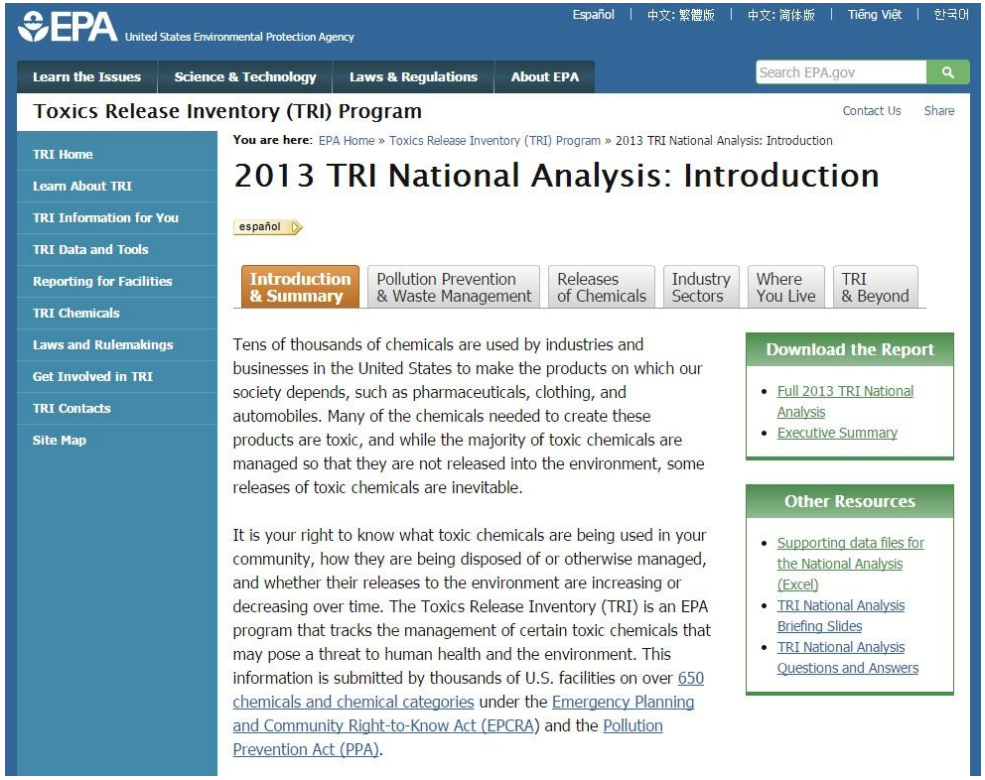
Introduction to the
Toxics Release Inventory and the 2013 TRI National Analysis Report



Overview

- Introduction to TRI
- Reporting Year 2013 TRI National Analysis
- New interactive web-based format
- Using TRI Explorer to analyze TRI data
- Questions & Discussion

Why was the Toxics Release Inventory created?

Bhopal memorial for those killed and disabled by the 1984 toxic gas release

Bhopal, India **December 1984**

- Methyl isocyanate gas released at a Union Carbide chemical plant
- Thousands died the first night
- Thousands more have died due to long-term health effects
- Survivors continue to suffer with permanent disabilities

Institute, West Virginia **August 1985**

- Chemical release at a similar facility in the U.S.
- Over 100 people hospitalized

Increased concern in the U.S. about chemical accident preparedness and availability of information on toxic chemical releases from industrial facilities

What is the Toxics Release Inventory (TRI)?

- TRI tracks the waste management of certain toxic chemicals that pose a threat to human health and the environment.
- TRI includes information on:

Releases

Waste transfers

Recycling

Pollution prevention

And much more!

What is a “release”?

- A **"release"** refers to different ways that toxic chemicals from industrial facilities enter the:


Air

Water

Land

- The likelihood of residents coming into contact with toxic chemicals depends on the type of release and other factors

For more information, see “*Factors to Consider When Using TRI Data”* at:
http://www.epa.gov/tri/triprogram/FactorsToConPDF.pdf

Which facilities must report to TRI?

1. Facility must be in a TRI-covered industry sector or category, including:

Manufacturing

Coal/Oil electricity generation

Certain Mining Facilities

Hazardous Waste Management

Federal Facilities

2. Facility must have the equivalent of at least 10 full-time employees
3. Facility must manufacture, process or use more than a certain amount of a TRI toxic chemical per year

What information do facilities report to TRI?

- On-site releases of TRI chemicals to:
  - Air
  - Water
  - Land

- Transfers of chemical waste to off-site locations

- Other waste management:
  - Recycling
  - Treatment
  - Energy Recovery

- Pollution prevention activities (www.epa.gov/tri/p2)

Considerations When Using TRI

- TRI covers an important subset of toxic chemicals managed at U.S. facilities, but doesn't cover all chemicals or facilities
- Data reflect annual totals and don't indicate the frequency or duration of a release
- Quantities reflect chemicals released into air and water and managed through recycling, energy recovery, treatment and disposal
- Toxicity level varies among the chemicals on the TRI list
- TRI doesn't include information about public exposure to chemicals
- TRI facility operations and releases are regulated under other EPA programs with requirements designed to limit human and environmental harm

For more information, see *"Factors to Consider When Using TRI Data"* at:
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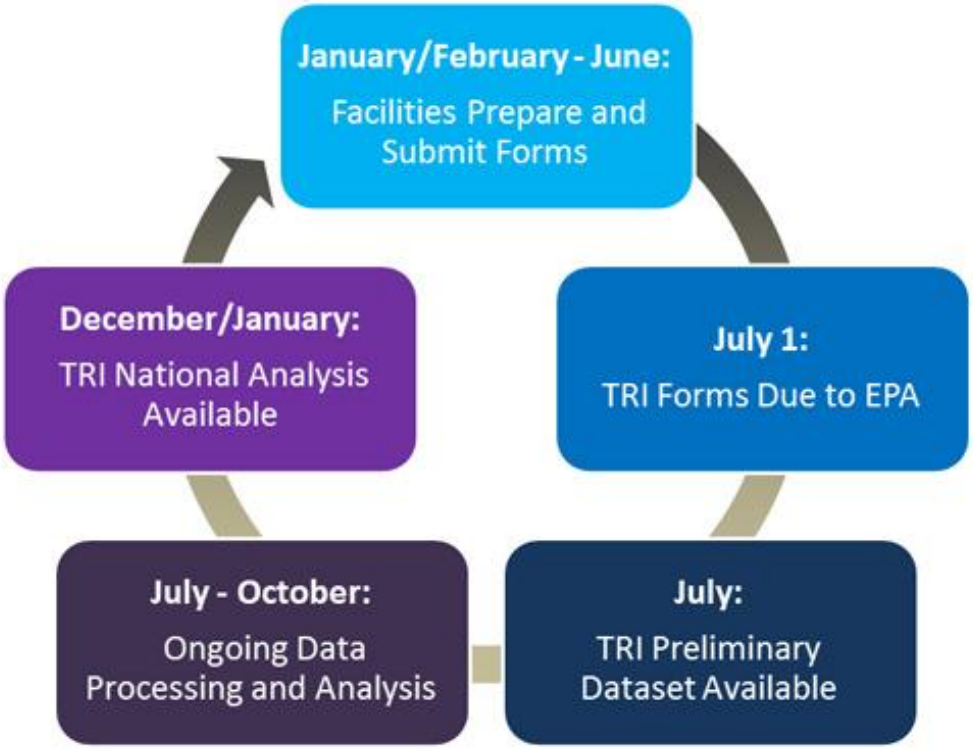
Annual TRI Cycle and Data Quality Process

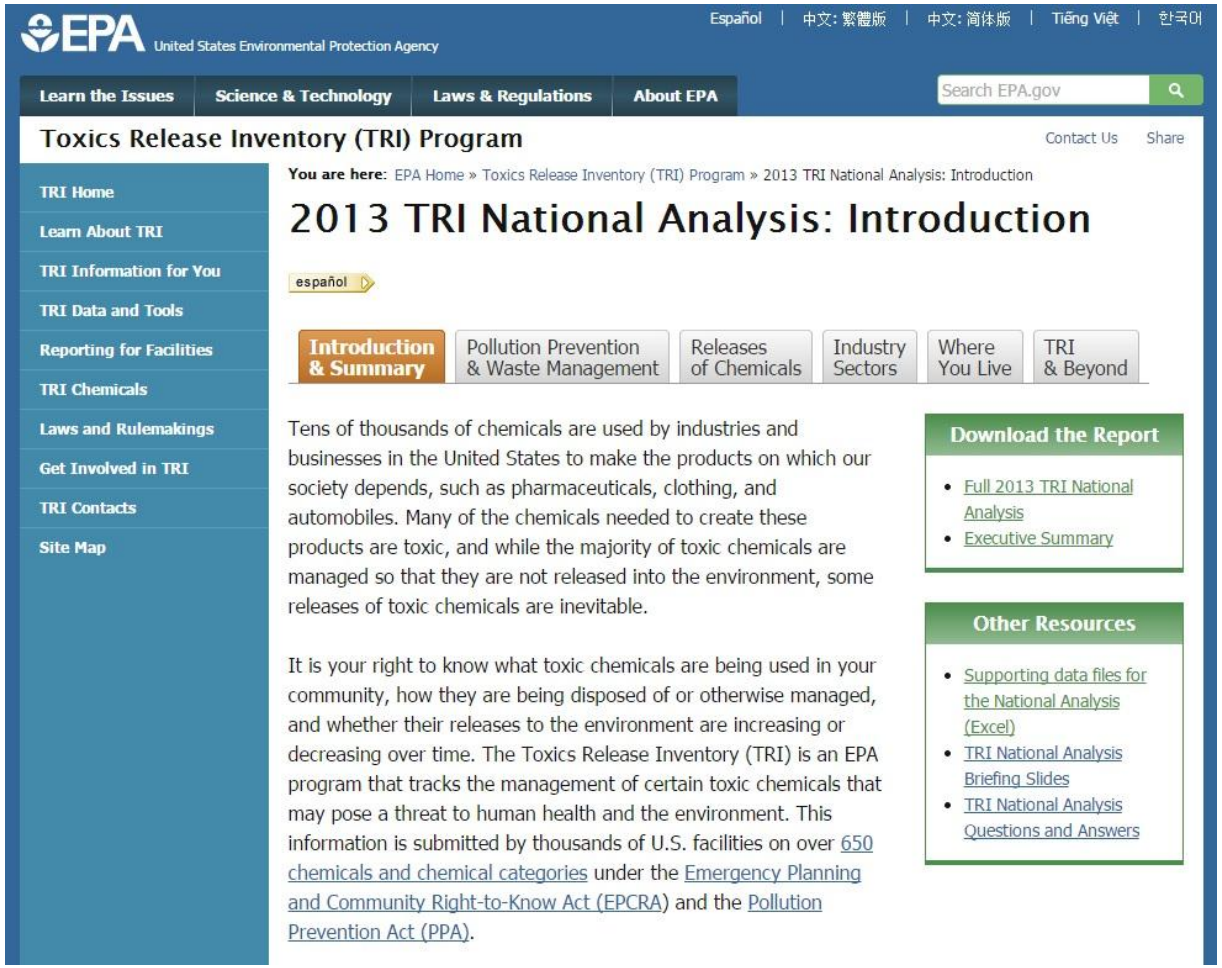


- Facilities submit their TRI forms for each calendar year to EPA by July 1st of the following year
- The preliminary TRI dataset is released in July
- EPA conducts data quality checks and compliance assistance activities from July - October
- The TRI National Analysis (EPA's official annual TRI report) is published in January

TRI Preliminary Dataset

- Most recent TRI data available in July in Envirofacts and downloadable data files
- Dataset ~ 95% complete in July
- Opportunity to see most recent data prior to National Analysis publication
- Can be used to begin looking at facility-level data
- Dataset updated several times during summer and fall as EPA processes late TRI submissions and revisions, and performs data quality checks

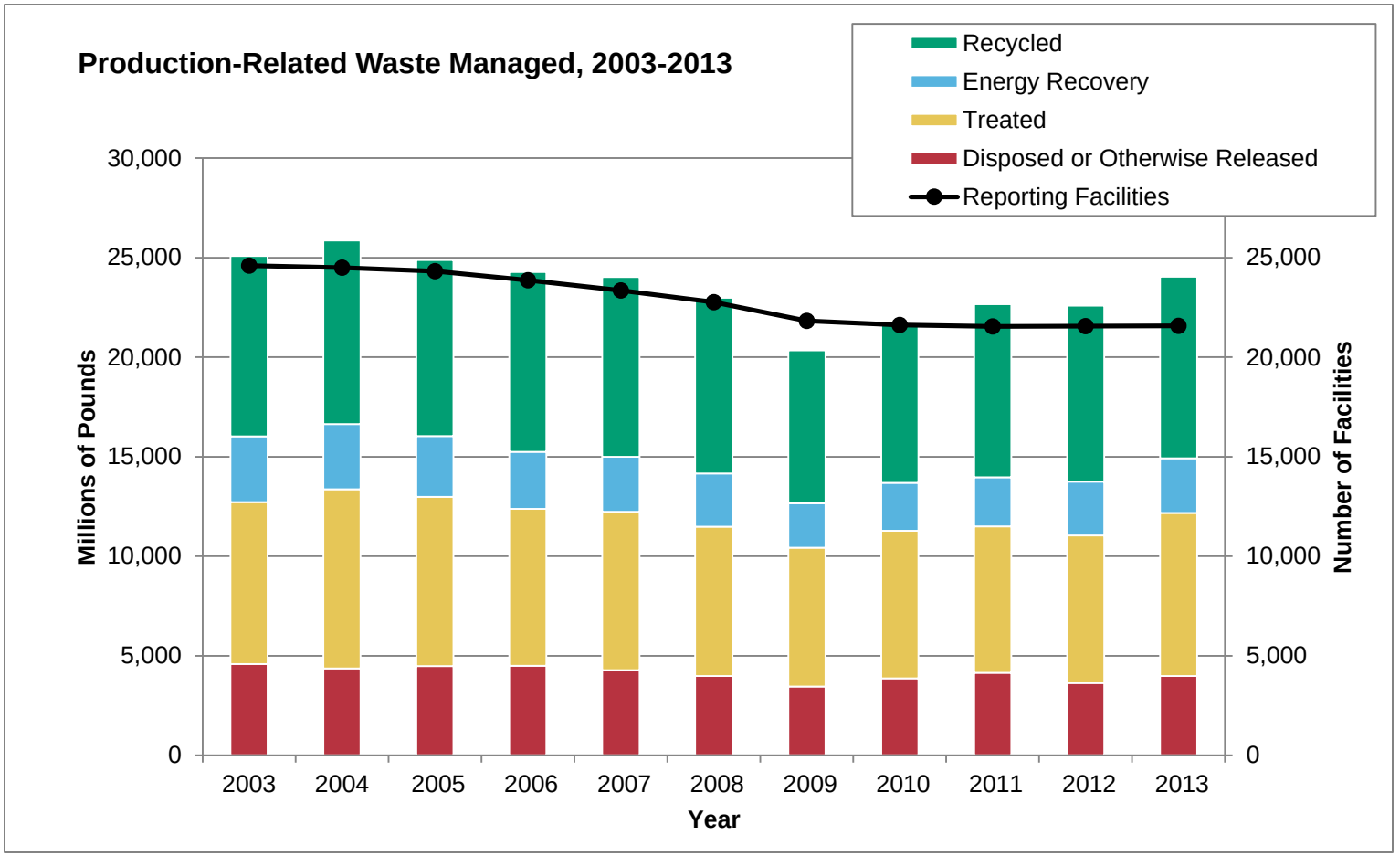
TRI National Analysis



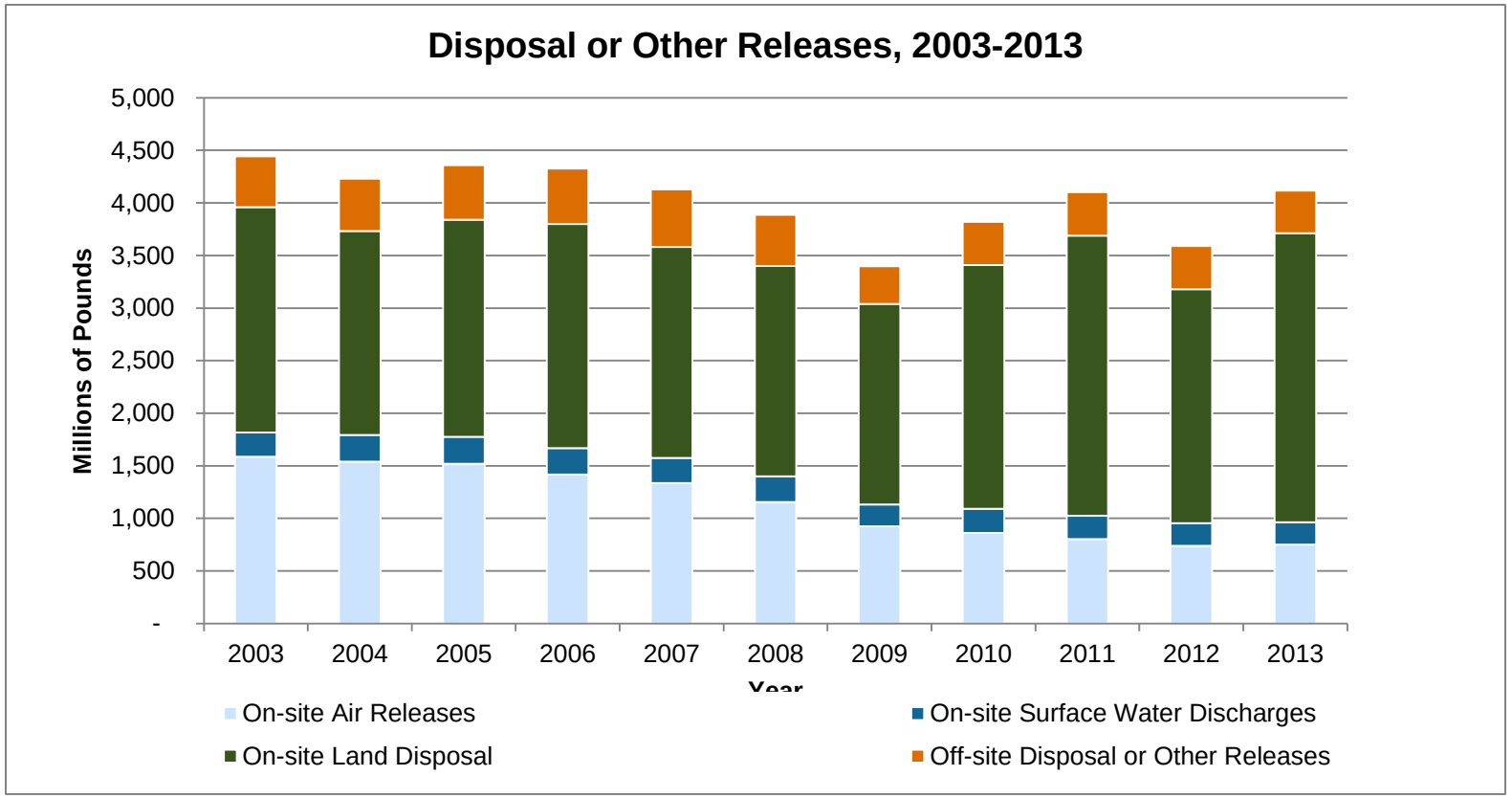
Key Messages for 2013 TRI National Analysis

- Total production-related waste managed increased 4% from 2012-2013
  - Of the 26 billion lbs of waste managed, 22 billion lbs (84%) were not released due to preferred waste management practices (e.g. recycling)
  - Reporting on all preferred waste management activities increased
- Total disposal or other releases increased 15% from 2012-2013
  - Of the 4 billion lbs released to the environment, 66% went to land, 19% went to air, 10% was transferred off-site, and 5% went to surface water
  - Land disposal increased 24%, primarily due to metal mining
- Air releases increased 1%, reversing a long-term trend
  - Mainly due to increased releases from the electric utility and chemical manufacturing sectors
- New this year:
  - Transition to a web-based format from PDF report
  - Expanded local analyses using interactive maps
  - More pollution prevention (P2) information, including parent co. data
  - Expanded analyses on water pollution information, greenhouse gas emissions, and emergency planning and chemical safety information

Key Messages for 2013 TRI National Analysis

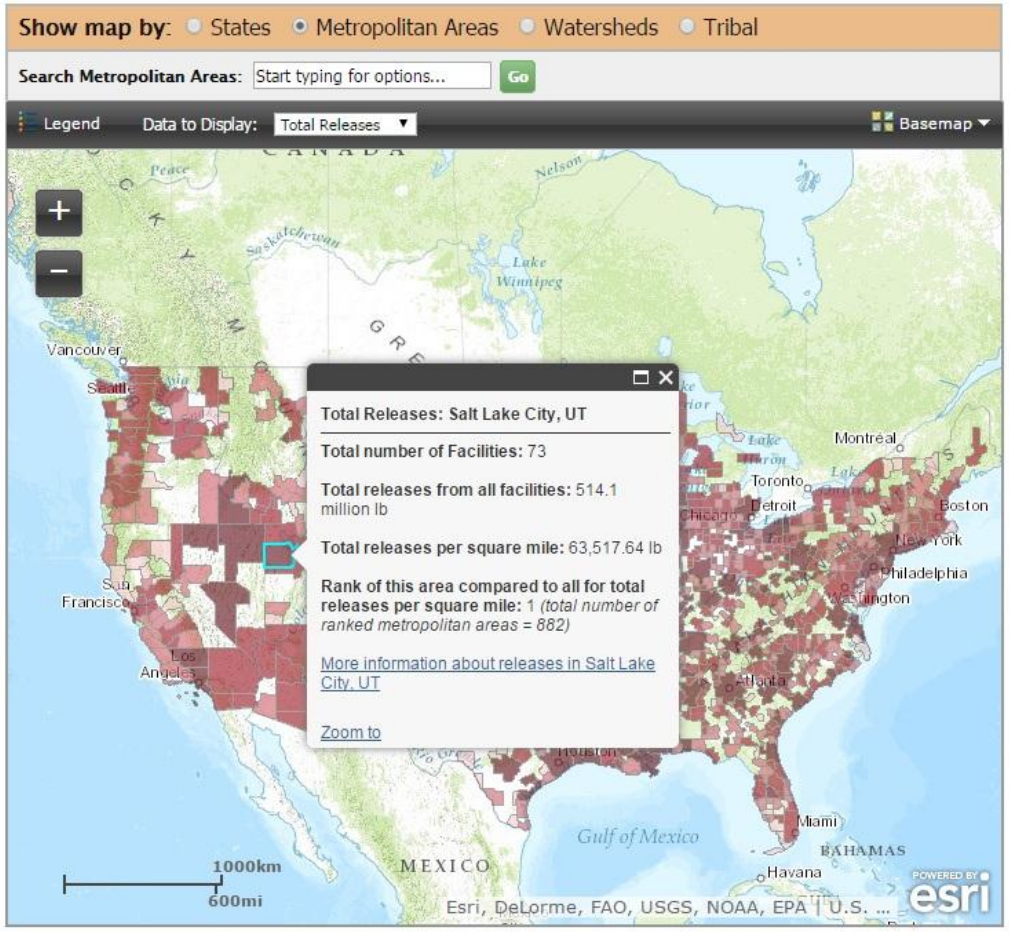


Key Messages for 2013 TRI National Analysis



New This Year

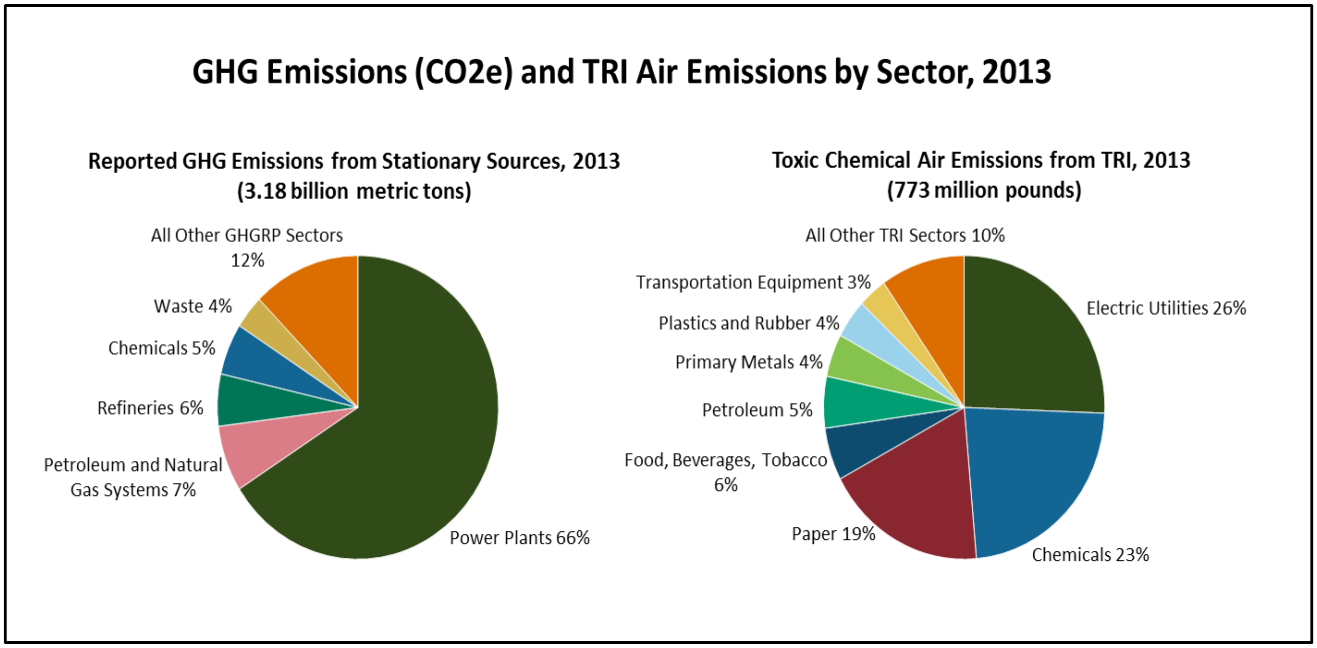
- Expanded focus on communities
  - TRI analysis available at a local level through interactive maps
  - Users can see TRI data and print fact sheets for each state, county, city, ZIP code, US metropolitan and micropolitan area, and major watersheds



View Larger Map, **Click on any one of the metropolitan areas in the map to see detailed information.**

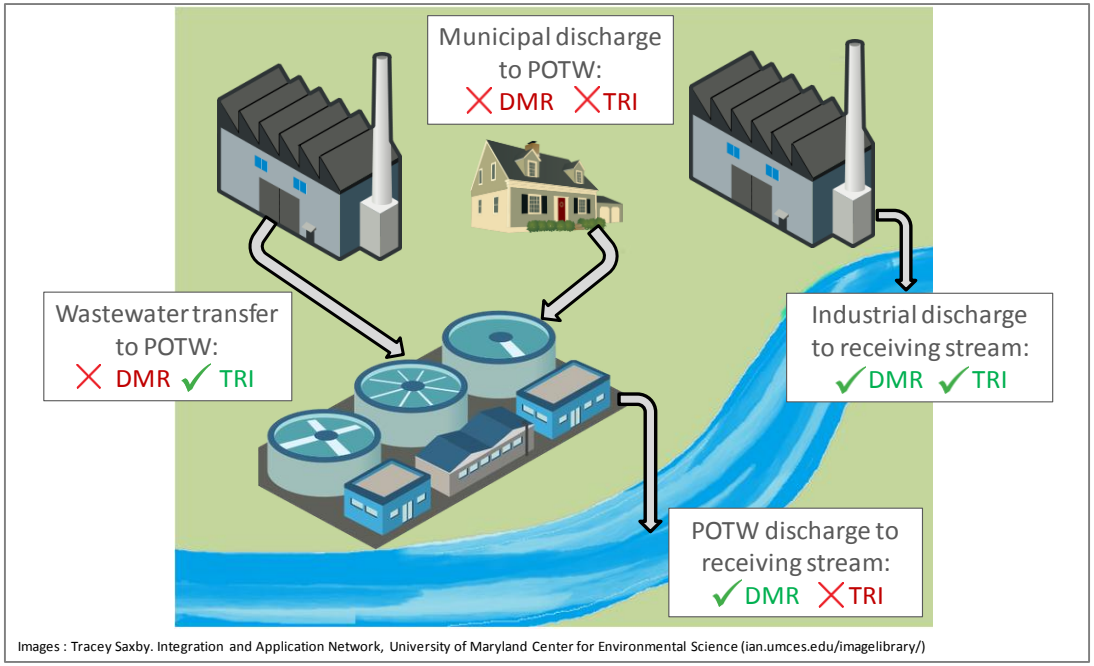
New This Year

- Greenhouse Gas Reporting
  - New map of projected sea level rise and TRI facility locations
  - Compares TRI data with GHG Reporting Program data



New This Year

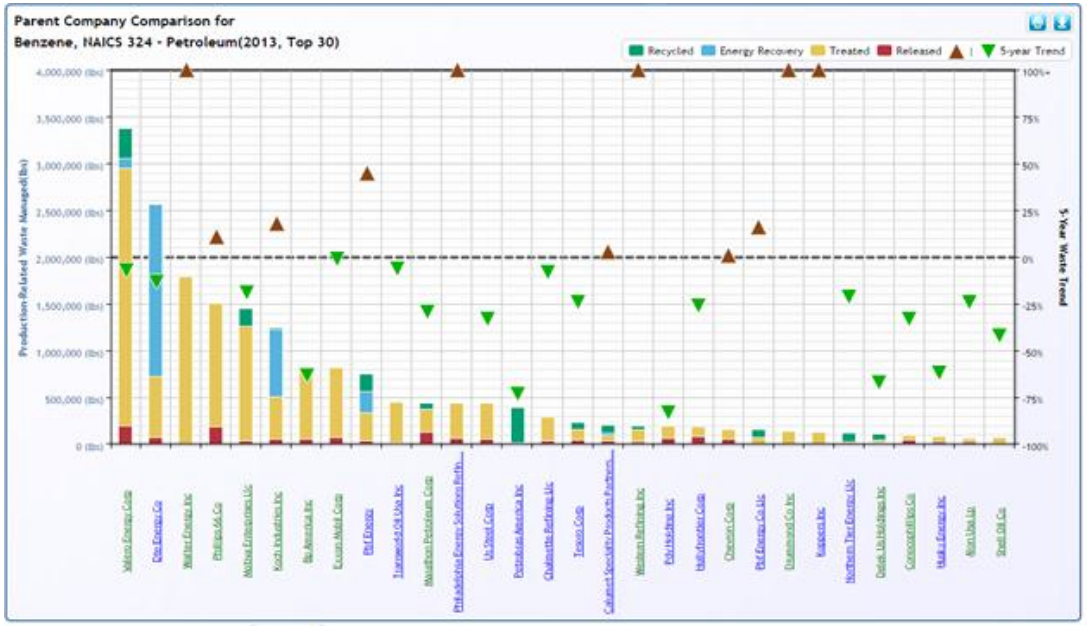
- Discharge Monitoring Report Data and TRI
  - Information on toxic chemicals released to water reported to both TRI and DMR
  - Information on conventional water pollutants and on facilities not included in TRI



Images : Tracey Saxby. Integration and Application Network, University of Maryland Center for Environmental Science (ian.umces.edu/imagelibrary/)

New This Year

- Expanded pollution prevention (P2) information
  - Includes P2 reporting by Parent Companies, new information on wastewater treatment methods, and highlighted P2 activities for sectors and chemicals with the greatest reductions in releases

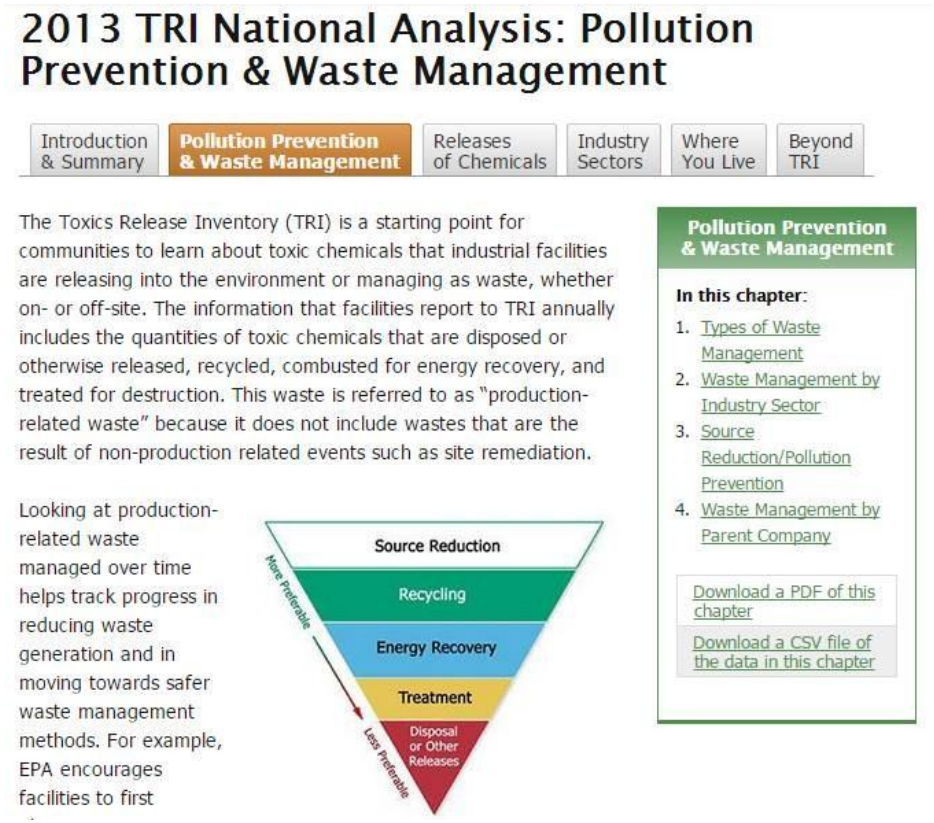


New This Year

- More information on off-site transfers
  - State-specific information on off-site transfers for disposal
  - Information on main sources of transfers to each state
  - List of top 5 chemicals transferred into each state
- New analysis of pollution rates by fuel type
  - Combines data from TRI, GHG Reporting Program, and DOE's Energy Information Administration
- New analysis of Emergency Planning and Chemical Safety data
  - Information on chemical safety and accident preparedness
  - Overview of programs that aim to reduce chemical risks at the community level

National Analysis Website

www.epa.gov/tri/NationalAnalysis



2013 TRI National Analysis: Pollution Prevention & Waste Management

Introduction & Summary | **Pollution Prevention & Waste Management** | Releases of Chemicals | Industry Sectors | Where You Live | Beyond TRI

The Toxics Release Inventory (TRI) is a starting point for communities to learn about toxic chemicals that industrial facilities are releasing into the environment or managing as waste, whether on- or off-site. The information that facilities report to TRI annually includes the quantities of toxic chemicals that are disposed or otherwise released, recycled, combusted for energy recovery, and treated for destruction. This waste is referred to as "production-related waste" because it does not include wastes that are the result of non-production related events such as site remediation.

Looking at production-related waste managed over time helps track progress in reducing waste generation and in moving towards safer waste management methods. For example, EPA encourages facilities to first

Pollution Prevention & Waste Management

In this chapter:

1. Types of Waste Management
2. Waste Management by Industry Sector
3. Source Reduction/Pollution Prevention
4. Waste Management by Parent Company

Download a PDF of this chapter

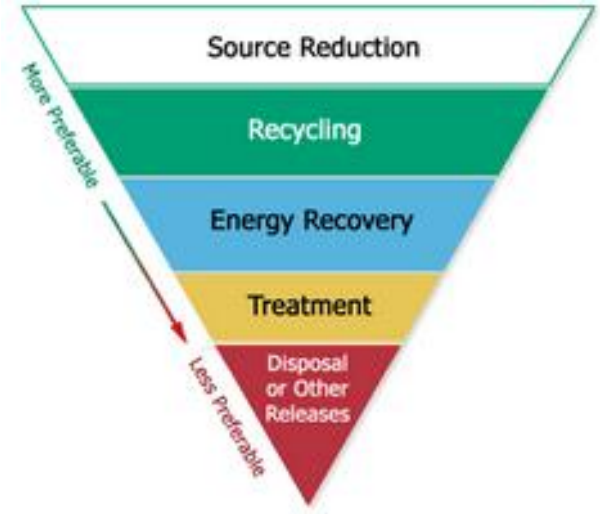
Download a CSV file of the data in this chapter

Upcoming TRI P2 Tool Webinar

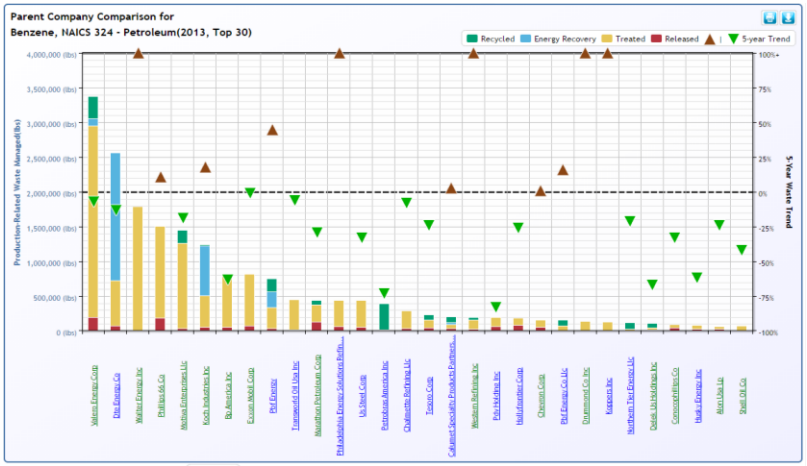
Do you want to know what companies are doing to reduce their environmental footprint in the U.S.?

Visit www.epa.gov/tri/p2 to register for our Feb 4th webinar on corporate sustainability and the expanded TRI P2 Tool

The Waste Management Hierarchy



P2 Tool: Parent Company Comparison



Using TRI Explorer

http://iaspub.epa.gov/triexplorer/tri_release.chemical

TRI Explorer

Five Steps to generate a report

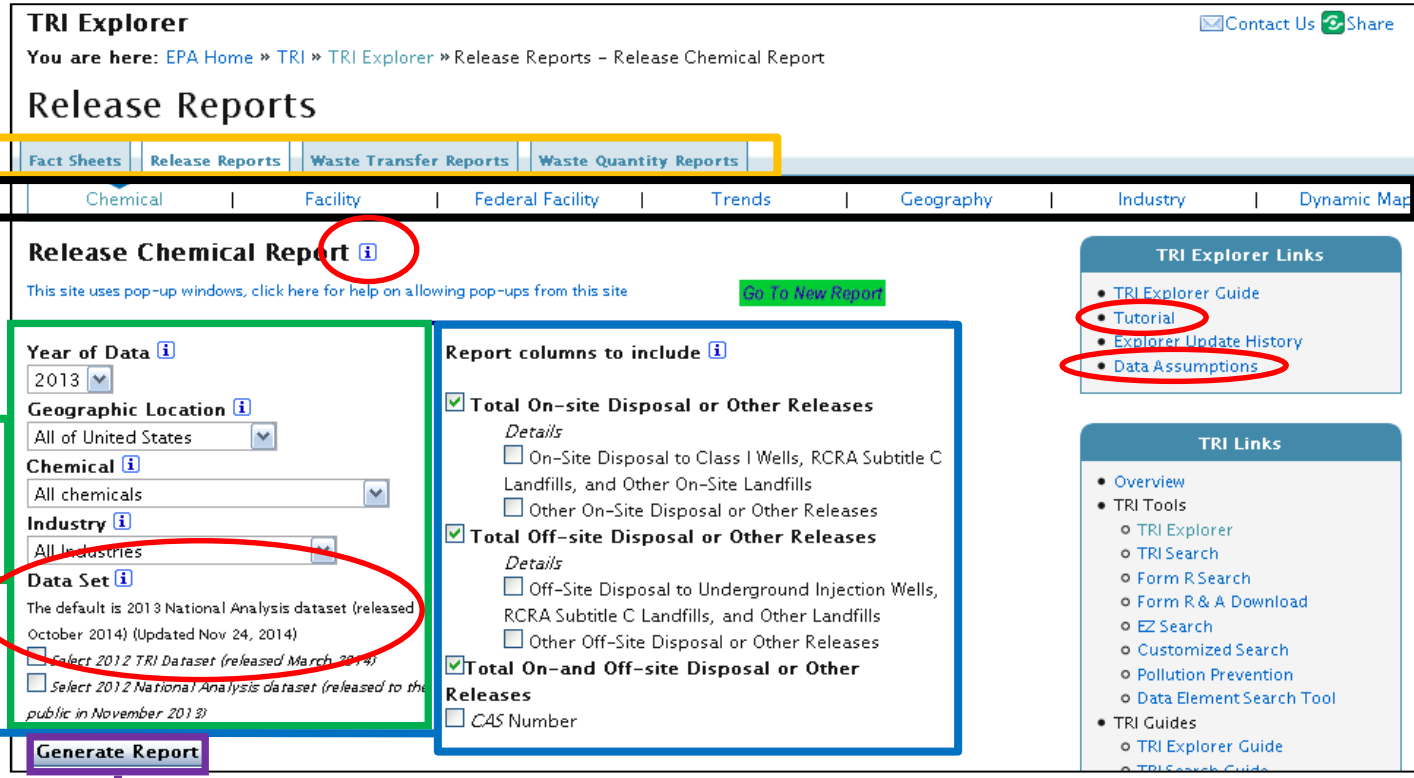
Step 1. Choose *Report Type*

Step 2. Select a *Report Grouping* (How data will be summarized)

Step 3. Choose *Filters (Optional - All filters have a default)*

Step 4. Choose *Columns* to be displayed *(All options have a default)*

Step 5. Click on the *Generate Report* button.



Red ovals identify available user aids or key references

TRI Explorer

Contact Us Share

You are here: EPA Home » TRI » TRI Explorer » Releases: Trends Report

Releases: Trends Report

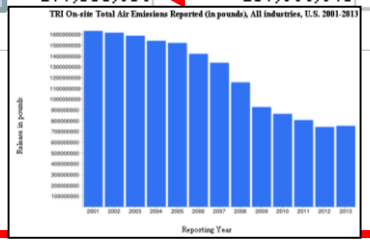
Data Source: 2013 National Analysis dataset (released October 2014) (Updated Nov 24, 2014) See Note

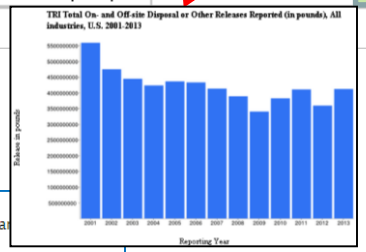
Go To New Report *Instructions for printing wide reports*

TRI On-site and Off-site Reported Disposed of or Otherwise Released (in pounds), Trend Report for facilities in All industries, for 2001 Core Chemicals, U.S. 2001-2013

Are year to year changes comparable?

Row #	Year	Total Air Emissions	Surface Water Discharges	Total Underground Injection	Total On-site Releases to Land	Total On-site Disposal or Other Releases	Total Off-site Disposal or Other Releases	Total On- and Off-site Disposal or Other Releases
1	2001	1,630,764,160	242,228,574	215,649,594	2,999,488,336	5,089,130,665	496,923,060	5,586,053,725
2	2002	1,614,969,904	243,354,779	227,038,336	2,175,684,032	4,261,047,051	484,254,382	4,745,301,434
3	2003	1,586,697,967	230,831,052	229,183,906	1,912,950,084	3,959,663,010	482,433,101	4,442,096,111
4	2004	1,540,087,654	253,334,147	238,165,383	1,701,664,176	3,733,251,360	498,263,939	4,231,515,300
5	2005	1,519,961,421	254,656,818	235,775,608	1,829,895,117	3,840,288,964	518,574,435	4,358,863,399
6	2006	1,418,805,486	250,595,588	224,179,677	1,906,538,500	3,800,119,251	526,739,226	4,326,858,477
7	2007	1,336,066,196	239,063,508	193,642,417	1,811,468,042	3,580,240,163	548,898,993	4,129,139,156
8	2008	1,154,393,594	247,193,502	178,333,501	1,820,089,591	3,399,920,189	485,549,442	3,885,469,631
9	2009	925,175,904	206,111,098	157,497,262	1,751,390,178	3,040,176,443	358,234,218	3,398,410,661
10	2010	861,979,958	230,569,145	204,825,510	2,111,119,477	3,408,494,490	411,491,272	3,819,985,762
11	2011	804,256,424	220,290,865	196,689,695	2,468,813,101	3,690,050,085	413,420,591	4,103,470,676
12	2012	740,483,307	215,607,270	198,052,224	2,026,538,680	3,180,681,481	409,132,165	3,589,813,646
13	2013	750,534,270	211,590,696	201,686,840	2,548,184,968	3,711,996,775	405,372,591	4,117,369,366





Export this report to a text file

Create comma-separated values, compatible with spreadsheet a

Save data in comma-separated-value, CSV, file Send data into Microsoft Excel

Download all records

View other report type:

Transfers Off-site for Further Waste Management

Quantities of TRI Chemicals in Waste (waste management)

View report in other formats:

PDF (Acrobat Reader); or

RTF (Microsoft Word)

Note: The above trend report excludes quantities for hydrogen sulfide added in 2012 and additional PACs added in 2011.
Total quantities reported to TRI may be viewed in any report aggregated for a single year

Questions and Discussion