



TRI Starter-Kit

April 11, 2012



TRI Training Resources



- First step in understanding, accessing, analyzing, and interpreting TRI data
- Ensure TRI data are accessible

EPA Toxics Release Inventory (TRI)

What is TRI?
TRI is a publicly accessible EPA database containing information on releases and other releases of over 600 toxic chemicals from more than 35,000 U.S. industrial facilities.

The database also includes information on how facilities manage chemicals through recycling, energy recovery, and treatment.

We are established by 1980 by Section 112 of the Emergency Planning and Community Right-to-Know Act and later expanded by the Pollution Prevention Act of 1990.

The goal of TRI is to provide communities with information about toxic chemical releases and waste management activities and to support informed decision-making by industry, government, non-governmental organizations and the public.

TRI data are submitted annually by U.S. facilities that meet the reporting criteria.

TRI data can be downloaded or accessed through a variety of available tools and applications.

What does TRI provide?
TRI includes information about:

- On-site releases and other disposal of toxic chemicals to air, water, and land;
- On-site recycling, treatment and energy recovery associated with TRI chemicals;
- Off-site transfers of toxic chemicals from TRI facilities to other facilities;
- Pollution prevention activities at facilities;
- Release of lead, mercury, arsenic and other nonmetal, non-halogenated metals (NHL) chemicals; and
- Facilities in a variety of industry sectors (including manufacturing, metal mining, and electric power generation) and some federal facilities.

Useful Links:

- TRI homepage: www.epa.gov/tri
- Chemical Right to Know: www.epa.gov/chemright
- TRI in the Environment: www.epa.gov/tri/environment (Council of the States)

More EPA:

- TRI/EPRA by National Library of Medicine: www.toxchem.nlm.nih.gov

TRI Download Center: See the TRI Information Center at 1-888-666-6868 (toll-free).

The Toxics Release Inventory (TRI) and Factors to Consider When Using TRI Data

EXECUTIVE SUMMARY

The Toxics Release Inventory (TRI) contains information about releases of certain chemicals and management of wastes at a wide variety of sources, including manufacturing operations, certain service businesses, and federal facilities. Since its inception, the program has grown in several important ways, including expanding the businesses covered and the chemicals on which they report. Equally important is the number of creative ways the general public, government agencies, and the reporting industries use the information made available. This paper provides an introduction and background on the TRI and identifies a number of important factors that must be considered when reviewing or using the data.

Key factors to consider when using the data, which are discussed in greater detail in the main body of the paper, include:

- Toxicity varies among the covered chemicals; data on amounts of the chemicals alone are not necessarily the best indicator of risk.

EPA eLearning TRI Explorer Online Learning

Introduction < PREVIOUS Page 5 of 7 NEXT >

The Toxics Release Inventory (TRI)

The Toxics Release Inventory (TRI) was created under the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986. EPCRA Section 313 requires EPA and the States to annually collect data on releases and transfers of certain toxic chemicals from industrial facilities and to make the data available to the public.

In 1990 Congress passed the Pollution Prevention Act, which required that additional data on waste management and source reduction activities be reported under TRI.

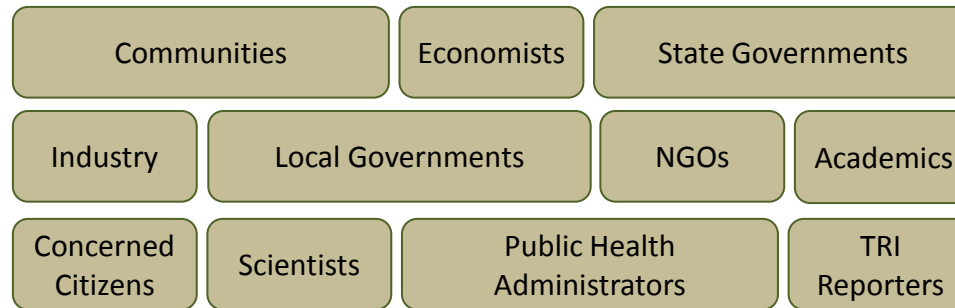
Code of Federal Regulations
42
Title 42, Chapter 1, Subchapter B, Part 191
Pollution Prevention Act of 1990
The Public Health & Welfare
Chapter 133

Training Resource Audience



- Most available resources are intended for a broad audience:

TRI stakeholders



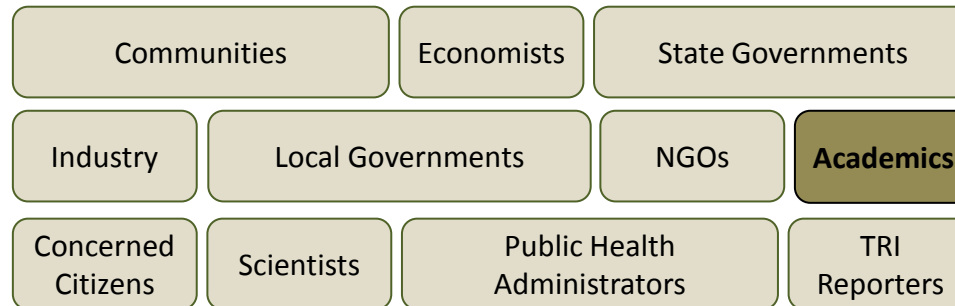
- Stakeholders have highly variable:
 - Background
 - Information Needs
 - Motivation

“Targeted” Training Resources



- Limit intended audience to specific stakeholders:

All TRI stakeholders



- Group can efficiently find information they need:
 - Less effort spent understanding and accessing TRI data
 - More effort spent applying and interpreting TRI data

University Engagement Initiative

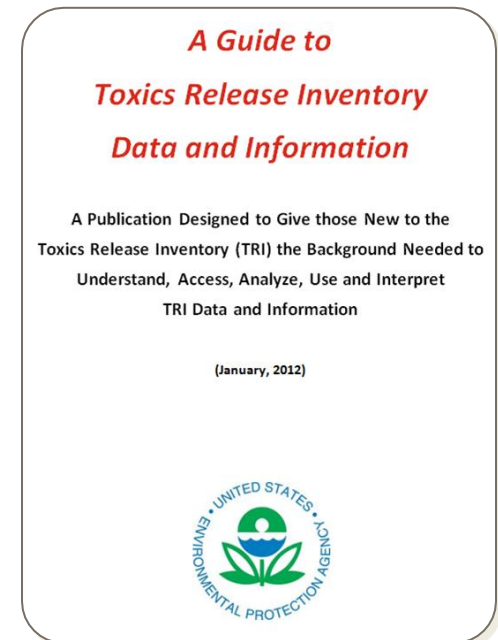


- Spring 2011: EPA launched initiative
- Partnering with colleges and universities to encourage:
 - Use and evaluation of TRI data
 - Work with local communities to apply TRI data
- Recognized need for targeted TRI training materials

TRI Starter-Kit



- Goal:
 - Give students unfamiliar with TRI the information they need to access, analyze, and interpret TRI data
- Audience:
 - Students and professors new to TRI



Contents



- Covers topics common to TRI Training Resources:
 - Background on the TRI Program
 - Who must report
 - What data are reported
 - Data flow
 - Accessing TRI data
 - How TRI data can be used
 - Tips for interpreting results

Student-specific Approach



- Provides sample analyses with open ended take-away questions to prompt creative thinking

QUESTION:

I'm concerned about potential health risks from chemicals entering water in Seattle, WA. How does hazard compare among facilities discharging toxic chemicals to water in this community?



Student-specific Approach



- Guides students through steps for independent analysis and application of TRI data

1. Develop a research question. Study what interests you. Are you concerned about potential risks in a community? Are you interested in a particular facility? Do you want to know what is happening in an industry across the U.S.?

Refer to *Using TRI data* for ideas.



7. Take action. Start by sharing your results. Depending on the scope of your analysis, you may want to present your results to community leaders, environmental organizations, facility managers, trade organizations, academic conference attendees, state environmental agencies, or staff at EPA regional offices. With their support, encourage positive environmental decision-making.

Student-specific Approach



- Includes a literature review

Use of TRI in Academia

Researchers in academia have used TRI data to study a broad range of topics, including:

- **Analyses of how and why information disclosure programs, like TRI, affect environmental decision making, such as decisions concerning the control of toxic chemical emissions.** Studies cover topics including communities' response to available information, economic impacts of information disclosure, and effects of variation in state environmental regulations.
- **Environmental Justice (EJ) analyses investigating whether exposure risk and health outcomes from facilities releasing toxic chemicals disproportionately affect minority or low income populations.** Studies review the relationship between demographic

How and Why Information Disclosure Programs Affect Environmental Decision Making

Kraft, M.E., M. Stephan, T.D. Abel. 2011. Coming Clean: Information Disclosure and Environmental Performance. Cambridge: The MIT Press.

Färea, R., S. Grosskopf, and C.A. Pasurka. 2010. Toxic releases: An environmental performance index for coal-fired power plants. Energy Economics 32(1) 158-165.

Abel, T.D., M. Stephan, and M.E. Kraft. 2007. Environmental Information Disclosure and Risk Reduction among the States. State & Local Government Review 39(3): 153-165.

Atlas, M. 2007. TRI to Communicate: Public Knowledge of the Federal Toxics Release Inventory. Social Science Quarterly 88(2): 555-572.

port to TRI,
Studies
comparisons
following

Efficient



- Provides roadmap and navigation tips

How you use this Starter-Kit depends on your familiarity with TRI and your objectives. For example, if you already understand why and how TRI data are collected and have a research question you want to answer:

1. Start by reviewing *What data are reported?*, *Limitations of TRI Data*, *Appendix A*, and the flowchart in *Who must report?* to determine whether the data you need to answer

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On the other hand, if this is your first time hearing about TRI:

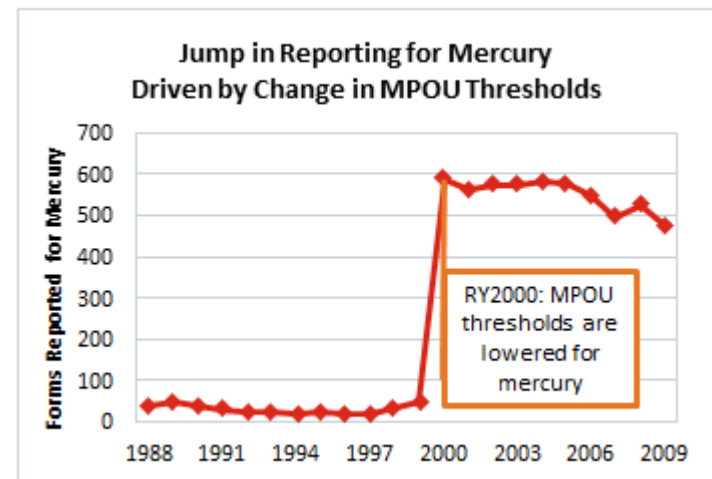
1. Start by reading the background on TRI in the *Creation of the TRI Program*, *Who must report?*, *What data are reported?*, and *Data Flow* sections;
2. Skim *Using TRI Data* to see what types of questions can be answered with TRI data;
3. Scan the tool comparison table and tool descriptions in *Accessing TRI Data* to find out about how you can get TRI data;
4. Carefully read the *Tips for Interpreting TRI*; and
5. Follow the steps in *Now what?* to apply TRI data.

Efficient



- Figures/graphs emphasize important text

Changes in MPOU thresholds. Starting in RY2000, and later in RY2001, the manufacturing, processing, and otherwise use (MPOU) reporting thresholds for Persistent, Bioaccumulative, and Toxic (PBT) chemicals were lowered from 25,000 pounds or 10,000 pounds to 100 or 10 pounds. As a result, more facilities were required to report for PBT chemicals.



Efficient



- Resources for quickly identifying the appropriate TRI data tool

Features		Tool														
		Downloadable TRI data files	Envirofacts					TRI.NET	TRI Explorer		myRTK	TRI Comparative Analysis Tool	RSEI	TOMMAP	TRI-CHIP	
			TRI Search	Customized	EZ	Form R	Form R & A		Reports	State Fact						
Use	Ease of Use	Easy		✓			✓			✓	✓	✓				
		Medium			✓		✓					✓		✓	✓	
		Challenging	✓		✓								✓			✓
	How to Access Tool	Internet browser	✓	✓	✓	✓	✓			✓	✓	✓			✓	
		Mobile device										✓				
		Download and install on your computer						✓					✓			✓
	Tool Outputs	View data within tool		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		Data exports to process on your computer	✓		✓	✓		✓	✓	✓			✓	✓	✓	✓
	Data	TRI Data	Unprocessed Raw Data	✓		✓	✓	✓								
Form-level			✓	✓	✓	✓	✓	✓				✓	✓	✓		
Facility-level			✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	
Aggregate Summaries					✓	✓			✓	✓	✓		✓	✓		
Reporting Year		Most Recent Year	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	
		Past Years	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		
Toxicity/Hazard		For reported data							✓					✓		
		For TRI chemicals										✓				✓
Flexibility		Preset analysis		✓			✓			✓	✓		✓	✓	✓	✓
	Ad-hoc analysis	✓		✓	✓		✓	✓				✓	✓	✓		
Compare TRI Reporting Across:	Industrial sectors	✓		✓	✓		✓	✓	✓		✓		✓			
	Chemicals	✓	✓	✓	✓		✓	✓			✓		✓			
	Facilities	✓	✓	✓	✓		✓	✓			✓		✓	✓		
	Reporting years	✓	✓	✓	✓		✓	✓					✓	✓		
	Parent Companies	✓		✓	✓		✓	✓					✓			

Possible Next Steps



- Complete review and publish
 - Gather feedback from users
- Develop interactive version of the Starter-Kit
- Expand lessons learned to other EPA tools and trainings
- Develop targeted training materials for other stakeholder groups

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BOLD
THINKERS
DRIVING
REAL-WORLD
IMPACT

