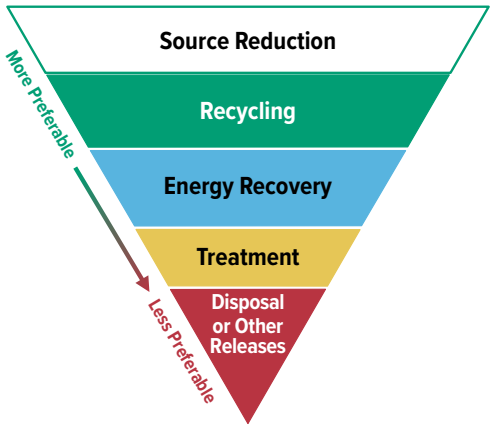
The Toxics Release Inventory (TRI) and Pollution Prevention

TRI and 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 burning 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.



The Waste Management Hierarchy

TRI's Pollution Prevention (P2) Data

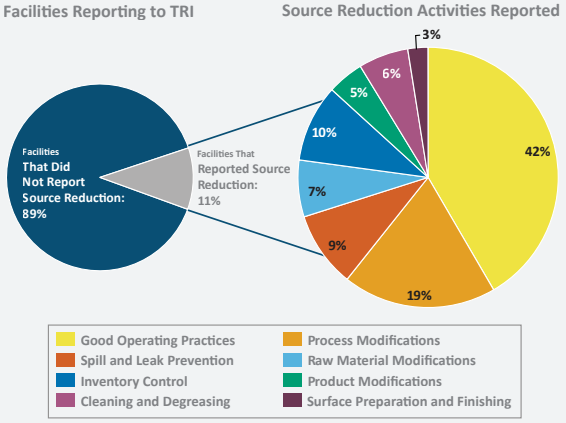
The PPA requires industrial facilities to provide details about each chemical they report to EPA's Toxics Release Inventory (TRI), such as:

- Information about source reduction and other activities that have reduced environmental releases of the chemical
- Quantities of production-related chemical waste managed
- A production or activity ratio to provide context for reported chemical quantities

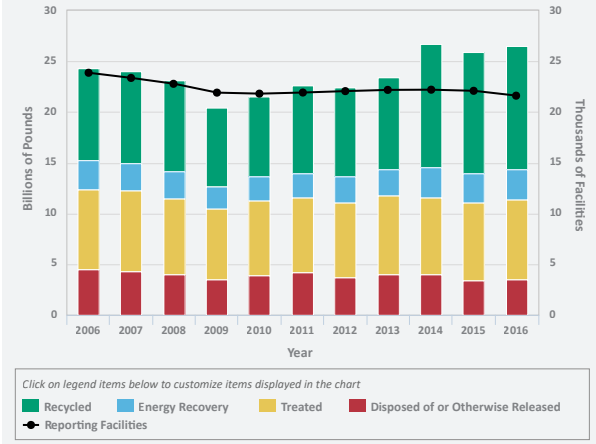
This information helps track industry progress in reducing waste generation and moving toward preferred waste management alternatives. Making the information publicly available also helps promote the sharing of best practices among individual facilities and companies and showcase a facility's achievements in improving environmental performance. TRI P2 data can 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? Or 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?

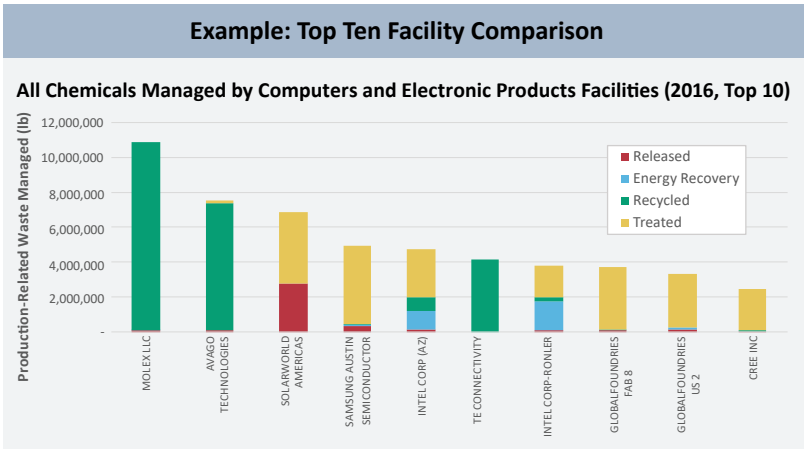
Newly Implemented Source Reduction Practices, 2016



Production-Related Waste Managed



Example: Top Ten Facility Comparison



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Source Reduction and Other Waste Management Practices

Facilities report the source reduction activities, including any green chemistry practices, they implement using designated codes (W codes) on their TRI forms. Many facilities also choose to describe these activities, or other measures taken to reduce releases of TRI chemicals, using an optional free-text data field on the TRI reporting form.

Source Reduction Activity	Example: P2 Free-Text Entries (Reporting Form R Section 8.11)
W42: Substituted raw materials	We have reduced our air emissions by substituting #6 fuel oil with B50; a product that is 50% vegetable oil.
W60: Changed to mechanical stripping / cleaning devices (from solvents or other materials)	Grit blasting has been used in place of some of our acid stripping operations. Our customer satisfaction with this process will determine if it will be used as a permanent change. Otherwise our acid use will increase with expected increase in production requirements.
W21: Instituted procedures to ensure that materials do not stay in inventory beyond shelf-life	We found customers for paint at the end of its shelf life that did not require high performance standards of paint within its shelf life. This reduced the amount in the waste stream.

Barriers to Implementing P2

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; or
- Prohibitive cost.

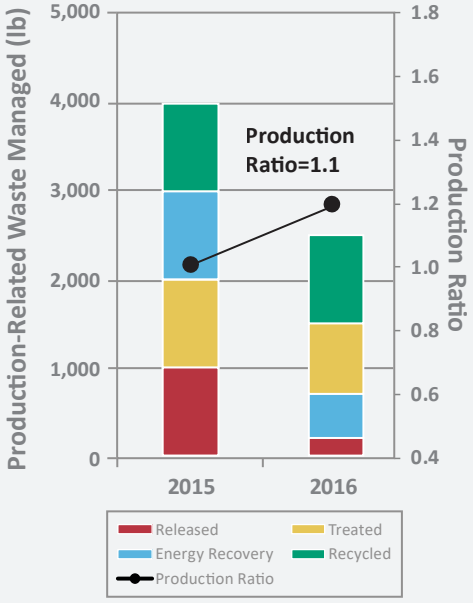
This information provides a more complete picture of P2 activities at facilities and may facilitate exchanges between those seeking and those offering technical assistance.

Production Ratio or Activity Ratio

Under the PPA, TRI facilities report a production or activity ratio that typically compares production in the current year to the prior year. For a chemical used in the generation of electricity, for example, the production ratio for that chemical reflects annual change of kilowatt hours produced.

Using this ratio, year-to-year changes in waste management quantities can be viewed within the context of production, which can help gauge whether or not reductions were the result of reported source reduction activities.

Facility Production Ratio and Waste Managed Example



Above: A facility reduces waste (even as production rises) and shifts to preferred waste management techniques.

Accessing and Using TRI's P2 Data

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. You can also visually explore P2 data by sector using the Industry Profile Dashboard. P2 Spotlights highlighting select chemicals and pollution prevention approaches are also available.

Other ways to access TRI's P2 data include: myRTK for on-the-go access, TRI Search for a facility-level view of the data, and the TRI National Analysis for EPA's annual interpretation of the data. For more information on these tools, visit the main TRI P2 webpage and for instructional resources related to pollution prevention, visit the P2 Resources page.