TRI Reporting and the RSEI Model

Toxics Release Inventory Reporting - Why Accuracy is More Important Than Ever

MECC
September 13, 2022

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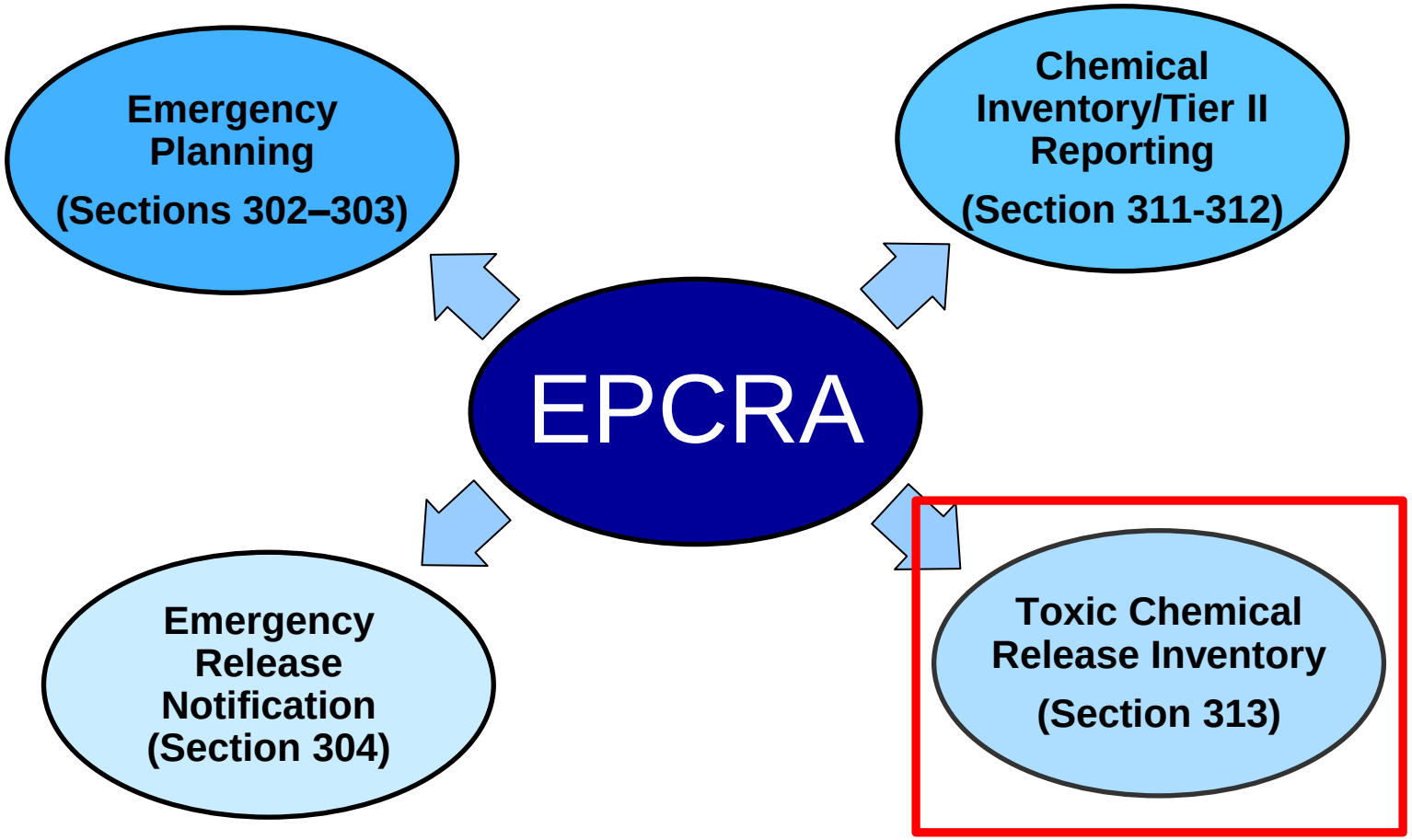
Bright ideas.
Sustainable change.

AGENDA

1. What is TRI Reporting?
2. What is USEPA's RSEI Model?
3. How is the RSEI Model being used?
4. What can you do?
5. Q&A and discussion

Emergency Planning and Community Right-to-Know Act (EPCRA)



Toxics Release Inventory (TRI)

Are you subject to reporting?

Must meet 3 criteria:

1. TRI-Covered Industry Sector
   - Refer to your 6-digit NAICS Code
2. Have 10 or more full time employee equivalents
   - A total of 20,000 hours or greater
3. Manufacture, Process, or Otherwise Use EPCRA 313 chemicals in quantities greater than established thresholds

What is reported?

For each chemical identified to be reportable, the facility must report:

- Activities and uses of the chemical
- Maximum amount onsite at any time
- Quantity, in pounds*
  - Released to air (stack and fugitive)
  - Discharged to water bodies
  - Disposed, treated, energy recovered, and recycled **on-site**
  - Disposed, treated, energy recovered, and recycled **off-site** (including discharged to POTW)

Output → Reports and Graphics

- Pounds of Releases of Toxic Chemicals
- Reports include all pathways of releases for each chemical

Purpose

- Provide the public information about the releases of toxic chemicals in their community
- Increase public preparedness for emergency response
- Allow facilities to identify and pursue pollution prevention activities

Limitations

- Use of "Best Readily Available Information"
- Historical mindset of "Better to over-report than under-report"

*Dioxin and Dioxin-Like Compound reported in grams

TRI Toxics Tracker

# Facilities	# Reporting Years	# Chemicals Reported	# Reporting Forms
78	10 (2011 - 2020)	112	2,610

Facilities Summary

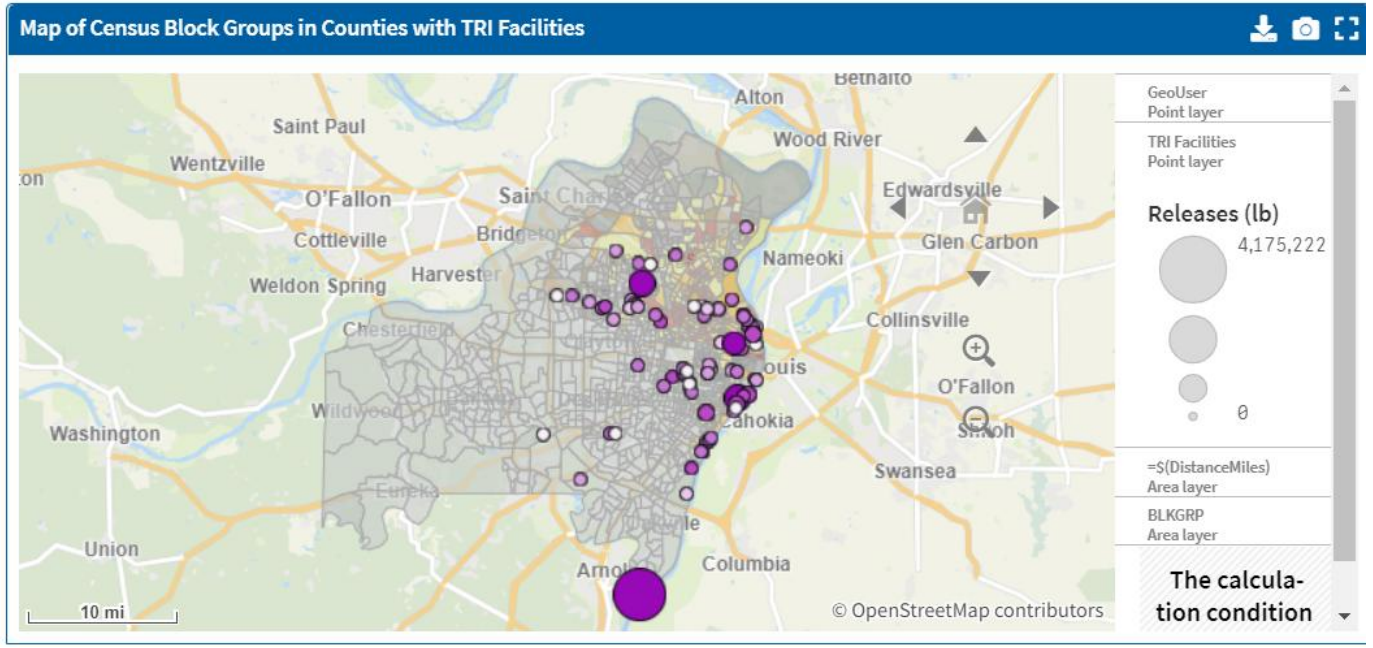
For details about an individual facility, go to the **Facility List**.

Summary Report | Print-Friendly Report | Top Facilities and Chemicals | Facility List | Compliance and Enforcement

Demographic Profile

Demographic data tell you about certain characteristics of the people who live near the facilities in your search area. In the map below, locations of TRI facilities are shown on top of Census block groups. Census block groups on the map are colored based on a demographic index indicator.

See the Demographic Profile section in the blue menu bar for more information and additional options for the demographic indicators.

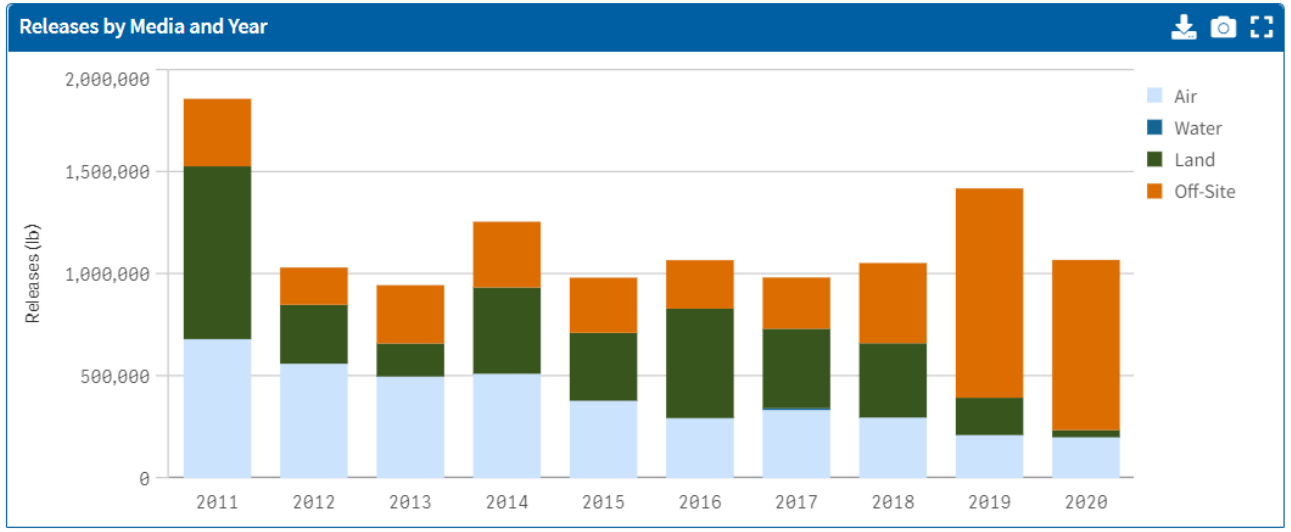


TRI Toxics Tracker

Releases

Evaluating releases of TRI-listed chemicals can help identify potential concerns and gain a better understanding of potential risks the releases may pose. The following graph shows the total disposal or other releases of TRI chemicals (also referred to as "total relases"), including on-site disposal to land, discharges to water, and releases to air, and off-site transfers for disposal or release.

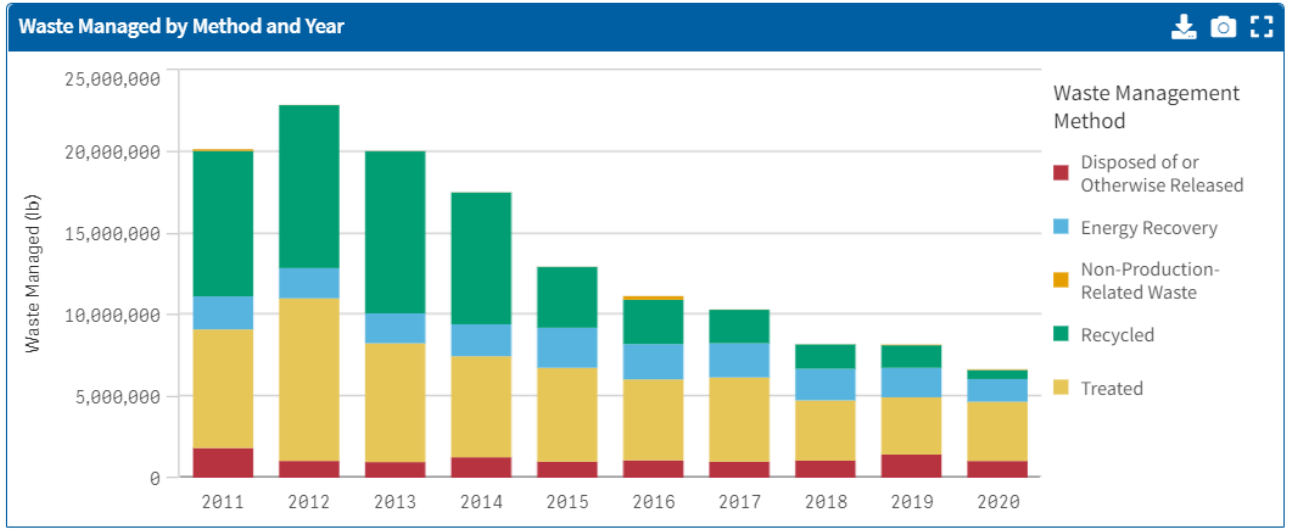
See the Releases section in the blue menu bar for more information and additional charts about releases.



Waste Managed

Facilities report to TRI the quantities of TRI-listed chemicals that they dispose of or otherwise release to the environment as a result of normal industrial operations. In addition, facilities report the quantities of these chemicals that they manage through preferred methods including recycling, combusting for energy recovery, and treating for destruction. This figure shows the trend in these quantities, collectively referred to as production-related waste managed.

See the Waste Managed section in the blue menu bar for more information and additional charts about waste management.



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TRI Toxics Tracker

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Chemicals

MORE INFO

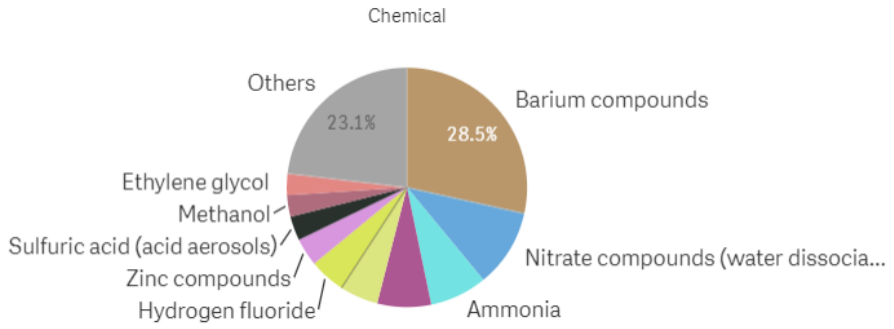
TRI Chemical Name (ID) | Other EPA Program | Health Endpoint | Chemical Groups | Chemical Synonym

Releases by Chemical | Waste Managed by Chemical | P2 by Chemical | Forms by Chemical | Potential Health Effects | Health Effect Definitions

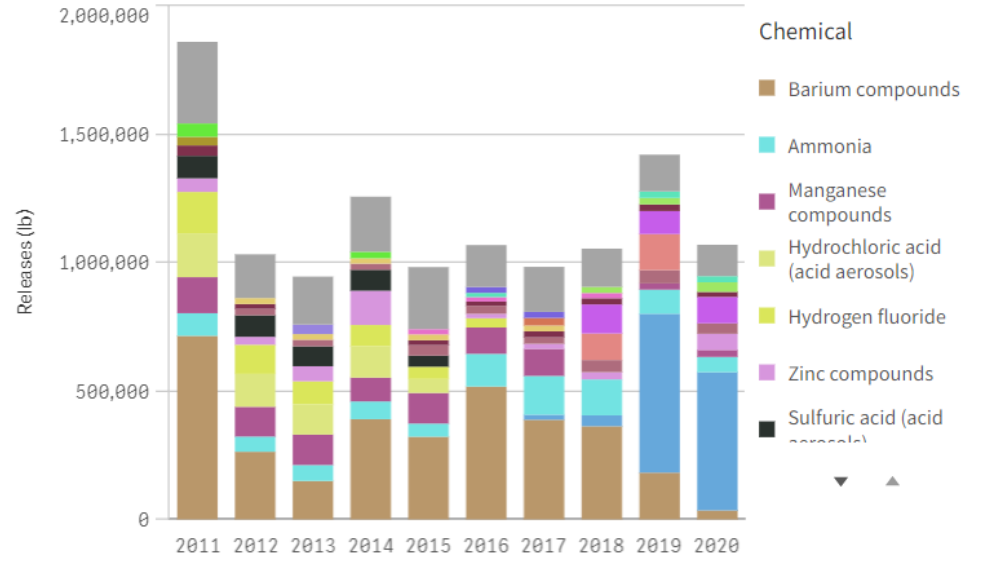
Releases by Chemical

Top 10 Chemicals | All Chemicals

Total Releases: 11,670,105 lb



Releases by Chemical and Year



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Risk Screening Environmental Indicators Model (RSEI)

- Further contextualizes information on releases of toxic substances

- Data from:
  - Toxics Release Inventory (TRI)
  - Relative toxicity
  - Chemical's fate and transport
  - Potential human exposure

- Different levels to the RSEI Model
  - RSEI Modeled Hazard
  - RSEI Score

- Scores by:
  - Chemical
  - Industry sector
  - Geographic area

Output → Reports and Maps

- Charts, maps & Tables
- By facility, location, chemical

Purpose

- Establish priorities for further investigation (high scores)
- Look at changes in potential human health impacts over time
- Prioritize issues related to toxics management
- Combine with demographic and income data for environmental justice

Limitations

- TRI data used as starting point may be overly conservative
- Uses simplifying assumptions in the model
  - Stack Heights
  - Metals vs. Metal Compounds
  - Proximity to residential areas
  - Volumes of water discharges

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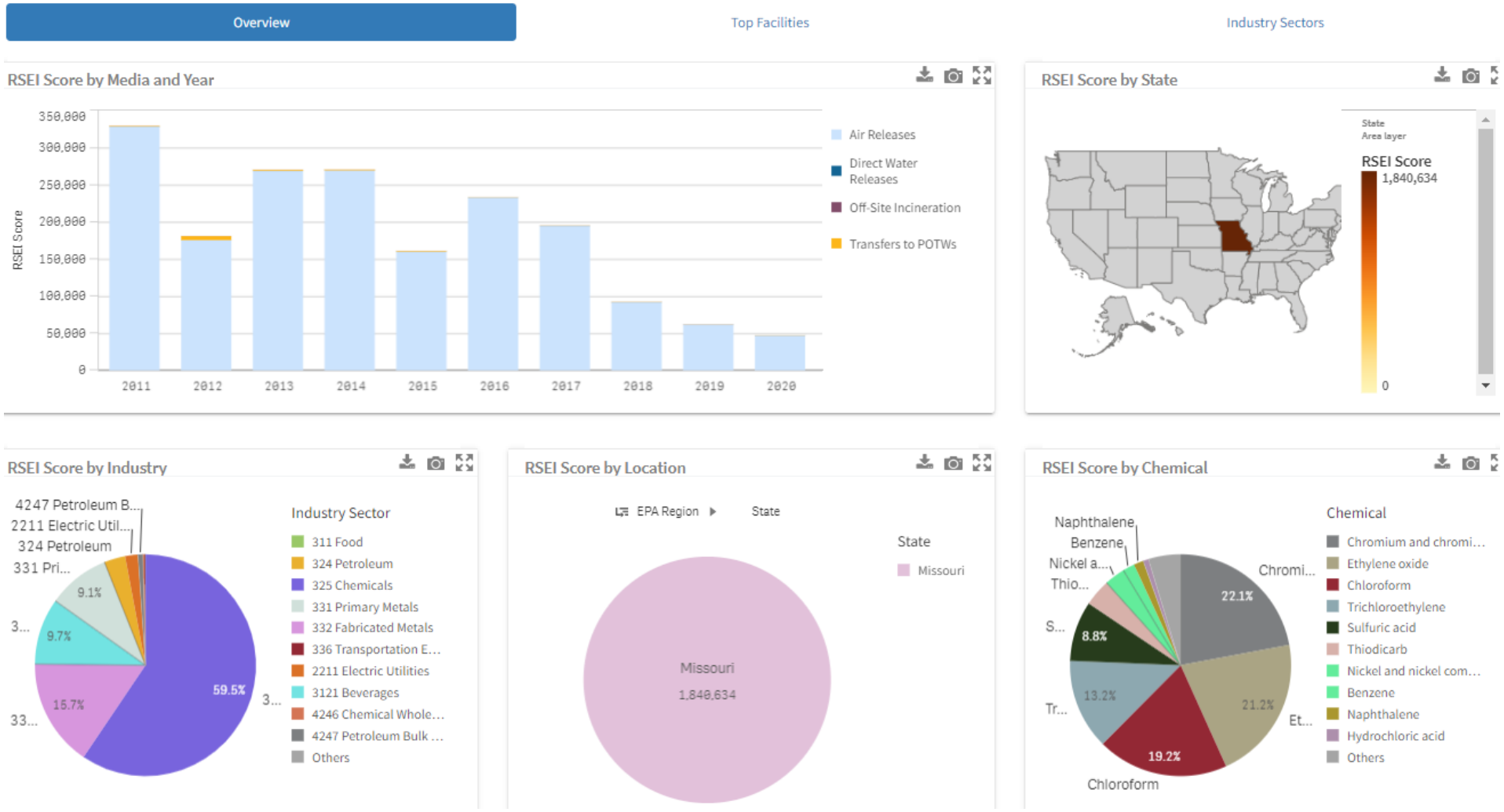
EasyRSEI Dashboard

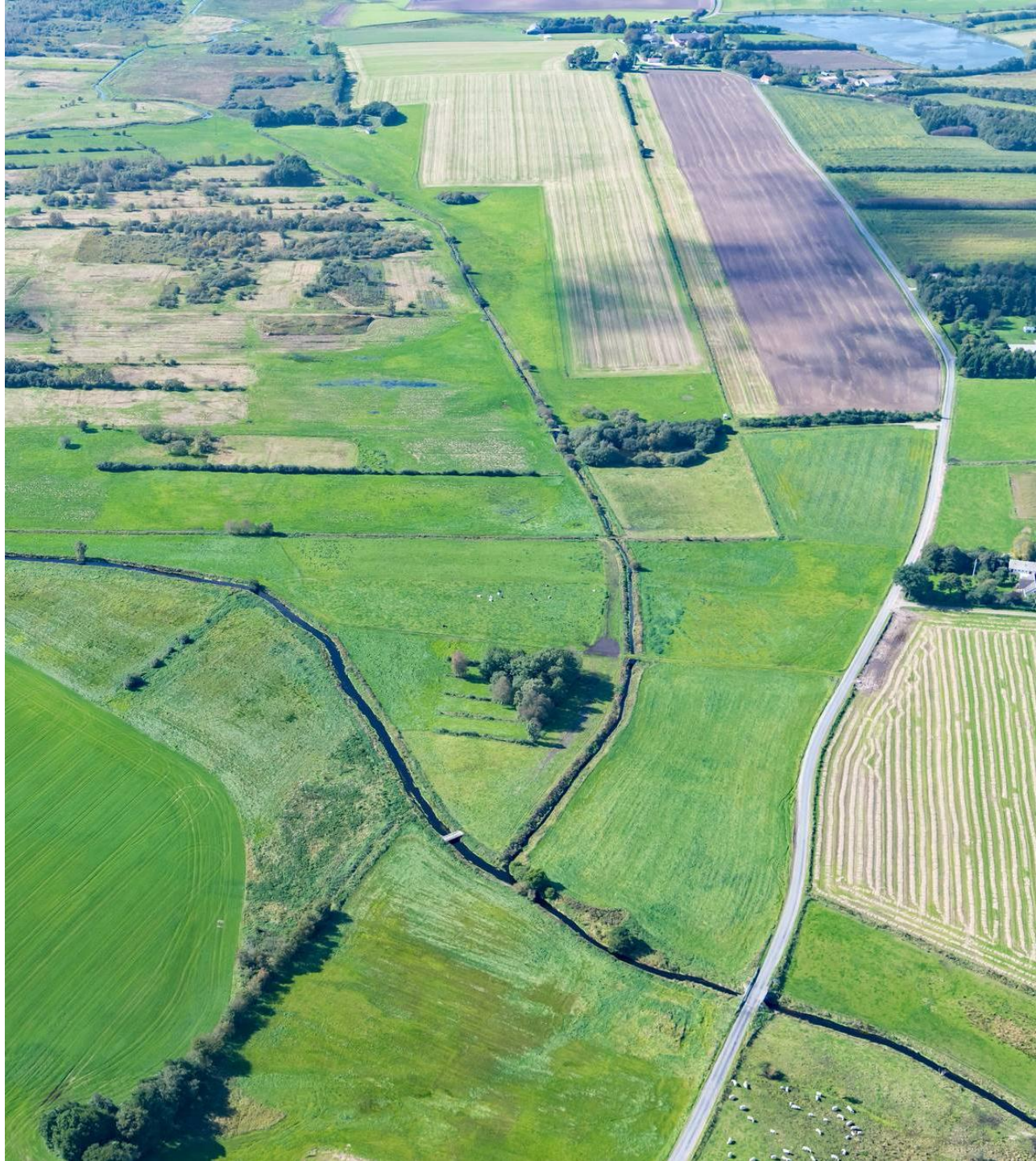


How are TRI and RSEI Data Being Used?

Environmental Justice (EJ) Screening Tools

UMASS PERI Top Polluters List

ProPublica – “Cancer Alley” Map



What can you do?

Ensure Your Reports are Accurate – Conduct and Audit

Explore Potential Ways to Refine Reports – Collect Analytical Data

Look into Pollution Prevention Options

QUESTIONS

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