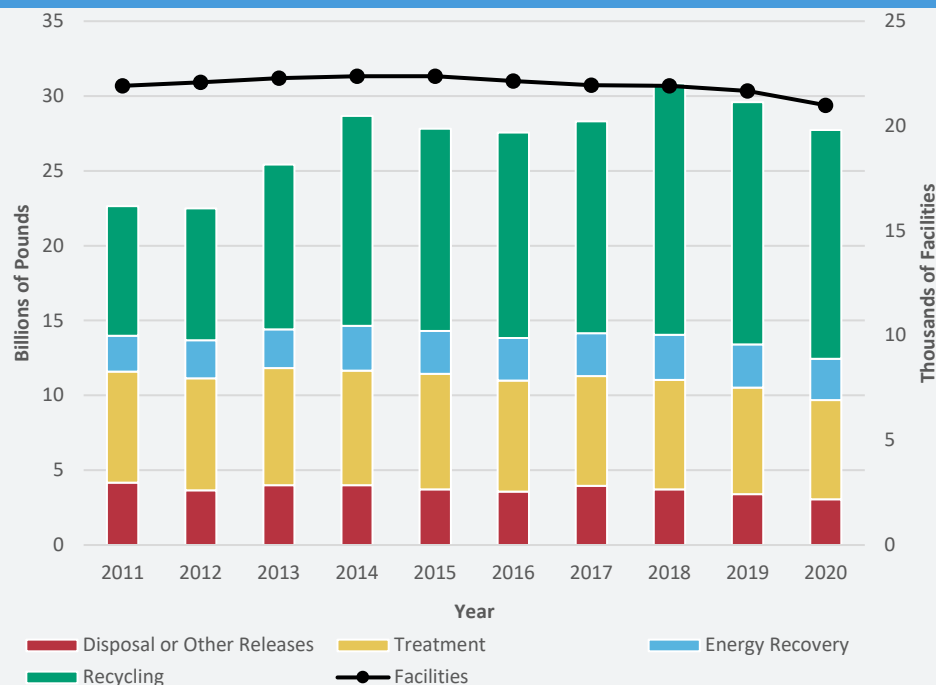


Newly Implemented Source Reduction Activities, 2011-2020

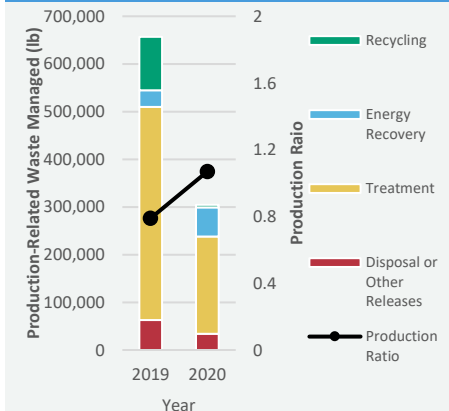


- Good Operating Practices
- Process Modifications
- Spill and Leak Prevention
- Raw Material Modifications
- Product Modifications
- Inventory Control
- Cleaning and Degreasing
- Surface Preparation and Finishing

Production-Related Waste Managed, 2011-2020



Example: Facility Production Ratio and Waste



A production or activity ratio typically compares production in the current year to the prior year. Using this ratio can help gauge whether reductions were the result of reported source reduction activities or if there was a shift to preferred waste management techniques.



Source Reduction and Other Waste Management Practices

Facilities report the source reduction activities, including any green chemistry practices, they implemented during the reporting year using predefined codes (W codes) on their TRI forms. For example, a facility may select a green chemistry code indicating that an organic solvent was reduced or eliminated in a production process as a source reduction activity. Many facilities choose to describe these activities using an optional text entry field on the TRI reporting form (see box for examples). Facilities may also provide details on barriers to source reduction or on other waste management methods (e.g., recycling) implemented to reduce releases of TRI chemicals to the environment.

Source Reduction Activity and Examples of TRI Text Entries (Section 8.11)

W56: Reduced or eliminated use of an organic solvent [-15-24%]

We switched to a water-based stain and eliminated our solvent-based stain.

W72: Modified spray systems or equipment [-5-14%]

We added a new straight-line machine which is more efficient than hand spraying. We also changed out all our spray guns to Airless Binks AG365 guns increasing our energy transfer efficiency to 15%.

W14: Changed production schedule to minimize equipment and feedstock changeovers [-0-4%]

Emphasis was placed on reducing the amount of scrap produced during extrusion line product changeovers.

Accessing and Using TRI's P2 Data

There are several resources for accessing TRI's P2 data and using them to answer questions, including:

- Have chemical releases at a particular industrial facility gone up or down over time?
- Was this change in releases driven by changes in production? Did P2 practices play a role?
- How are similar facilities managing the chemical? What P2 practices have been reported?
- Which P2 practices have led to the largest reductions in releases of TRI chemicals to the environment?

[EPA's TRI P2 Search Tool](#) can be used to identify P2 practices associated with particular industries, chemicals, or businesses and compare P2 performance at the facility and corporate level (see example). You can also visually explore P2 data by sector using the TRI Toxics Tracker. P2 Spotlights highlighting select chemicals and pollution prevention approaches are also available.

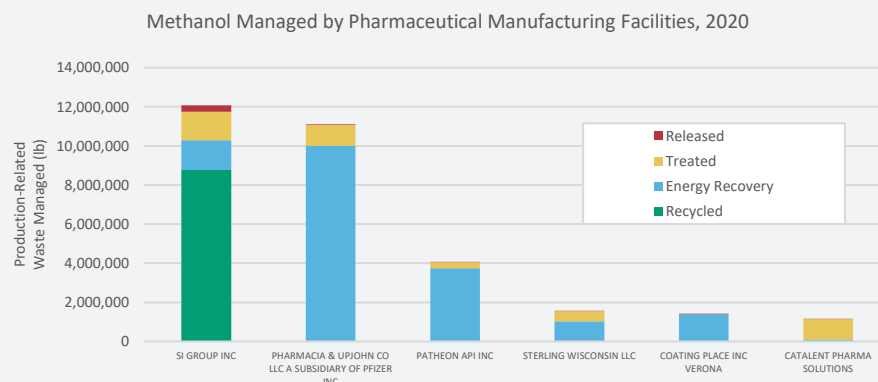
Barriers to Implementing Source Reduction

EPA encourages facilities that did not implement source reduction activities to use the optional P2 text entry field to indicate what barriers may be preventing them from doing so. These may include:

- Need for additional technical information
- Concerns about product quality
- Prohibitive cost

This information provides a more complete picture of P2 activities at facilities and may facilitate exchanges between those seeking and those offering technical assistance.

Example: How are similar facilities managing the same chemical?



Use the TRI P2 Search Tool to access P2 information and a conduct comparative analysis. This example shows how methanol waste is managed by different facilities in the pharmaceutical manufacturing sector. This comparison may help facilities learn from their peers to identify opportunities to move toward preferred waste management methods.