

Using Toxics Release Inventory for EJ Grant Applications

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US EPA Region 8 – Denver, Colorado

Why Grants?

- Generally, over 50% of EPA Budget is distributed as grants
- Grants are for the benefit of the public, it is work to support non-federal entity, such as governments and communities, to carry out a public purpose
- Grants are not for the benefit form the EPA
- Grants support your organization in protecting human health and the environment at the local level

Inflation Reduction Act

- Environmental and Climate Justice Program (ECJ Program),
 - created by the Inflation Reduction Act (IRA) under Clean Air Act (CAA) Section 138
 - funding for financial and technical assistance to carry out environmental and climate justice activities to benefit underserved and overburdened communities
- Congress appropriated \$2.8 billion for financial assistance
 - \$200 million for technical assistance

 EPA must award grants and technical assistance under the ECJ Program by September 30, 2026

Environmental and Climate Justice Funding

- Environmental and Climate Justice Community Change Grants Program (Community Change Grants)
- Environmental Justice Thriving Communities Grantmaking (EJ TCGM)
 Program
- Environmental Justice Collaborative Problem-Solving (EJCPS)
 Cooperative Agreement Program
- Environmental Justice Government-to-Government (EJG2G) Program

Environmental Justice Grants – Terms

Disproportionate Effects

Describes situations of concern where there exists significantly higher and more adverse

health and environmental effects on minority populations, low-income populations or

indigenous peoples.

Environmental Justice Grants – Terms

Fair Treatment

The principle that no group of people, including a racial, ethnic or a socioeconomic group, should bear a disproportionate share of the negative environmental consequences from industrial, municipal and commercial operations or the execution of federal, state, local and tribal programs and policies. In implementing its programs, EPA has expanded the concept of fair treatment to include not only consideration of how burdens are distributed across all populations, but the distribution of benefits as well.

Environmental Justice Grants – Terms

Overburdened Community

Minority, low-income, tribal, or indigenous populations or geographic locations in the United States that potentially experience disproportionate environmental harms and risks. This disproportionality can be because of greater vulnerability to environmental hazards, lack of opportunity for public participation, or other factors. Increased vulnerability may be attributable to an accumulation of negative or lack of positive environmental, health, economic, or social conditions within these populations or places. The term describes situations where multiple factors, including both environmental and socio-economic stressors, may act cumulatively to affect health and the environment and contribute to persistent environmental health disparities.

Describe Environmental/Human Health issues

- What: Environmental/human health concern you wish to address for project.
- Where: Identify location(s) of environmental/public health concern.
 - Where are sources of concern (drinking water, power plant, air quality, indoor air)?
 - Where are sources in relation to community, vulnerable populations?
- Who: Identify who is impacted by environmental/public health risks/impacts. Are there individuals who are vulnerable (socio-economic status, geography, gender, age, disability status, etc.).
 - How are individuals or community impacted? Is community disproportionately, adversely impacted, or vulnerable? How will community benefit from this project?
- Why: Describe why it is important to address this issue? Why now?

TRI data to support your EJ Grant application

- Learn about toxic chemical releases by industrial and federal facilities
- Available at the by geography, industry type, and chemical
- Data is available for many years; you can see trends of conditions at the local level
- Target issues for community
- Identify existing conditions
- Describe disproportionate and adverse impacts

Four ways to access TRI data

• TRI National Reports/Fact Sheets - TRI Explorer

- Overview of TRI data for a location, industry sector, or chemical. Ideal for beginning TRI users.
- https://enviro.epa.gov/triexplorer/tri factsheet search.searchfactsheet

Toxics Tracker

- Access nationwide TRI data from the past 10 years and easily explore by geography, facility, industry, chemical, or specific data elements.
- https://edap.epa.gov/public/extensions/TRIToxicsTracker/TRIToxicsTracker.html

EJScreen

- Environmental justice mapping and screening tool that provides EPA with a nationally consistent dataset and approach for combining environmental and demographic socioeconomic indicators.
- https://ejscreen.epa.gov/mapper/

EnviroMapper

- A single point of access to select U.S. EPA environmental data.
- https://enviro.epa.gov/enviro/em4ef.home

Find TRI Data

https://www.epa.gov/toxics-release-inventory-tri-program/tri-data-and-tools

Toxics Release Inventory (TRI) Program



What is the TRI? The Toxics Release Inventory (TRI) is a resource for learning about toxic chemical releases and pollution prevention activities reported by industrial and federal facilities. TRI data support informed decision-making by communities, government agencies, companies, and others. Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) created the TRI

TRI Site Map | El Inventario de Emisiones Tóxicas

What is the TRI?



 Learn why the TRI was created and what chemicals and industry sectors

Report TRI Data





Access & Use Data

Get TRI Email &

Text Updates

TRI data, materials for specific

Find, Understand and Use TRI

Watch webinar recordings to learn more about TRI and data access tools.

Find TRI Data

Find out about particular facilities, chemicals, geographic areas, and industry sectors.

- Select the best tool for getting the data you want
- Browse guides and tutorials for TRI tools
- Learn about the TRI data quality process

What Do You Need to Know?

- TRI for Communities
- TRI for Tribal Communities
- TRI for Researchers
- TRI for the Press
- TRI for Reporting Facilities

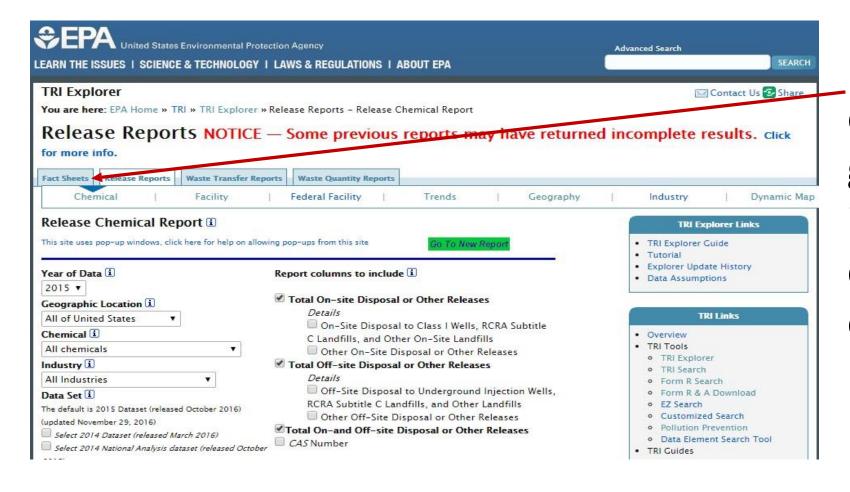
TRI Explorer/Fact Sheets



- Chemical-Individual
- Chemical Group
- Industry
- Region (EPA Regions)
- Metropolitan statistical area

- Watershed
- Zip Code
- On or near Tribal Land
- All United States and Puerto Rico
- Some Territories

Fact Sheets



Fact sheets is the easiest way to get general information for chemicals, industry, or a geography

Fact Sheet – South Dakota, 2019

TRI Explorer

Description: Search by chemical, location, industry sector, or tribal land. Focus on chemical releases, waste transfers, or waste

Contents: Facility-reported data and additional contextual information

Output: Reports made up of sortable data tables (most include ability to drill down to a facility's individual reporting forms); spreadsheet-

compatible .csv/.txt files, or results in PDF/Word





South Dakota ranks 52 out of 56 states/territories nationwide based on total releases per square mile (Rank 1 = highest releases)

Quick Facts for 2019

	South Dakota	United States
Number of TRI Facilities:	109	21,548
Total Production-Related Waste Managed:	19.3 million lbs	30.6 billion lbs
Total On-site and Off-site Disposal or Other Releases:	7.1 million lbs	3.4 billion lbs
Total On-site:	6.8 million lbs	2.9 billion lbs
• Air:	1.5 million lbs	600.4 million lbs
• Water:	3.0 million lbs	201.3 million lbs
• Land:	2.2 million lbs	2.1 billion lbs
Total Off-Site:	336.3 thousand lbs	456.8 million lbs

14 **TRI National Conference** October 24-25, 2023

Fact Sheet – Utah, 2021

2021 TRI Factsheet: State - Utah

Data Source: 2021 National Analysis Dataset (updated May 2023, released May 2023)

Go To New Report

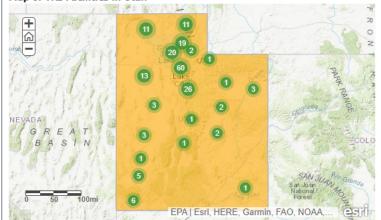
Print View

Español

Classic View

The Toxics Release Inventory (TRI) tracks the management of certain toxic chemicals that may pose a threat to human health and the environment. Certain industrial facilities in the U.S. must report annually how much of each chemical is recycled, combusted for energy recovery, treated for destruction, and disposed of or otherwise released on- and off-site. This information is collectively referred to as production-related waste managed.

Map of TRI Facilities in Utah



Utah ranks **5 out of 56** states/territories nationwide based on total releases per square mile (Rank 1 = highest releases)

Quick Facts for 2021

	Utah	United States
Number of TRI Facilities:	193	21,226
Total Production-Related Waste Managed:	489.1 million lbs	29.3 billion lbs
Total On-site and Off-site Disposal or Other Releases:	199.9 million lbs	3.3 billion lbs
Total On-site:	197.6 million lbs	2.8 billion lbs
• Air:	7.3 million lbs	572.3 million lbs
• Water:	99.7 thousand lbs	197.5 million lbs
• Land:	190.1 million lbs	2.1 billion lbs
Total Off-Site:	2.2 million lbs	431.1 million lbs

What/Where: Environmental/human health conditions in community; Location of sources



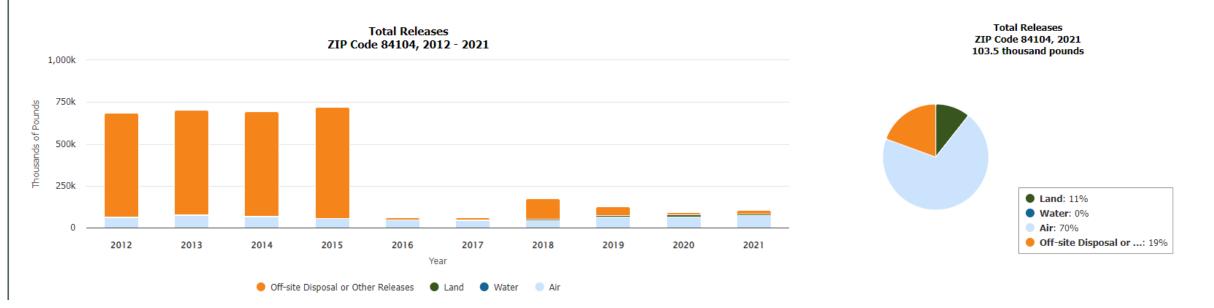


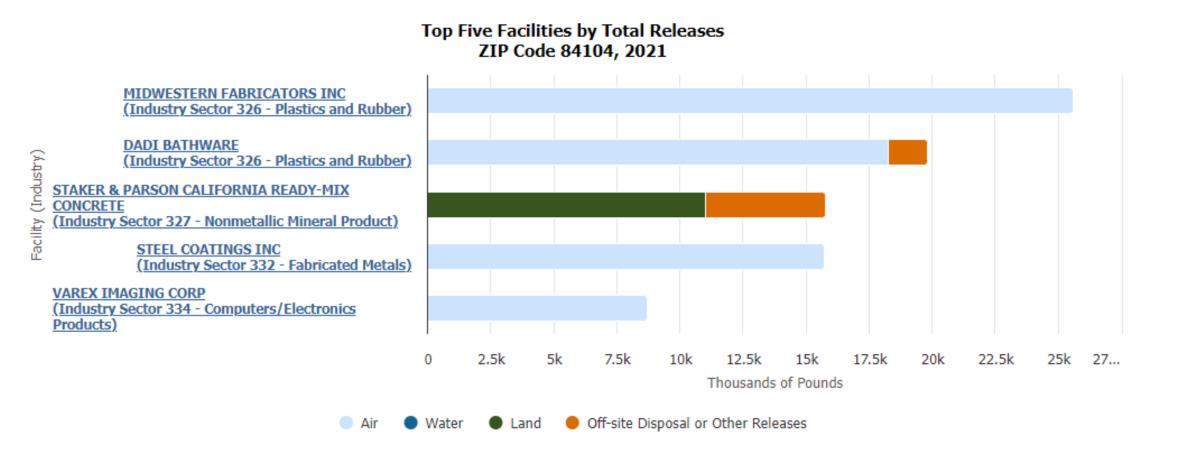
2021 TRI Factsheet: ZIP Code – 84104

Quick Facts for 2021

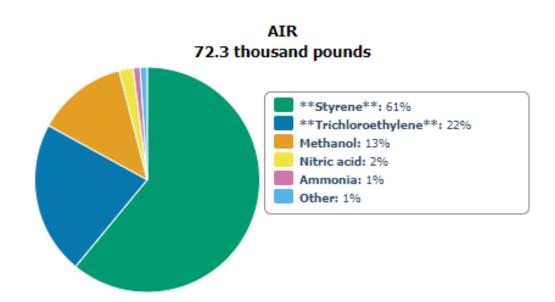
	ZIP Code 84104	United States
Number of TRI Facilities:	16	21,226
Total Production-Related Waste Managed:	1.2 million lbs	29.3 billion lbs
Total On-site and Off-site Disposal or Other Releases:	103.5 thousand lbs	3.3 billion lbs
Total On-site:	83.4 thousand lbs	2.8 billion lbs
• Air:	72.3 thousand lbs	572.3 million lbs
• Water:	0 lbs	197.5 million lbs
• Land:	11.0 thousand lbs	2.1 billion lbs
Total Off-Site:	20.1 thousand lbs	431.1 million lbs

The following charts represent releases of TRI-covered chemicals to the environment in ZIP Code 84104. A "release" of a chemical means that it is emitted to the air or water, placed in some type of land disposal, or transferred off-site for disposal or release.





Top Five Chemicals Released to Air and Water ZIP Code 84104, 2021



No Releases to Water Reported

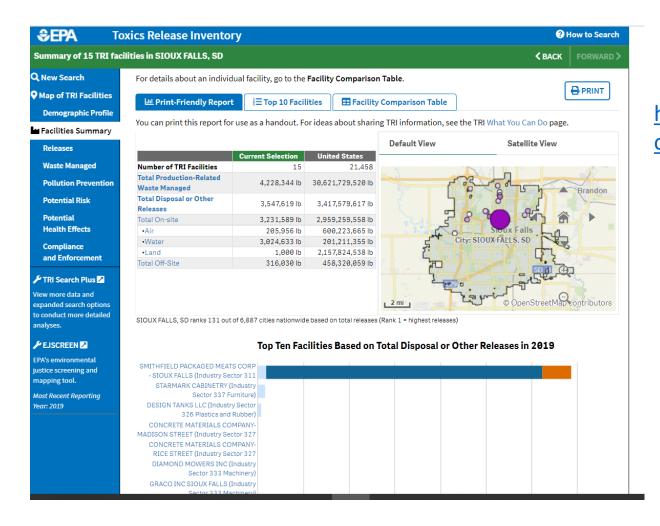
Note: **=Carcinogenic Chemical

Note: Trend graphs were created using the 2001 core chemicals/industries list.

Describing conditions for Zip code 84014, 2021

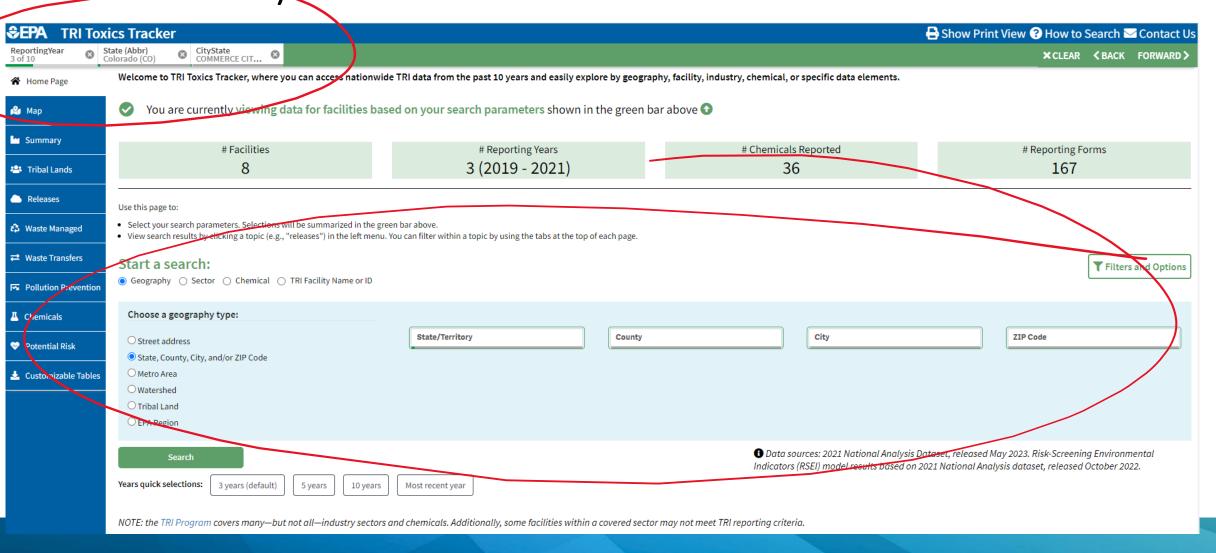
- Utah ranks 5th out of 56 states/territories in releases (193 facilities statewide)
- Salt Lake County (60 facilities) comprises of over 31% of facilities reporting statewide
- Zip code 84104 has the burden of over 26% of the facilities reporting in Salt Lake County
- Over 8% of facilities reporting in Utah are in zipcode 84104,
 - Smaller number may see less compelling
- 72.3 thousand pounds of releases were to air
- The top two facilities are with most releases are in the Plastics and Rubber Manufacturing industry
- Most releases to air from these facilities two facilities.
- Styrene is the chemical most released to air in this zipcode
- Styrene is identified as a carcinogenic chemical

Toxics Tracker

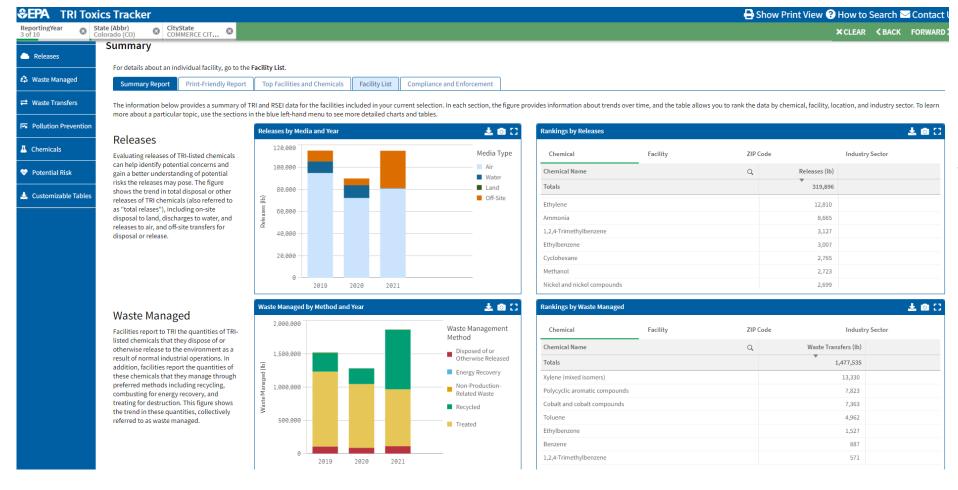


https://edap.epa.gov/public/extensions/TRIToxicsTracker/TRIToxicsTracker.html

Toxics Tracker – Search by Geography, Sector, Chemical, or TRI Facility



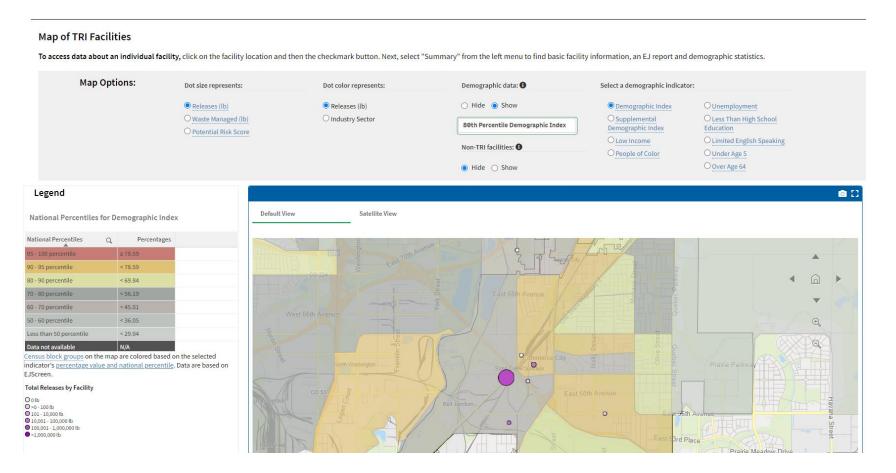
Toxics Tracker – Summary Report



You can download data and download as an image. Graphics are useful in grant applications, just be sure to explain these.

The graphics need to have context.

Toxics Tracker – EJScreen data added



Select radio buttons to show EJScreen data – Demographic Index.

This is Low-income and People of Color in a Census blockgroup combined.

Percentiles describe this Census Block population to the rest of the US.

For a blockgroup with a 75th percentile for the demographic index.

This means that 25% of blockgroups have a greater percentage of combined low-income and people of color populations

Toxics Tracker – Facility List Table

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

The information below provides a summary of TRI and RSEI data for the facilities included in your current selection. In each section, the figure provides information about trends over time, and the table allows you to rank the data by chemical, facility, location, and industry sector. To learn more about a particular topic, use the sections in the blue left-hand menu to see more detailed charts and tables.

To change the sorting order in the table, click on a column header.

For individual facility information, click on a facility name.

Total Releases
Releases By Media

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

i DEFINITIONS

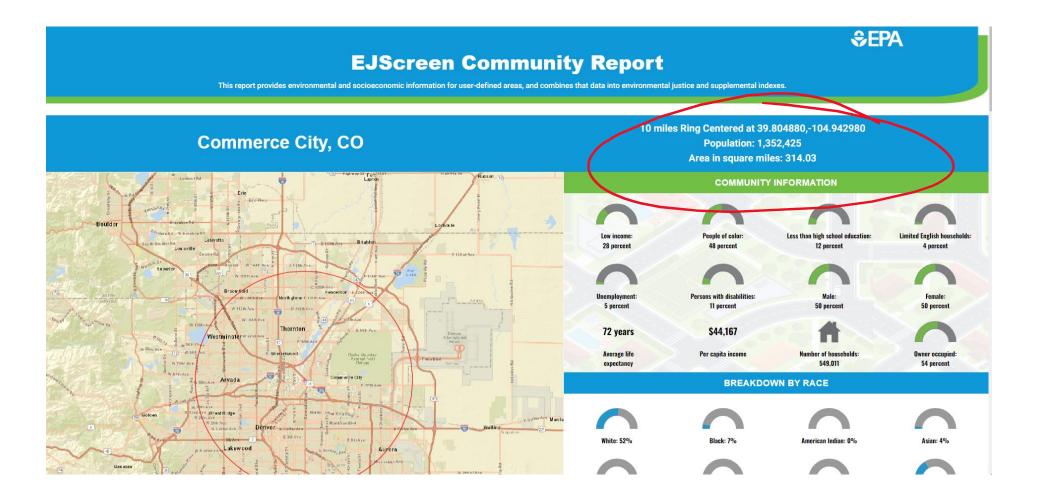
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Facility Q	Releases (lb)	Waste Managed (lb)	RSEI Score	Demographic Index National Q	Pollut Preve Activit	Pollution Prevention Activities	Number of TRI Reporting Forms		Primary NAICS Code Q	Top 3 Chemicals by Releases	Top 3 Chemicals by RSEI Score	EJ Q	TRI Q	P2 Q	
Totals	319,896	4,686,572	104,044		0	2	167	2021		-	-				
SUNCOR ENERGY COMMERCE	271,672	3,280,056	99,238	64	0	0	89	2021	324110 Petroleum Refi	Hydrogen cyanide; Prop	Benzene; Coba	Link	Link	Link	
THERMO FLUIDS DENVER - 800	18,903	521,633	97	79	0	0	14	2021	424710 Petroleum Bulk	Ethylene glycol; Methan	Benzo[g,h,i]per	Link	Link	Link	
AZZ GALVANIZING -DENVER - 8	17,911	692,741	47	92	0	2	6	2021	332812 Metal Coating,	Lead and lead compoun	Lead and lead	Link	Link	Link	
PHILLIPS 66 CO DENVER TERM	11,312	139,738	3,969	64	0	0	34	2021	424710 Petroleum Bulk	Toluene; Xylene (mixed	Benzene; Ethyl	Link	Link	Link	
BKEP MATERIALS LLC-DENVER	95	157	73	92	0	0	6	2021	324121 Asphalt Paving	Benzo[g,h,i]perylene; P	Benzo[g,h,i]per	Link	Link	Link	
A R WILFLEY & SONS INC - 8002	3	52,246	621	92	0	0	6	2021	333911 Pump and Pum	Chromium and chromiu	Chromium and	Link	Link	Link	
BRANNAN SAND & GRAVEL - 80		0	No RSEI Score	64	0	0	3	2021	327320 Ready-Mix Conc		No RSEI Score	Link	Link	Link	
PURINA ANIMAL NUTRITION LL		0	No RSEI Score	92	0	0	9	2021	311119 Other Animal F		No RSEI Score	Link	Link	Link	

A facility list will provide you with a list of all facilities for the geography selected and years.

You can link to an EJ Report, it is a 10-mile radius, which may not as helpful for a localized EJ grant application.

Toxics Tracker – EJScreen Community Report



EnviroMapper – multiple facilities

https://enviro.epa.gov/enviro/em4ef.home



EnviroMapper – Searching data

20 per page

Single facility

Clustered facilities

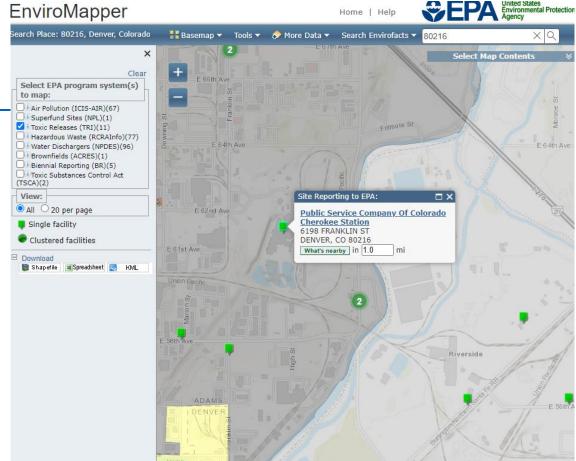
EnviroMapper EJScreen layers can be added to EnviroMapper earch Place: 80216, Denver, Colorado Search Envirofacts Clear By Program Select EPA program system(s) Air Pollution (ICIS-AIR)(67) Superfund Sites (NPL)(1) Toxic Releases (TRI)(11) Water Dischargers (NPDES)(96) Biennial Reporting (BR)(5) Clear Toxic Substances Control Act Select EPA program system(s) Site Reporting to EPA: to map: Public Service Company Of Colorado Home | Help Cherokee Station ☐ Air Pollution (ICIS-AIR)(158) **DENVER, CO 80216** ✓ ⊕Superfund Sites (NPL)(1) What's nearby in 1.0 🚟 Basemap 🔻 Tools ▼ More Data Search Envirofacts ✓ ①Toxic Releases (TRI)(21) ✓ ⊕ Hazardous Waste (RCRAInfo)(241) ■ Water Dischargers (NPDES)(159) Tichy Blvd Tichy E 67th PI 2 Brownfields (ACRES)(4) Memory Demou Ave Biennial Reporting (BR)(9) Toxic Substances Control Act (TSCA)(4) View:

EnviroMapper - Interactive

- Can click on facilities and get a Facility Report
- https://enviro.epa.gov/enviro/multisys2_v2.get_list?facility

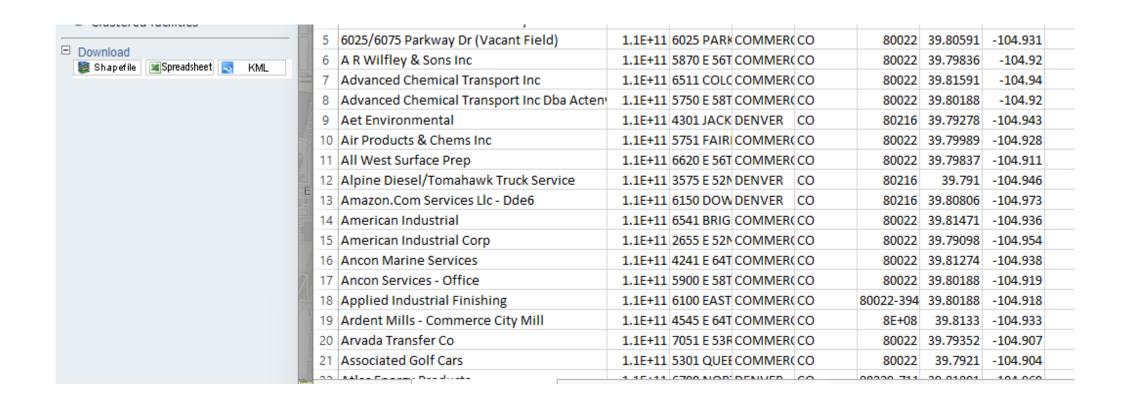
AFS Information

Operating Status:	0	HPV Flag:	
Operating Status Description:	OPERATING	State Registration Number:	840296600
State County Compliance Source:	0800100001	Government Facility Code Description:	PRIVATELY OWNED/OPERATED
Region Code:	08	Class Code:	A
Primary SIC Code:	4911	Class Code Description:	ACTUAL OR POTENTIAL EMISS
Primary SIC Description:	ELECTRIC SERVICES	Compliance Status:	С
NAICS Code:	221112	Compliance Status Description:	IN COMPLIANCE WITH PROCED
NAICS Code Description:	Fossil Fuel Electric Power Generation	Date Plant Information Last Updated:	07/30/2014



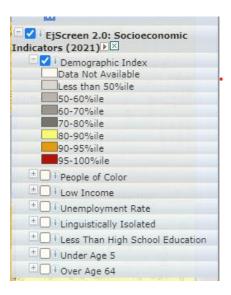
EnviroMapper – Facility spreadsheet

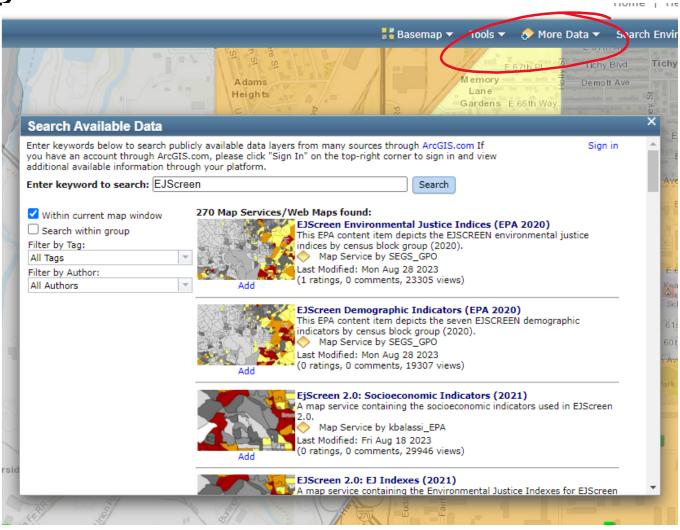
Can download a spreadsheet with facility information that should cover the extent of the map



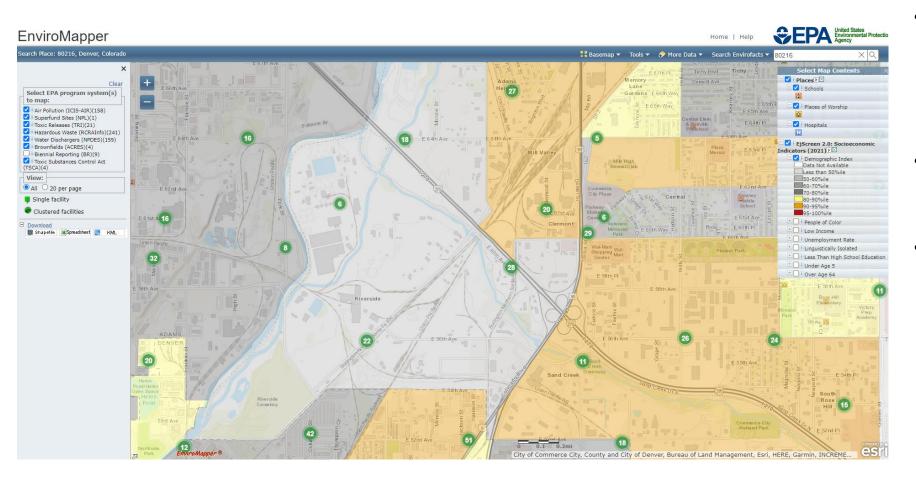
EnviroMapper – adding EJScreen data

- EJScreen layers can be added to EnviroMapper
- Select More Data
 - More Available Data
 - Search: EJScreen
 - Select layer and Add
 - EJScreen Socioeconomic Indicators 2021





EnviroMapper – Interpreting data

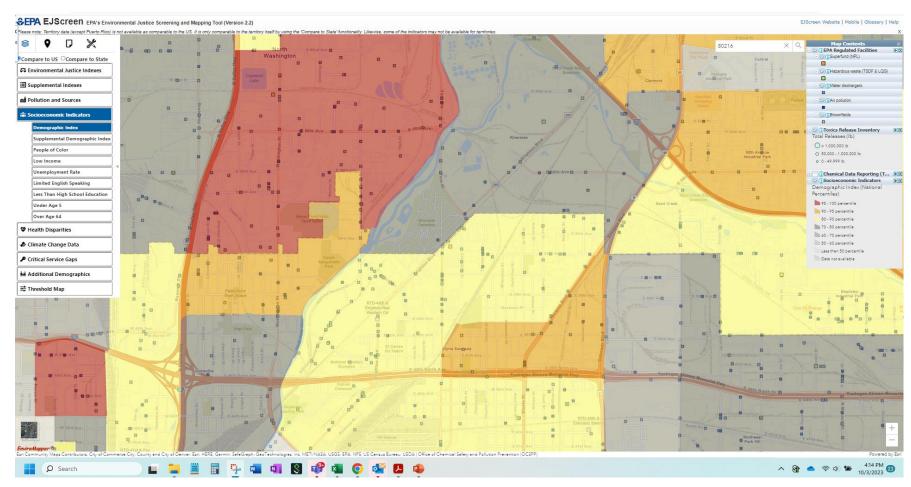


What does this map show?

- EPA Programs (# of facilities on the map extent)
 - 952 Facilities
 - 51 TRI; 1 Superfund, 14 Brownfields
- Places
 - Schools, Hospitals, Places of Worship
- EJScreen Demographic Index by color and percentile.
 - Orange is 90-95th percentile
 - 5-10% of places nationally have more a higher Demographic Index (more people of color and more low-income populations combined)

EJScreen – Interpreting data

https://ejscreen.epa.gov/mapper/

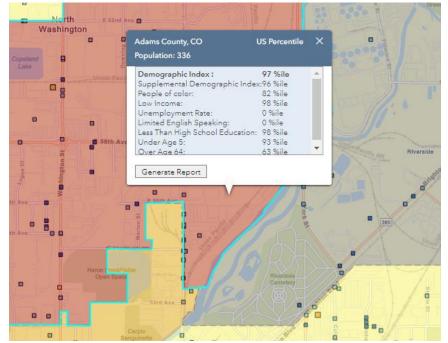


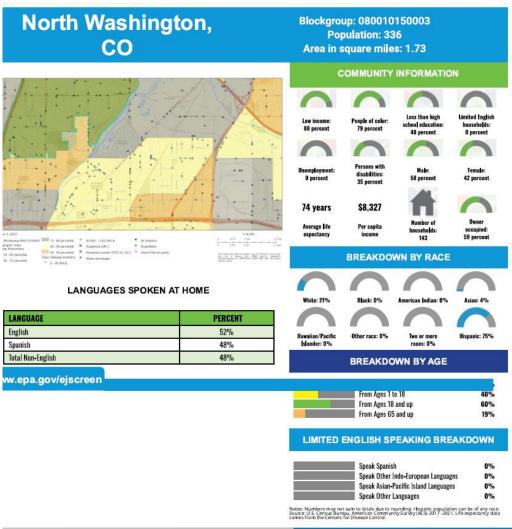
What does this show?

- Demographic Index
 - People of Color and Low-income
 combined
 - Census Blockgroups in color scale
- EPA Regulated Facilities
 - Polygons and colors
 - TRI data by pounds of Releases

EJScreen – popups and reports

- 1. Select Blockgroup
- 2. Generate Report





EJScreen - report

Environmental Variables

- Value, state average, percentile, in state, USA
 Average and percentile in USA
- Particulate Matter has a value of 8.77, this is higher than the Colorado average of 6.45.
- The people living this area are in the 95th percentile in the state. This means that only 5% of places in Colorado have a higher values of Particulate Matter
- State Averages and USA Averages are useful in describing the local environmental burdens, compared to other places

EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE In State	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter (µg/m³)	8.77	6.45	95	8.08	67
Ozone (ppb)	65,8	64,9	53	61,6	79
Diesel Particulate Matter (µg/m³)	0,686	0,268	95	0,261	96
Air Toxics Cancer Risk* (lifetime risk per million)	30	21	69	25	52
Air Toxics Respiratory HI*	0.4	0.25	83	0.31	70
Toxic Releases to Air	4,400	3,400	85	4,600	84
Traffic Proximity (daily traffic count/distance to road)	300	180	84	210	83
Lead Paint (% Pre-1960 Housing)	0.56	0.2	85	0.3	77
Superfund Proximity (site count/km distance)	0.99	0.1	99	0.13	98
RMP Facility Proximity (facility count/km distance)	2.3	0.35	98	0.43	97
Hazardous Waste Proximity (facility count/km distance)	3.9	0.58	98	1.9	85
Underground Storage Tanks (count/km²)	4,8	2,7	80	3,9	76
Wastewater Discharge (toxicity-weighted concentration/m distance)	0,3	710	87	22	87
SOCIOECONOMIC INDICATORS					
Demographic Index	84%	28%	99	35%	97
Supplemental Demographic Index	32%	11%	99	14%	96
People of Color	79%	32%	95	39%	82
Low Income	88%	25%	99	31%	98
Unemployment Rate	0%	5%	0	6%	0
Limited English Speaking Households	0%	2%	0	5%	0
Less Than High School Education	48%	8%	99	12%	98
Under Age 5	13%	5%	94	6%	93
Over Age 64	19%	16%	68	17%	63
Low Life Expectancy	24%	18%	93	20%	86

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPAS Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prior little air toxics, emission sources, and locations of interest for further study is important to remember that the air toxics data gresented there provide broad estimates of the either hisks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rordunding. More information on the Air Toxics Data Update can be found; any opyrhagural revisive data update.

EJScreen – other information

Health, Climate and Critical Service Gaps information is displayed with same averages, percentiles, and comparisons to State and USA.

Asthma for this Blockgroup is in the 94th percentile for Colorado, but 84th percentile for USA

That means that in only 6% of people in Colorado have higher Asthma values. And there are 16% of people nationally that have higher Asthma Values.

HEALTH INDICATORS						
INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE	
Low Life Expectancy	24%	18%	93	20%	86	
Heart Disease	8.6	4.8	98	6,1	90	
Asthma	11,3	9,9	94	10	84	
Cancer	6.7	5,9	70	6,1	62	
Persons with Disabilities	23,3%	11,4%	96	13,4%	93	

CLIMATE INDICATORS							
INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE		
Flood Risk	13%	5%	87	12%	74		
Wildfire Risk	0%	33%	0	14%	0		

CRITICAL SERVICE GAPS						
INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE	
Broadband Internet	15%	10%	76	14%	61	
Lack of Health Insurance	17%	8%	93	9%	88	
Housing Burden	No	N/A	N/A	N/A	N/A	
Transportation Access	Yes	N/A	N/A	N/A	N/A	
Food Desert	Yes	N/A	N/A	N/A	N/A	

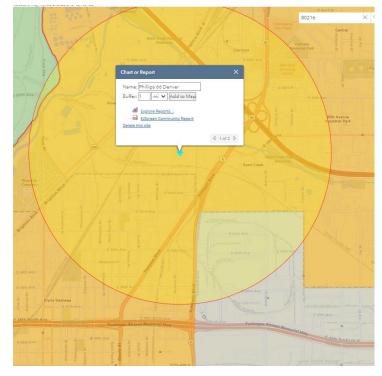
Footnotes

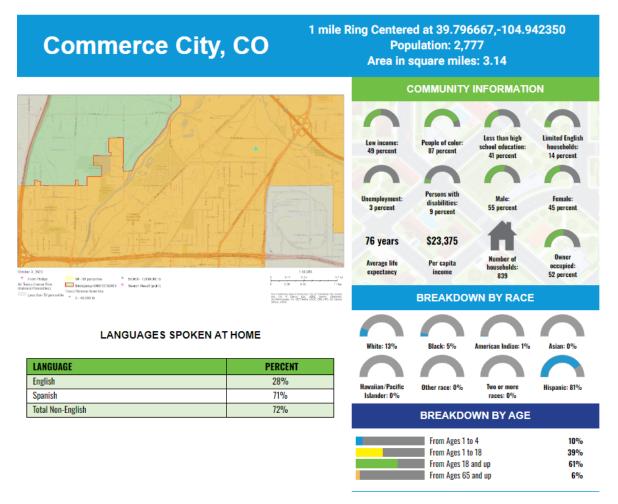
Report for Blockgroup: 080010150003

EJScreen – customize reporting locations

Selected Facility:

Phillps 66 Denver and created a 1-mile radius





EJScreen – Other sites and information

Within 1-mile of Phillips 66

Sites reporting to EPA within defined area:

Superfund	1
Hazardous Waste, Treatment, Storage, and Disposal Facilities	2
Water Dischargers	104
Air Pollution	97
Brownfields	2
Toxic Release Inventory	11

Selected location contains American Indian Reservation Lands* No Selected location contains a "Justice40 (CEJST)" disadvantaged community Yes Selected location contains an EPA IRA disadvantaged community Yes

Report for 1 mile Ring Centered at 39.796667,-104.942350

Other community features within defined area:

Schools)
Hospitals)
Places of Worship	

Other environmental data:

Air Non-attainment	Yes
Impaired Waters	Yes

Describe Environmental/Human Health issues

- Describe and characterize the underserved community directly impacted by disproportionate environmental and/or human health harms and risks,
- # of facilities in community, pounds of chemical releases, cumulative impact of many facilities, other sites regulated by EPA, percentiles/values locally compared to state/nation
- Describe how the community is impacted by those harms and risks (i.e., Who is the community comprised of and what are the disproportionate environmental and/or human health issues they experience?)
- Demographic information, lack of access, health outcomes

What next

- TRI data is powerful, supports characterize community conditions
- TRI Explorer Fact Sheets, Toxics Tracker, EnviroMapper, and EJScreen all include TRI and population data
 - If you don't know where to start, start with Fact Sheets (state, county, city, zipcode, tribal data geographies)
- Toxics Tracker supports looking at all facilities in a geographic area that report to TRI
 - Graphics and tables can be downloaded; compelling in a grant application
 - EJScreen report is a default of 10 miles may be too large for urban areas
- EnviroMapper displays multiple facilities regulated by EPA
 - Download data as a spreadsheet for the mapped extent in tool
- EJScreen displays environmental justice percentiles and allows to map facilities
 - TRI data is hard to see in the map



Using Toxics Release Inventory for EJ Grant Applications

Thank you! Please reach out if you need support

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US EPA Region 8 – Denver, Colorado