CDR & TRI Data Specifics

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Presentation Overview

- ❑ Chemical Data Reporting (CDR) and Toxics Release Inventory (TRI) overview and comparison
- ❑ Crosswalk
- ❑ Data use examples
- ❑ Chemical group overlap (PFAS)

Releases to the Environment

- Releases of chemicals to the environment from conditions of use (**COU**) are a component of potential exposure.
- EPA's **CDR** database tracks production quantities and uses of chemicals. https://www.epa.gov/chemical-data-reporting
- EPA's **TRI** database tracks quantities of toxic chemicals released from facilities into the environment (i.e., to air, water, and disposed of to land), treated, burned for energy, recycled, or transferred off-site to other facilities for these purposes. https://www.epa.gov/toxics-release-inventory-tri-program

How does **CDR** differ from **TRI**?

- The **TRI** was established by the Emergency Planning and Community Right-to-Know Act of 1986. The goal of the TRI is to provide the public, EPA, researchers, and many other stakeholders, including industry and covered facilities, with information about toxic chemical **releases**.
- The **CDR** was implemented under Section 8 of TSCA. The primary purpose of the CDR is to provide EPA with up-to-date information on the **production and use** of chemicals in commerce.

CDR & TRI Comparison:

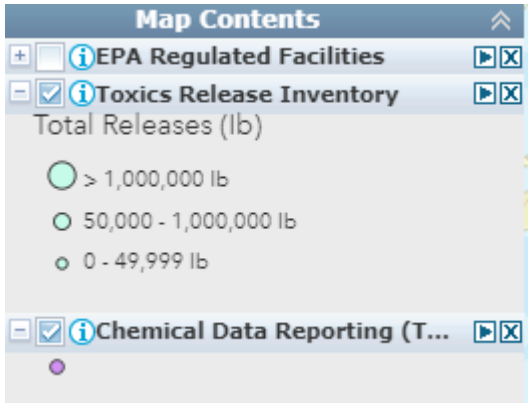
Differences in reporting and overlap areas

Chemical Data Reporting	Toxics Release Inventory	Overlap
Submitted every 4 years	Submitted annually	
Chemical is on the TSCA Inventory (34,000+ active chemicals)	Chemical is on the TRI list (850+ chemicals and chemical categories)	670+ chemicals on both TSCA Inventory and TRI list
Downstream use information		Chemical use type and function
Production data		
	Chemical waste management quantities	
Confidential Business Information (CBI)	>99% of data are public	
		Volume thresholds and reporting exemptions
		Site (name, location, NAICS, parent company)

Mapping CDR & TRI

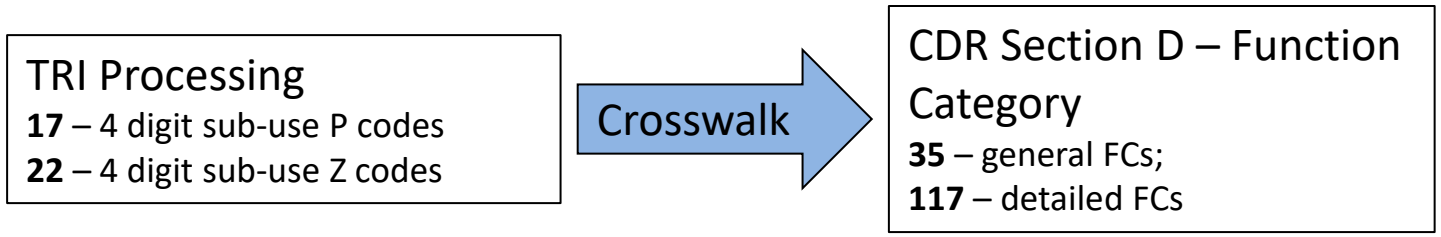
- EPA's Facility Registry Service Identification (FRS ID) can be used to identify sites that report to CDR & TRI
- 2021 TRI: 21,000+ Facilities
- 2020 CDR: 5,500+ sites

Map source: EJScreen V2.2



CDR-TRI Use Code Crosswalk

- TRI Section 3.2 – Processing – P codes (17)
- TRI Section 3.3 – Otherwise Use - Z codes (22)
- Mapped to 2016 CDR U codes (35) and 2020 Industrial Function Category (IFC) codes (117)
  - 2021 TRI to 2020 CDR IFC Codes (7 1:1 relationships)



CDR-TRI Use Code Crosswalk

2021 TRI				2020 CDR	
TRI Section	Description	Sub-Use Code	Sub-Use Code Name	IFC Code	Category
3.2b	Processing: As a formulation component	P205	Solvent	F075	Solvent
3.2b	Processing: As a formulation component	P207	Emulsifiers	F077	Emulsifier
3.2b	Processing: As a formulation component	P208	Surfactants	F076	Surfactant (surface active agent)
3.2b	Processing: As a formulation component	P210	Flame Retardants	F029	Flame Retardant
3.3b	Otherwise Use: As a manufacturing aid	Z203	Coolants	F032	Heat transferring agent
3.3b	Otherwise Use: As a manufacturing aid	Z205	Hydraulic Fluids	F033	Hydraulic fluids
3.3c	Otherwise Use: Ancillary or other use	Z305	Flame Retardant	F029	Flame retardant

1:1 relationships across 2021 TRI use information and 2020 CDR

CDR-TRI Use Code Crosswalk

2021 TRI				2016 CDR		2020 CDR	
TRI Section	Description	Sub-Use Code	Sub-Use Code Name	Code	Category	IFC Code	Category
3.2b	Processing: As a formulation component	P205	Solvent	U030	Solvents	F075	Solvent
3.2b	Processing: As a formulation component	P210	Flame Retardants	U011	Flame Retardants	F029	Flame Retardant
3.3.b	Otherwise Use: As a manufacturing aid	Z203	Coolants	U013	Functional fluids (closed systems)	F032	Heat transferring agent
3.3.b	Otherwise Use: As a manufacturing aid	Z205	Hydraulic Fluids	U013	Functional fluids (closed systems)	F033	Hydraulic fluids

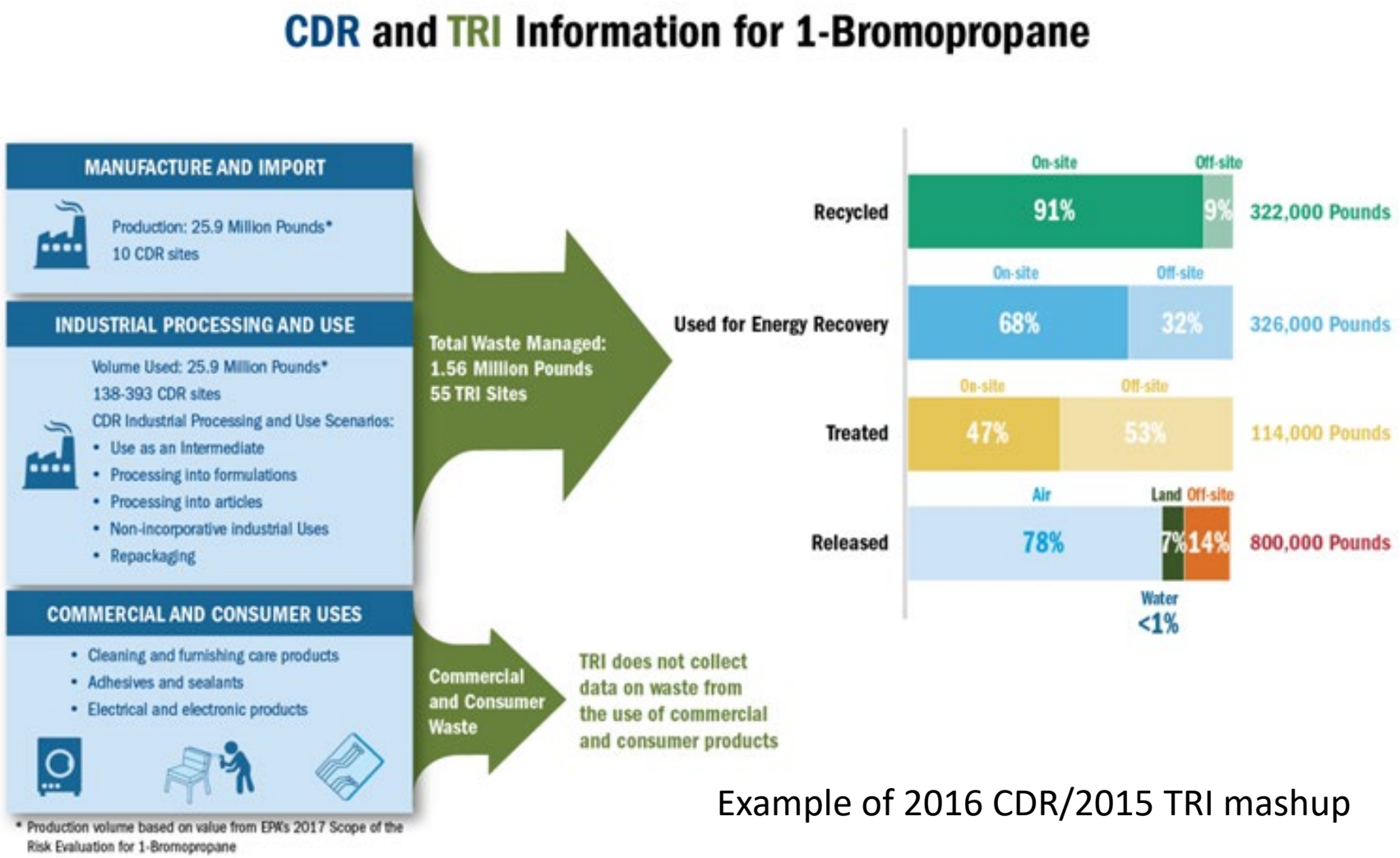
1:1 relationships across TRI use information and 2016 and 2020 CDR

CDR-TRI Use Code Crosswalk

2021 TRI				2016 CDR		2020 CDR	
TRI Section	Description	Sub-Use Code	Sub-Use Code Name	Code	Category	IFC Code	Category
3.2.a	Processing: As a reactant	P103	Intermediates	U015	Intermediates	F037	Intermediates
						F038	Monomers
3.2 b	Processing: As a formulation component	Z201	Process Lubricants	U017	Lubricants and lubricant additives	F040	Anti-slip agent
						F041	Lubricating agent
3.3 c	Otherwise Use: Ancillary or other use	Z304	Fuel	U012	Fuels and fuel additives	F030	Fuel agents
						F031	Fuel
3.3 a	Otherwise Use: As a chemical processing aid	Z199	Other	U006	Bleaching agents	F015	Bleaching agent
						F016	Brightener

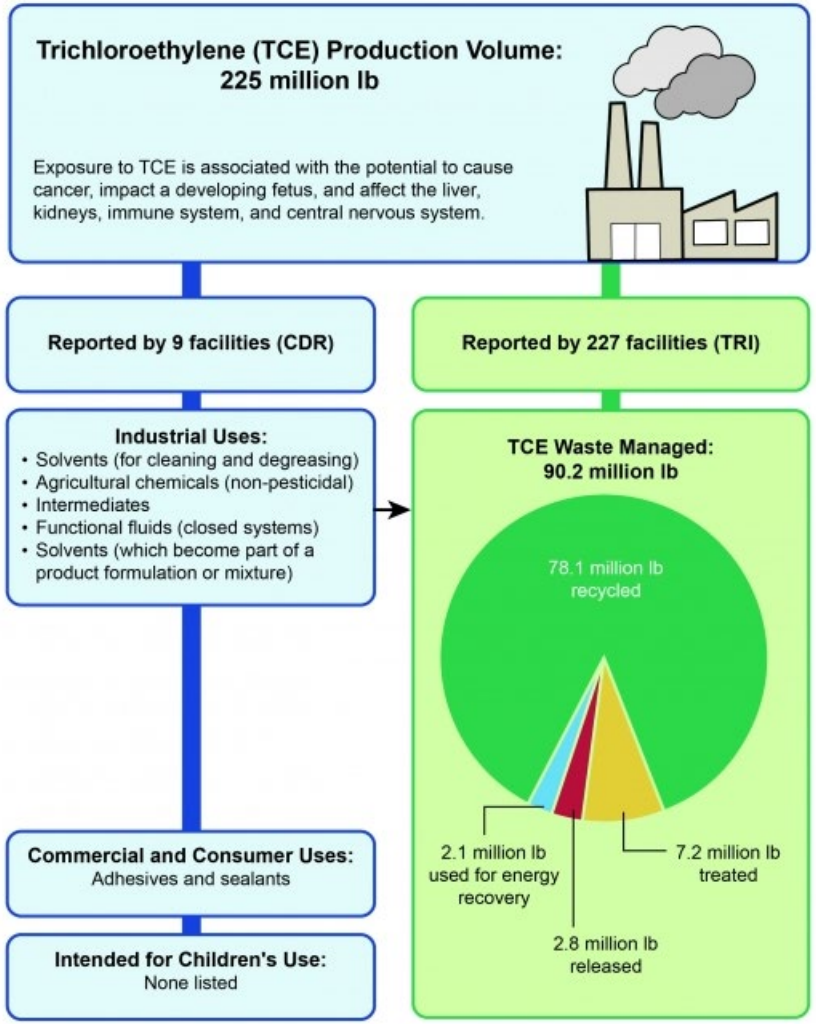
Example 1:2 relationships across TRI use information and 2016 and 2020 CDR

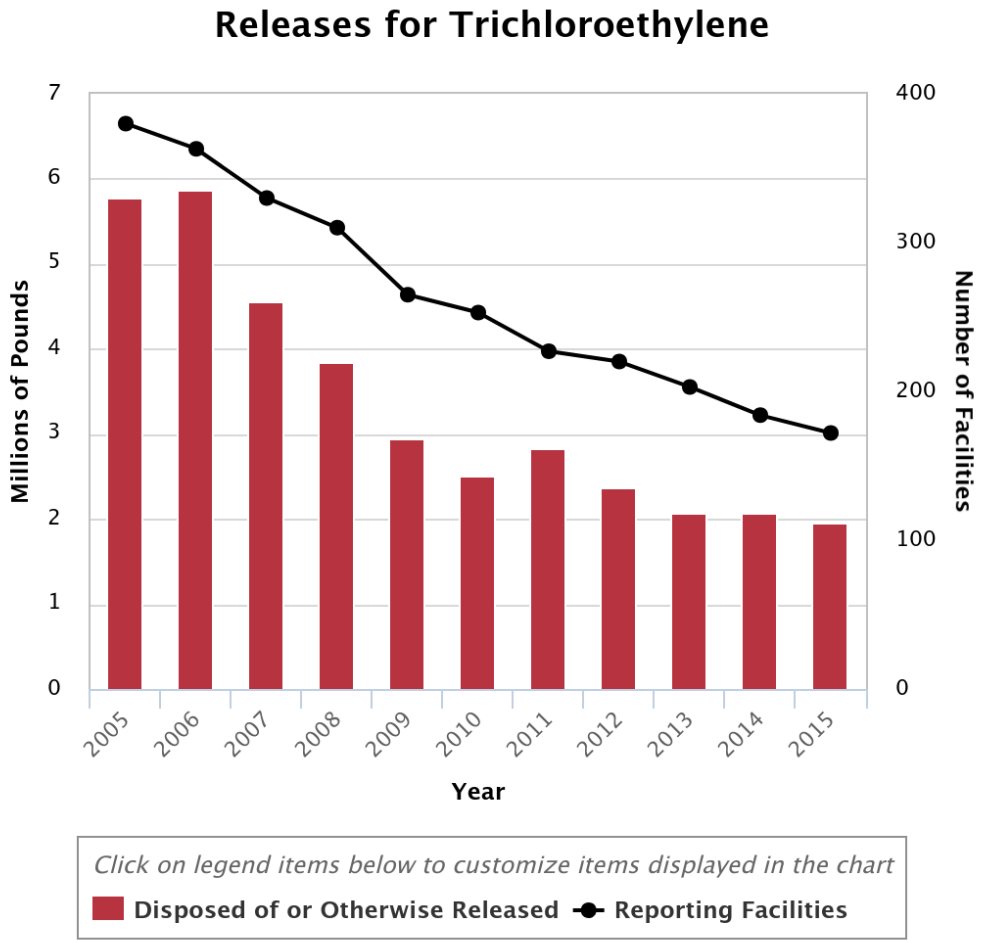
CDR-TRI Data Use Example



Example of 2016 CDR/2015 TRI mashup

CDR-TRI Data Use Example





Example of 2012 CDR/2014 TRI mashup

CDR & TRI PFAS Overlap

CDR Reporting Cycle	PFAS reported to CDR	PFAS reported to CDR and on 2021 TRI List	PFAS reported to CDR and reported to 2020 TRI	PFAS reported to CDR and reported to 2021 TRI
2020	180	27	18	16
2016	176	40	22	19
2012	109	22	10	9
All three cycles unique	219	43	22	19
All three cycles in common	85	13	7	7

CDR & TRI PFAS Overlap

TRI Reporting Year	Sites reporting PFAS to 2020 CDR	Facilities reporting PFAS to TRI	Sites/Facilities reporting to both 2020 CDR & TRI
2020	57	41	4
2021	57	44	5

- Lack of overlap due to differences in:
  - The set of PFAS currently used in commerce versus those listed on the TRI chemical list
  - Reporting thresholds

Summary - Using CDR and TRI Data

- Obtain annual TRI release data to complement CDR information collected every 4 years.
- Quality assure manufacturing information reported by common facilities in both CDR/TRI.
- Gather additional use information from TRI for facilities that process or otherwise use chemicals.
- Combining the chemical information reported to both TRI and CDR provides a more complete picture of a chemical's lifecycle from sources of import and domestic manufacture to final deposition in the environment or products.
- Chemical overlap for most workplan chemicals (70%).

Questions?

Thank you!

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