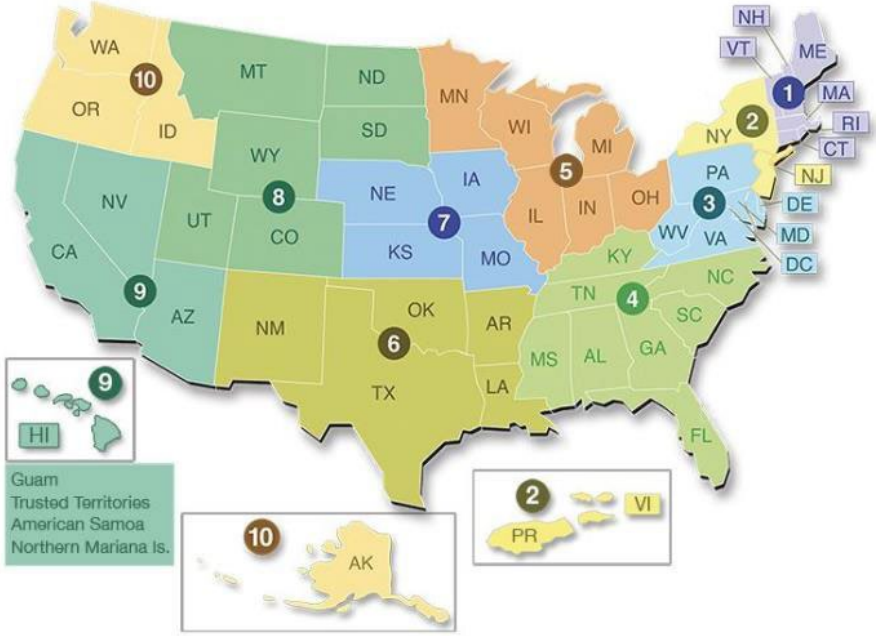
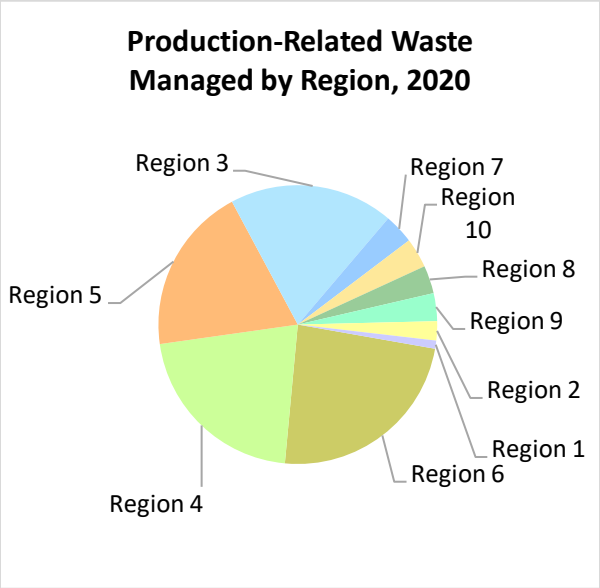
EPA Regional Profiles

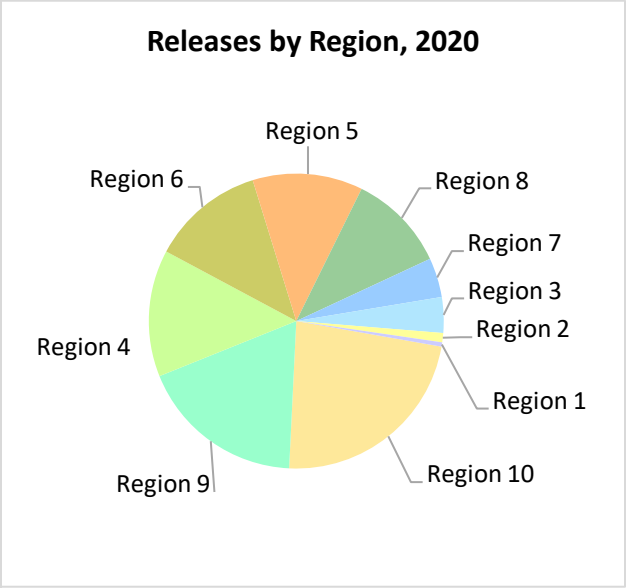
This section of the National Analysis looks at releases and other production-related waste management activities of Toxics Release Inventory (TRI) chemicals at the EPA regional level during 2020. EPA has 10 regional offices, each of which is responsible for multiple states and in some cases, territories and tribes.



EPA regions vary in size, population, and the types of facilities located in each. This results in significant differences between national and regional trends in TRI chemical waste management. For example, certain industrial activities such as metal mining are geographically concentrated and generate large quantities of TRI chemical waste. Release trends in regions with many metal mines often differ greatly from national release trends.

The charts below show how much each EPA region contributed to production-related waste managed and releases.





The relative amounts of production-related waste managed compared to releases in each region is largely explained by the types of industry located in each region. For example:

- Quantities of production-related waste managed in **Regions 3, 4 and 5** were mostly from the chemical manufacturing sector. Each of these regions include one chemical manufacturing facility that reported large quantities of chemicals recycled on site. For example, in Region 3, one facility reported recycling 3.6 billion pounds of cumene. In Region 4, one facility reported recycling almost 2 billion pounds of dichloromethane (methylene chloride).

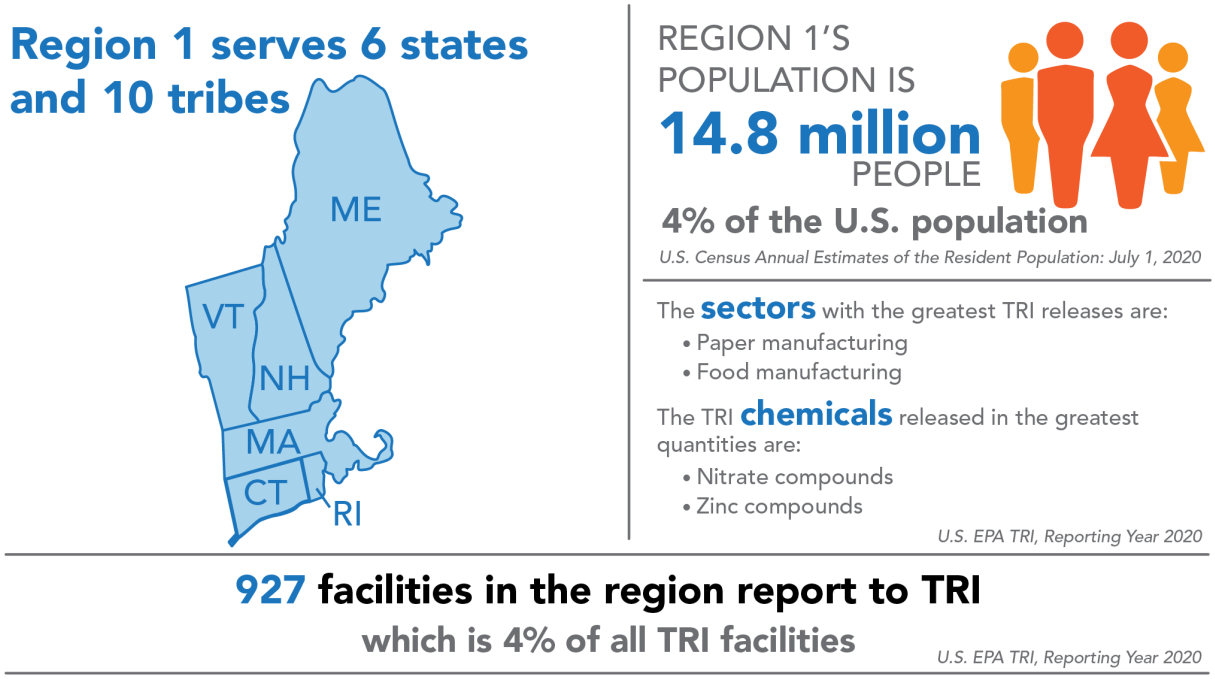
- **Region 6** had the largest quantity of production-related waste managed, driven by chemical manufacturing facilities treating chemicals on site, such as ethylene, propylene, and hydrochloric acid.

- In **Regions 8, 9 and 10**, metal mines accounted for more releases than any other sector. Metal mines usually report large quantities of on-site land disposals, primarily of TRI chemicals in metal-bearing rock (called ore) and waste rock. This sector also ranks lower than almost all others for quantities of waste managed through treatment, energy recovery, and recycling, resulting in lower quantities of waste managed in regions with more metal mines.

TRI Data Considerations
As with any dataset, there are several factors to consider when using the TRI data. Key factors associated with data used in the National Analysis are summarized in the Introduction. For more information see *Factors to Consider When Using Toxics Release Inventory Data*.

Regional Profile for EPA Region 1

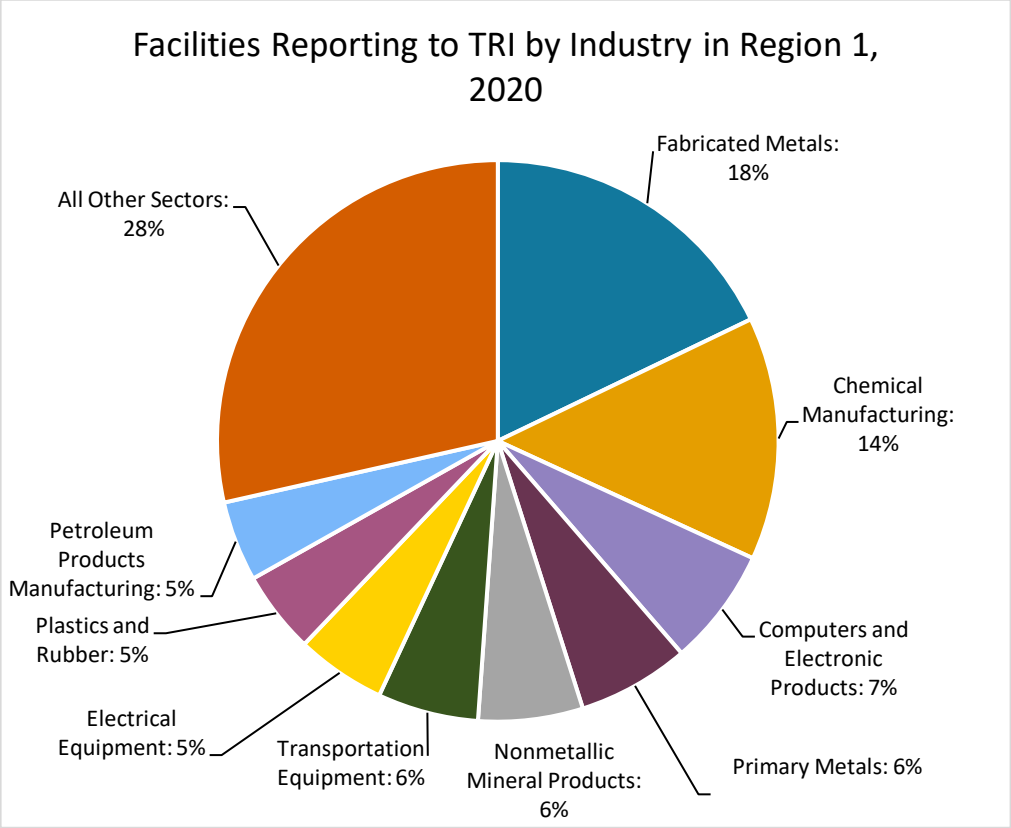
This section examines TRI reporting in EPA Region 1. Region 1 includes Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont, and 10 tribes.



For state- and tribe-specific TRI data, see the Where You Live section and the Tribal Communities section.

Industry Sectors

This chart shows the industry sectors with the most TRI-reporting facilities in Region 1.



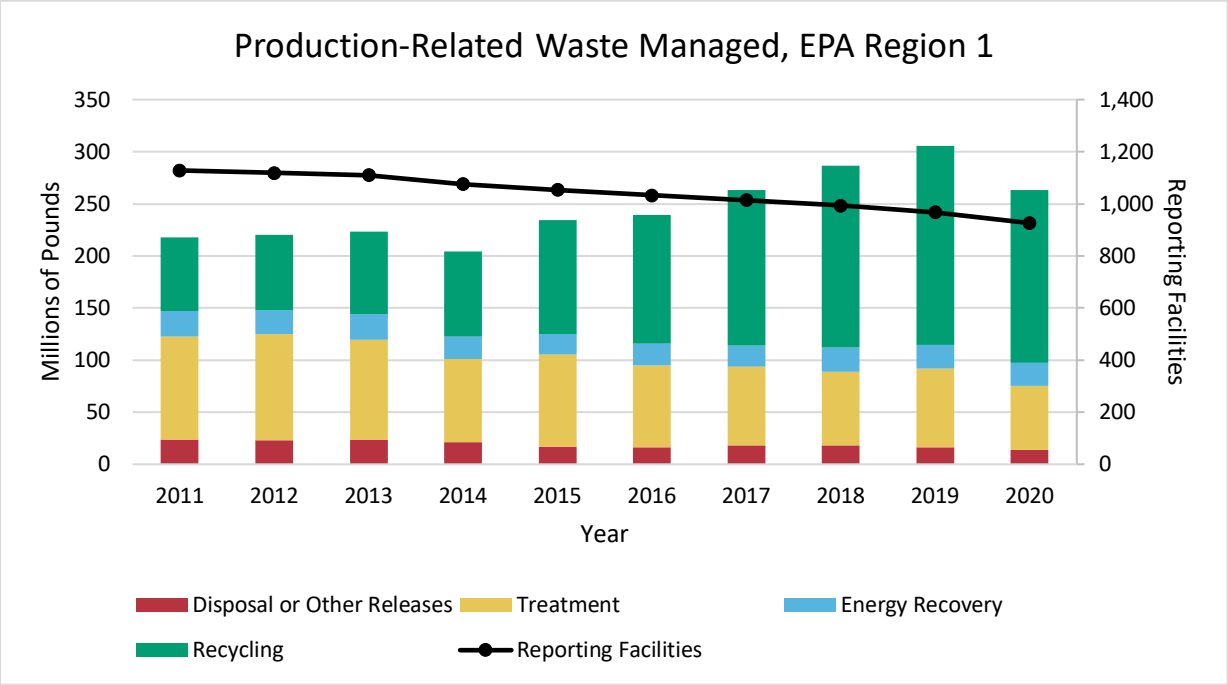
Note: Percentages do not sum to 100% due to rounding

In 2020:

- 927 facilities in Region 1 reported to TRI, which is slightly fewer than reported for 2019. The sectors with the most facilities were the fabricated metals (i.e., manufacture of metal products) and chemical manufacturing sectors.
- While the figure shows the sectors with the most TRI facilities in the region, the sectors that reported the largest TRI releases in Region 1 were the paper manufacturing, food manufacturing, fabricated metals, and chemical manufacturing sectors. Note that relatively few facilities in the paper manufacturing and food manufacturing sectors reported to TRI in this region and those sectors are included in "All Other Sectors" in the pie chart above.

Waste Management Trend Region 1

The following graph shows the 10-year trend in quantities of TRI chemicals managed as production-related waste by facilities located in Region 1.



Note: For comparability, trend graphs include only those chemicals that were reportable to TRI for all years presented.

From 2011 to 2020:

- Waste managed increased by 45.7 million pounds (21%) in Region 1, driven by increased recycling. Nationally, quantities of waste managed increased by 22%, also driven by increased recycling.

In 2020:

- Facilities in Region 1 managed 267 million pounds of production-related waste, 95% of which was recycled, combusted for energy recovery, or treated. Only 5% was disposed of or otherwise released into the environment in Region 1, compared to 11% nationally.
- Since 2019, quantities of waste managed in the region decreased by 14%, driven by decreases in recycling and treatment.

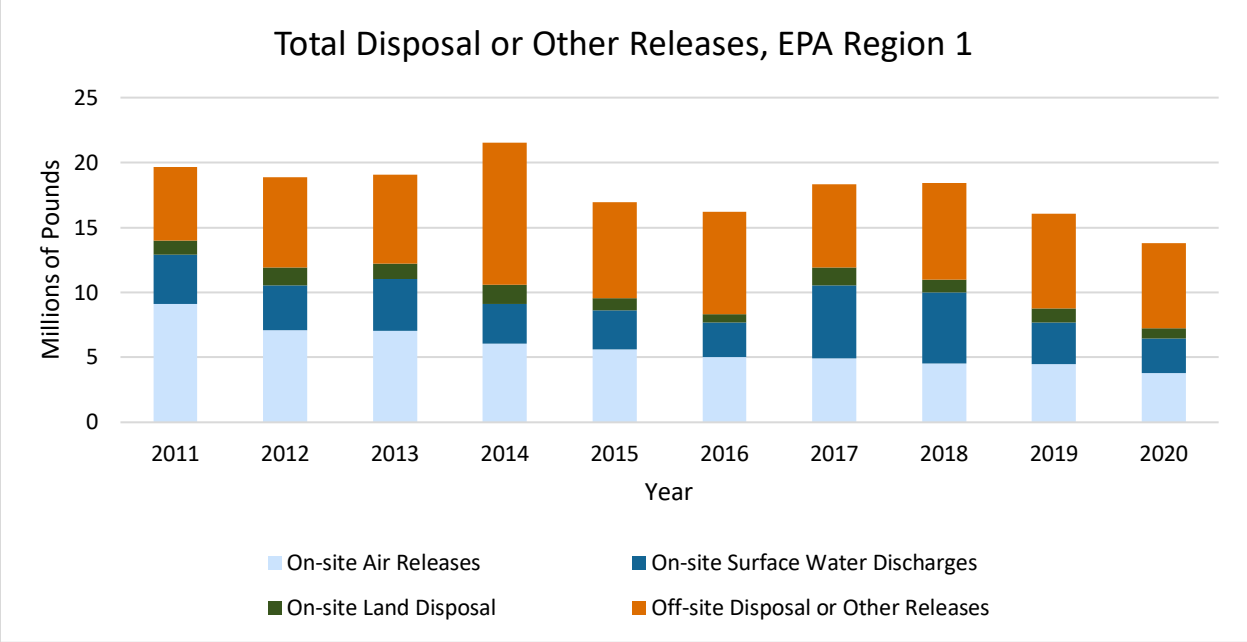
Source Reduction

In 2020, 8% of facilities in Region 1 (71 facilities) reported implementing new source reduction activities. Source reduction reporting rates were highest in the plastics and rubber products

manufacturing sector. For example, a laminated plastics manufacturer eliminated methanol usage by using a modified resin to manufacture laminates. [Click to view facility details in the TRI P2 Search Tool].

Release Trend Region 1

The following graph shows the 10-year trend in quantities of TRI chemicals released by facilities located in Region 1.



Note: For comparability, trend graphs include only those chemicals that were reportable to TRI for all years presented.

From 2011 to 2020:

- Releases in Region 1 decreased by 5.9 million pounds (-30%), driven by reduced air releases from paper manufacturing and electric utilities. Nationally, releases decreased by 26%.
- Quantities of chemicals released to air, water, and land decreased, while quantities of chemicals transferred off site for disposal increased.

Regional Highlight

Since 2011, releases in Region 1 have decreased by 30%, driven by reductions in air releases reported by paper manufacturing facilities and electric utilities.

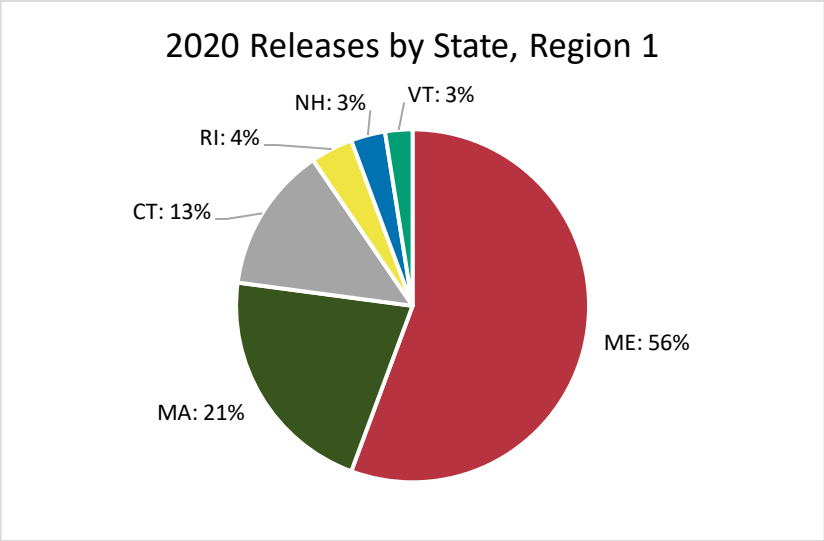
In 2020:

- Facilities in Region 1 reported releasing 14.3 million pounds of TRI chemicals.
- Since 2019, releases in Region 1 decreased by 2.4 million pounds (-14%). On-site releases to air, water, and land, and off-site transfers for disposal all decreased. Nationally, releases decreased by 10%.
- 2020 was the first year facilities reported their releases and waste management practices for certain per- and polyfluoroalkyl substances (PFAS) to TRI. Two facilities in Region 1

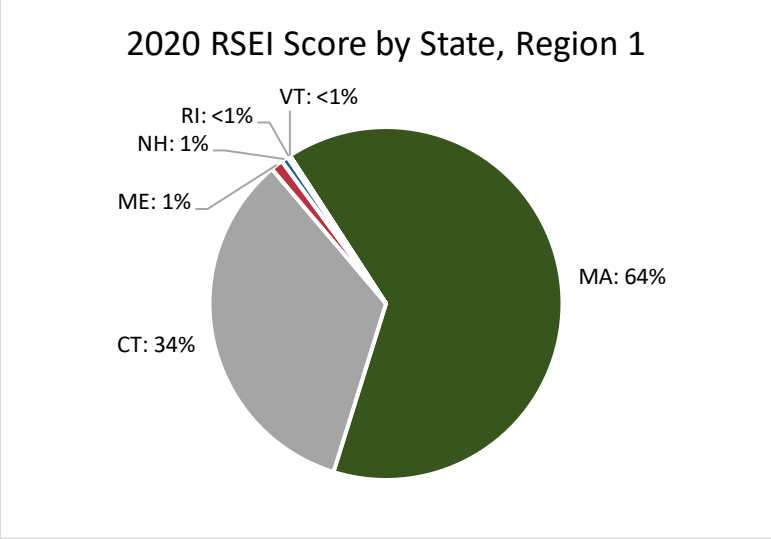
reported for PFAS; neither facility reported any production-related waste or releases of PFAS.

Releases by State

The following chart shows each state's contribution to the region's TRI chemical release quantities for 2020.



To consider the potential health risk from chronic exposure to these releases, EPA uses a risk-screening score from the RSEI model. The following pie chart shows each state's contribution to the region's total RSEI Score for 2020.



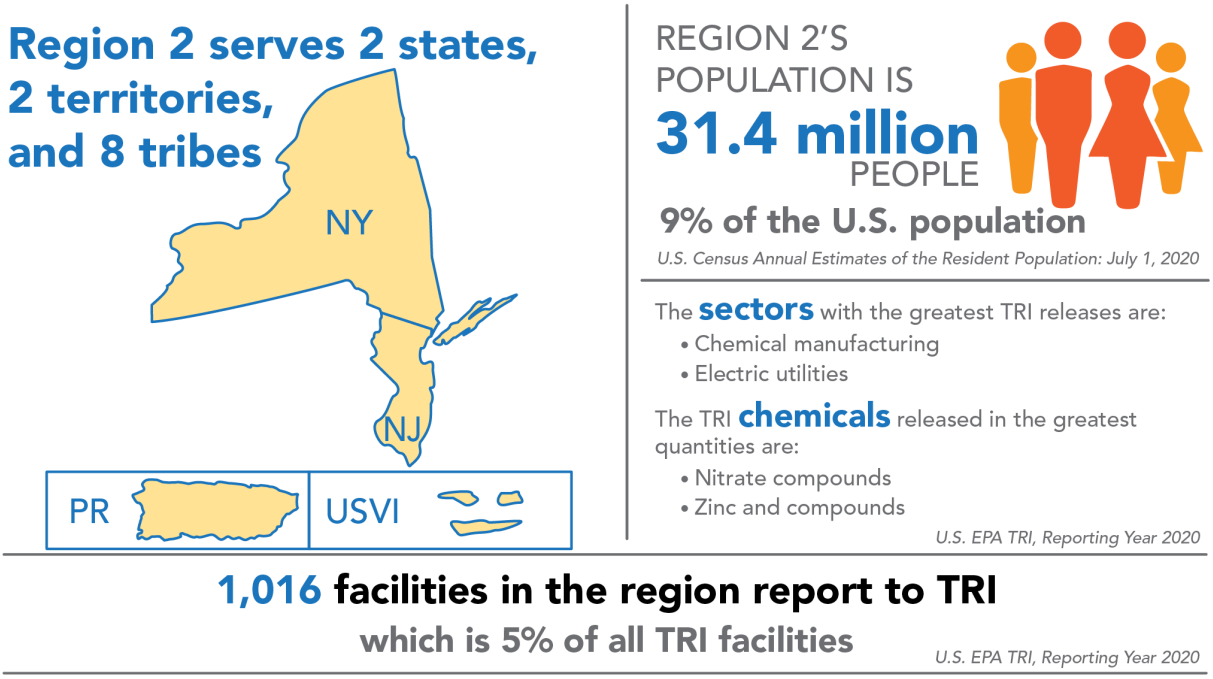
- The RSEI model accounts for factors such as a chemical's toxicity, its movement in the environment, and population density, in addition to the pounds of TRI chemicals

released. RSEI models releases to the air and water but does not model land disposal quantities. These factors can lead to significant differences between a state's contribution to regional releases and its contribution to the regional RSEI Score.

For information on the Region 1 facilities with the largest releases, see the Region 1 TRI factsheet.

Regional Profile for EPA Region 2

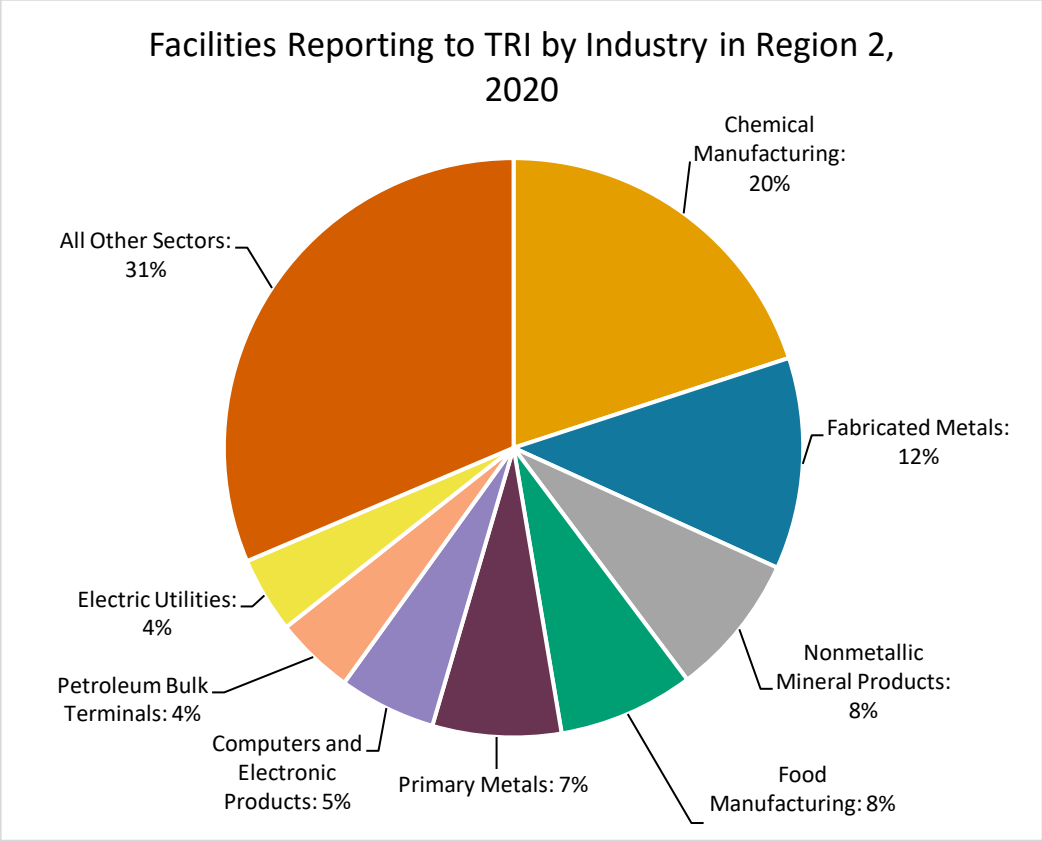
This section examines TRI reporting in EPA Region 2. Region 2 includes New Jersey, New York, Puerto Rico, US Virgin Islands, and 8 tribes.



For state- and tribe-specific TRI data, see the Where You Live section and the Tribal Communities section.

Industry Sectors

This chart shows the industry sectors with the most TRI-reporting facilities in Region 2.



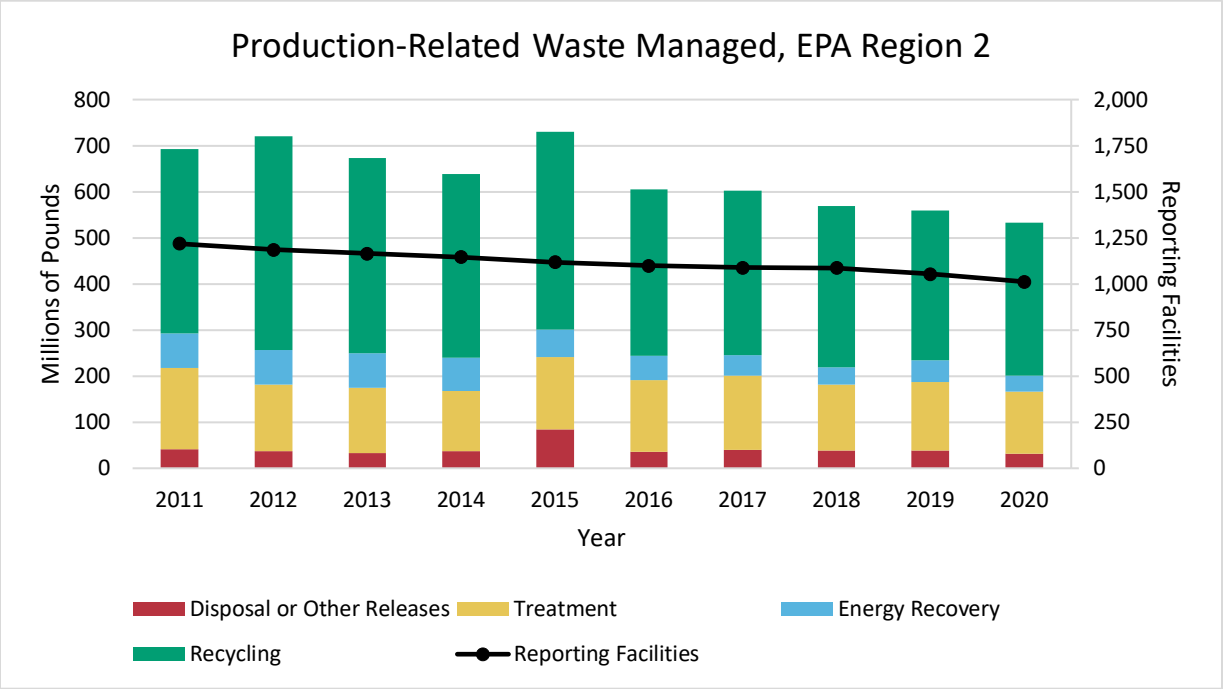
Note: Percentages do not sum to 100% due to rounding

In 2020:

- 1,016 facilities in Region 2 reported to TRI, which is slightly fewer than reported for 2019. The sectors with the most facilities were the chemical manufacturing and fabricated metals (i.e., manufacture of metal products) sectors.
- While the figure shows the sectors with the most TRI facilities in the region, the sectors that reported the largest TRI releases in Region 2 were the chemical manufacturing, electric utilities, petroleum products manufacturing, primary metals (including iron and steel manufacturing, and foundries), and hazardous waste management sectors. Note that relatively few facilities in the petroleum products and hazardous waste management sectors reported to TRI in this region and those sectors are included in "All Other Sectors" in the pie chart above.

Waste Management Trend Region 2

The following graph shows the 10-year trend in quantities of TRI chemicals managed as production-related waste by facilities located in Region 2.



Note: For comparability, trend graphs include only those chemicals that were reportable to TRI for all years presented. Total production-related waste managed reported for 2020 in Region 2 was higher than shown here due to large treatment quantities of hydrogen sulfide, which was not TRI-reportable until 2012.

From 2011 to 2020:

- Production-related waste managed decreased by 159 million pounds (-23%). Quantities of waste treated, combusted for energy recovery, recycled, and disposed of or otherwise released all decreased. Nationally, quantities of waste managed increased by 22%, driven by increased recycling.

In 2020:

- Facilities in Region 2 managed 631 million pounds of production-related waste, 95% of which was recycled, combusted for energy recovery, or treated. Only 5% was disposed of or otherwise released into the environment in Region 2, compared to 11% nationally.
- The 631 million pounds of waste managed includes all chemicals reported for 2020, while for comparability over time, the trend chart excludes chemicals that were added to the TRI list after 2011.

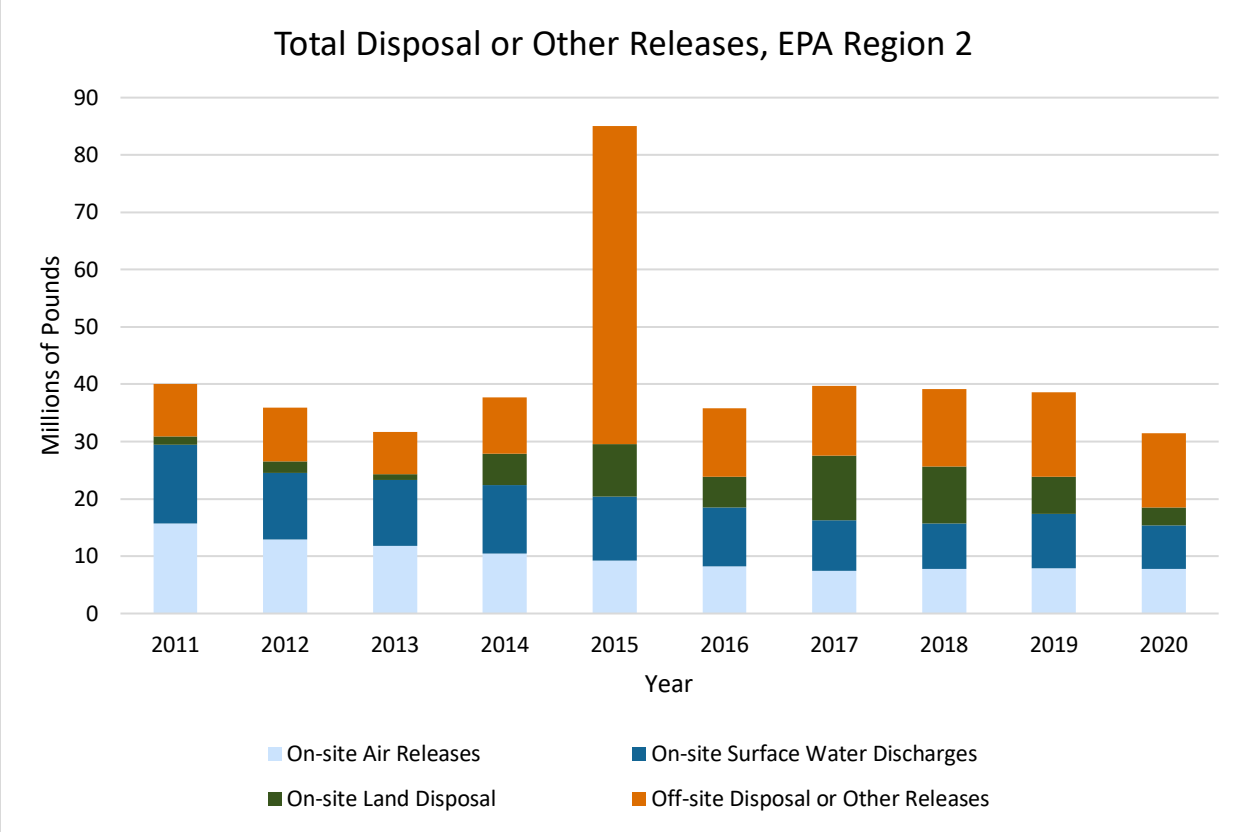
- For Region 2, the difference for 2020 is primarily due to the quantity of hydrogen sulfide treated, which is included in the 631-million-pound total for 2020 but is excluded from the trend chart. TRI reporting of hydrogen sulfide began in 2012.

Source Reduction

In 2020, 6% of facilities in Region 2 (66 facilities) reported implementing new source reduction activities. Source reduction reporting rates in the region were among the highest in the electrical equipment manufacturing sector. For example, a wiring device manufacturer in Region 2 reduced its use of lead compounds by switching to lead-free solder. [Click to view facility details in the TRI P2 Search Tool].

Release Trend Region 2

The following graph shows the annual quantities of TRI chemicals released by facilities located in Region 2.



Note: For comparability, trend graphs include only those chemicals that were reportable to TRI for all years presented.

From 2011 to 2020:

- Releases in Region 2 decreased by 8.70 million pounds (-22%), driven by reduced releases from chemical manufacturing, petroleum product manufacturing, and electric utilities. Nationally, releases decreased by 26%.
- Quantities of chemicals released to air and water decreased, while releases to land and off-site transfers for disposal increased.
- The increased releases for 2015 shown in the graph were caused by transfers of several chemicals from a hazardous waste

Regional Highlight

Variability in TRI chemical releases in Region 2 is due to changes in releases from hazardous waste management facilities, where release quantities can vary widely year to year.

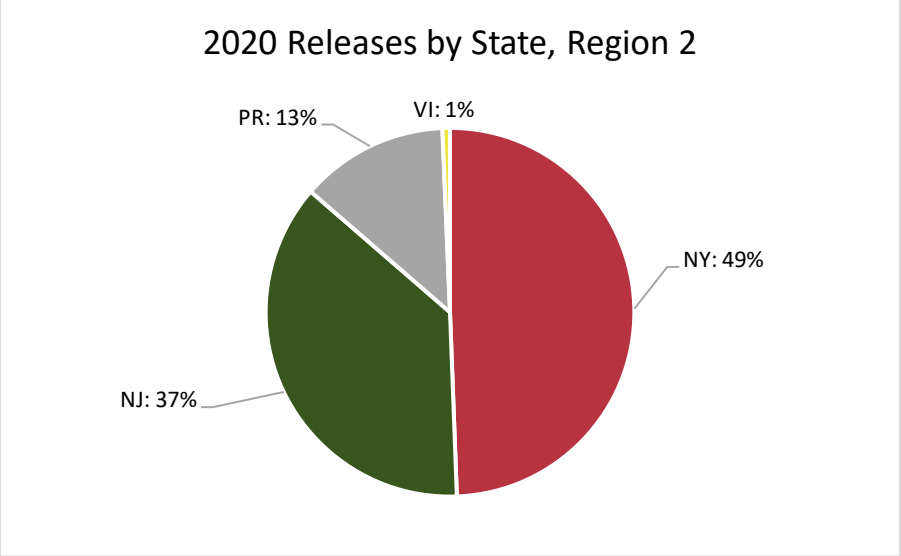
management facility in Kearny, New Jersey, to an off-site disposal facility. [Click to view facility details in the TRI P2 Search Tool].

In 2020:

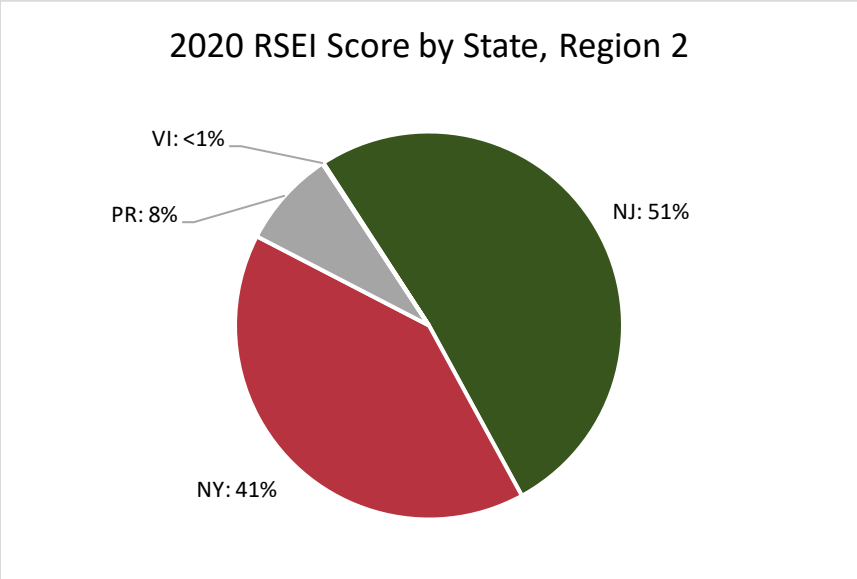
- Facilities in Region 2 reported releasing 31.4 million pounds of TRI chemicals.
- Since 2019, releases decreased by 7.25 million pounds (-19%). Releases to air, water, land and off-site transfers for disposal all decreased. Nationally, releases decreased by 10%.
- 2020 was the first year facilities reported their releases and waste management practices for certain per- and polyfluoroalkyl substances (PFAS) to TRI. Four facilities in Region 2 reported for PFAS. Facilities in the region managed 3,781 pounds of PFAS as waste of which 1,825 pounds was released.

Releases by State

The following chart shows each state's contribution to the region's TRI chemical release quantities for 2020.



To consider the potential health risk from chronic exposure to these releases, EPA uses a risk-screening score from the RSEI model. The following pie chart shows each state's contribution to the region's total RSEI Score for 2020.



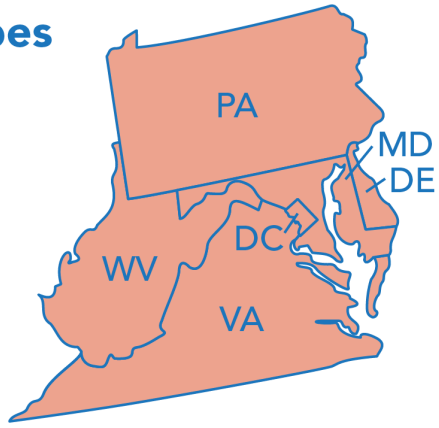
- The RSEI model accounts for factors such as a chemical's toxicity, its movement in the environment, and population density, in addition to the pounds of TRI chemicals released. RSEI models releases to the air and water but does not model land disposal quantities. These factors can lead to significant differences between a state's contribution to regional releases and its contribution to the regional RSEI Score.

For information on the Region 2 facilities with the largest releases, see the TRI Region 2 TRI factsheet.

Regional Profile for EPA Region 3

This section examines TRI reporting in EPA Region 3. Region 3 includes Delaware, the District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia, and 7 tribes.

Region 3 serves 5 states, District of Columbia, and 7 tribes



REGION 3'S POPULATION IS **30.9 million** PEOPLE

9% of the U.S. population

U.S. Census Annual Estimates of the Resident Population: July 1, 2020

The **sectors** with the greatest TRI releases are:

- Electric utilities
- Primary metals

The TRI **chemicals** released in the greatest quantities are:

- Nitrate compounds
- Lead compounds

U.S. EPA TRI, Reporting Year 2020

1,850 facilities in the region report to TRI

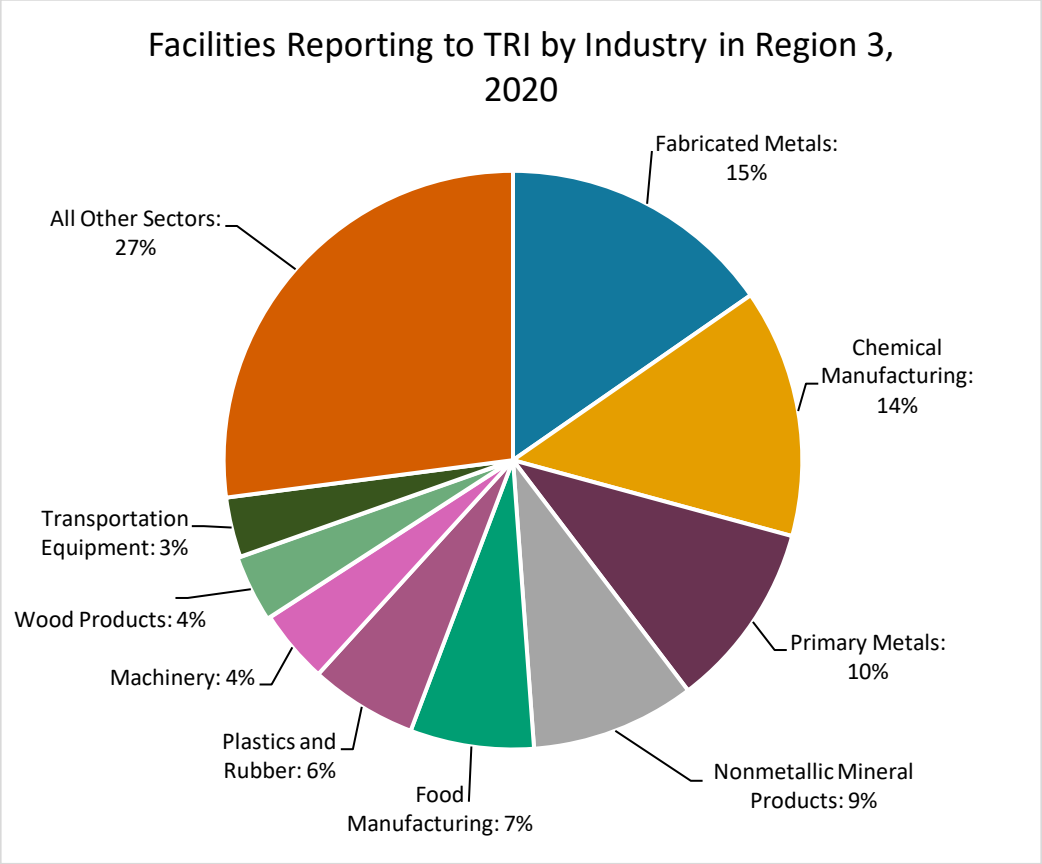
which is 9% of all TRI facilities

U.S. EPA TRI, Reporting Year 2020

For state- and tribe-specific TRI data, see the Where You Live section and the Tribal Communities section.

Industry Sectors

This chart shows the industry sectors with the most TRI-reporting facilities in Region 3.



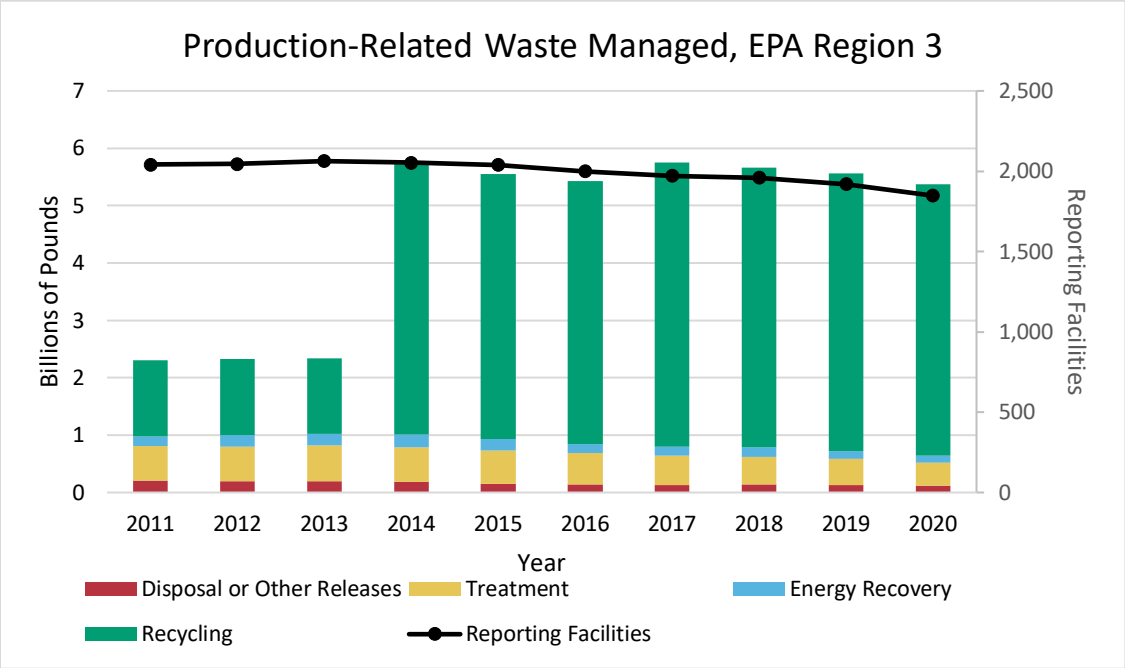
Note: Percentages do not sum to 100% due to rounding

In 2020:

- 1,850 facilities in Region 3 reported to TRI, which is slightly fewer than reported for 2019. The sectors with the most facilities were the fabricated metals (i.e., manufacture of metal products) and chemical manufacturing sectors.
- While the figure shows the sectors with the most TRI facilities in the region, the sectors that reported the largest TRI releases in Region 3 were the electric utilities, primary metals (including iron and steel manufacturing, and foundries), hazardous waste management, and petroleum products manufacturing sectors. Note that relatively few facilities in the electric utilities, hazardous waste management, and petroleum products manufacturing sectors reported to TRI in this region and those sectors are included in "All Other Sectors" in the pie chart above.

Waste Management Trend Region 3

The following graph shows the 10-year trend in quantities of TRI chemicals managed as production-related waste by facilities located in Region 3.



Note: For comparability, trend graphs include only those chemicals that were reportable to TRI for all years presented.

From 2011 to 2020:

- Total waste managed increased by 3.1 billion pounds (134%), driven by one facility that recycled over 3 billion pounds of cumene each year from 2014 to 2020. [Click to view facility details in the TRI P2 Search Tool].
    - Excluding this facility, waste managed in the region decreased by 412 million pounds (-19%).
    - Nationally, quantities of waste managed increased by 22%, driven by increased recycling.

In 2020:

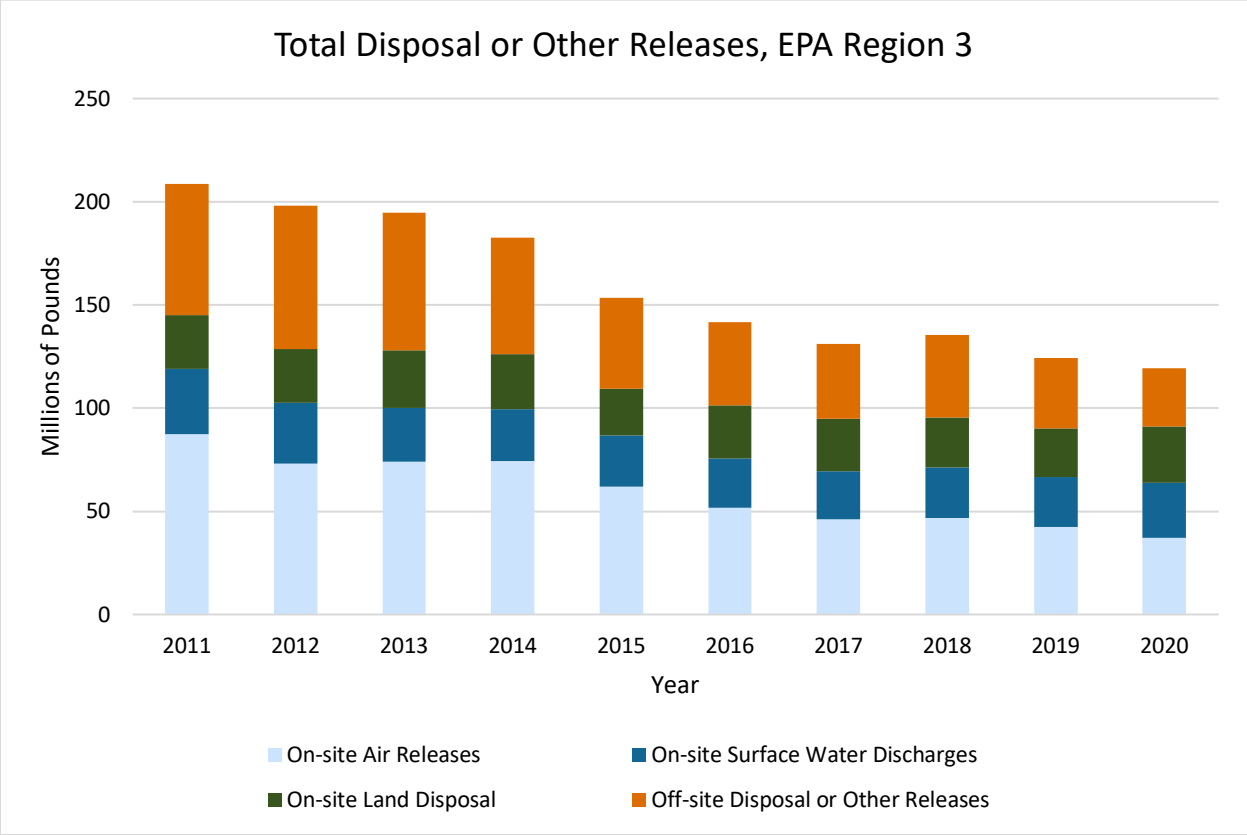
- Facilities in Region 3 managed 5.4 billion pounds of waste, 88% of which was recycled, compared to 54% nationally.
- Since 2019, waste managed decreased by 521 million pounds (-9%), driven by reductions in the quantities of waste treated and recycled.

Source Reduction

In 2020, 6% of facilities in Region 3 (118 facilities) reported implementing new source reduction activities. Source reduction reporting rates in the region were among the highest in the plastics and rubber products manufacturing sector. For example, a plastics product manufacturer made product modifications that utilized lower styrene level resin systems. [Click to view facility details in the TRI P2 Search Tool].

Release Trend Region 3

The following graph shows the 10-year trend in quantities of TRI chemicals released by facilities located in Region 3.



Note: For comparability, trend graphs include only those chemicals that were reportable to TRI for all years presented.

From 2011 to 2020:

- Releases in Region 3 decreased by 89 million pounds (-43%), compared to a 26% decrease nationally.
- Quantities of chemicals released into the air and surface waters, and transfers off-site for disposal all decreased. Releases to land increased.

In 2020:

- Facilities in Region 3 reported releasing 120 million pounds of TRI chemicals.
- Since 2019, releases decreased by 4.9 million pounds (-4%), primarily driven by decreased air releases and off-site transfers for disposal, which were somewhat offset by increased releases to water and land. Nationally, releases decreased by 10%.

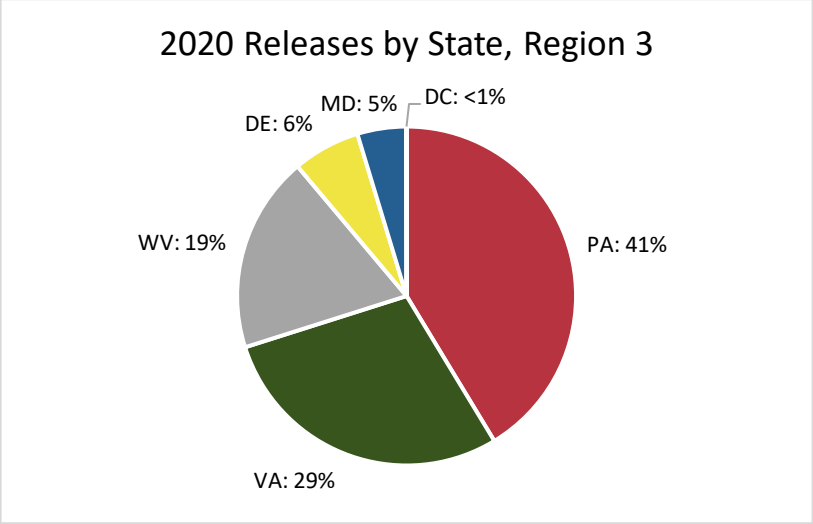
Regional Highlight

From 2011 to 2020, releases in Region 3 decreased by 89.4 million pounds (-43%). The decrease in total releases was driven by reduced air releases from electric utilities and fewer pounds of off-site transfers for disposal from the primary metals sector.

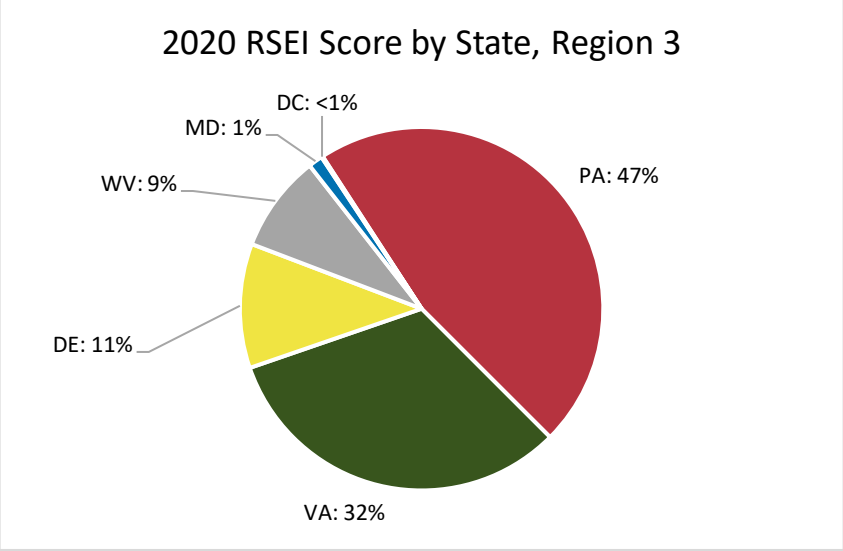
- 2020 was the first year facilities reported their releases and waste management practices for certain per- and polyfluoroalkyl substances (PFAS) to TRI. One facility in Region 3 reported managing 249,812 pounds of PFAS as waste, 630 pounds of which was released.

Releases by State

The following chart shows each state's contribution to the region's TRI chemical release quantities for 2020.



To consider the potential health risk from chronic exposure to these releases, EPA uses a risk-screening score from the RSEI model for 2020. The following pie chart shows each state's contribution to the region's total RSEI Score for 2020.

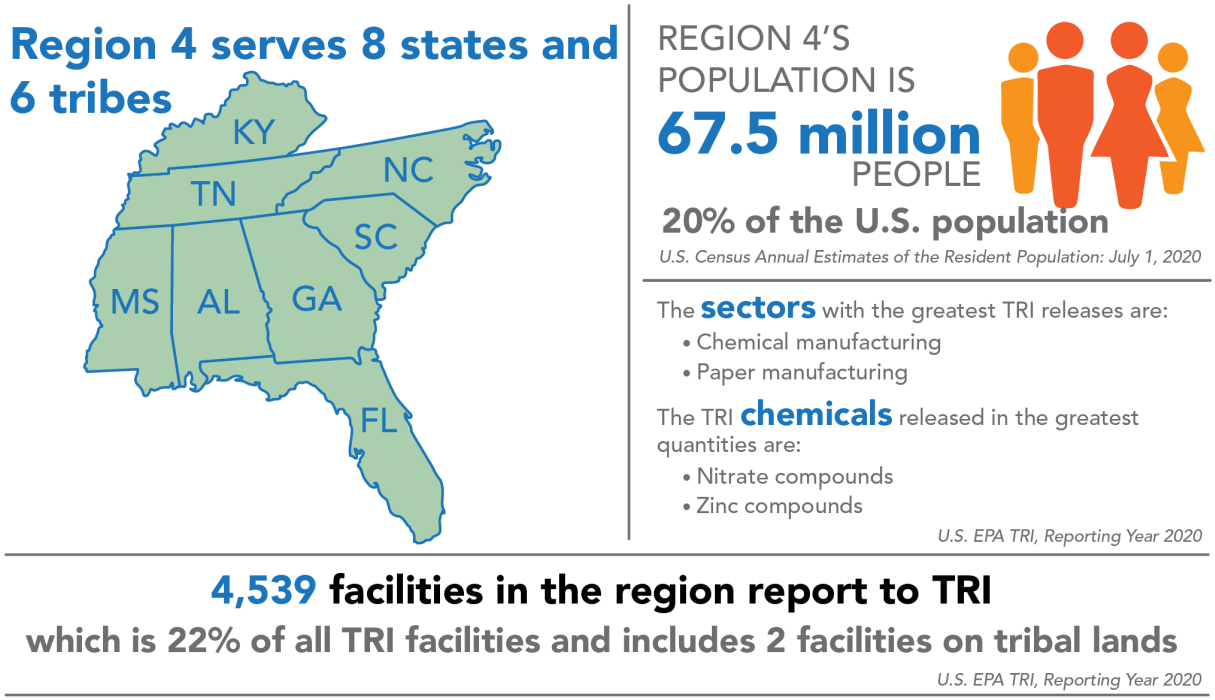


- The RSEI model accounts for factors such as a chemical's toxicity, its movement in the environment, and population density, in addition to the pounds of TRI chemicals released. RSEI models releases to the air and water but does not model land disposal quantities. These factors can lead to significant differences between a state's contribution to regional releases and its contribution to the regional RSEI Score.

For information on the facilities with the largest releases in the region, see the Region 3 TRI factsheet.

Regional Profile for EPA Region 4

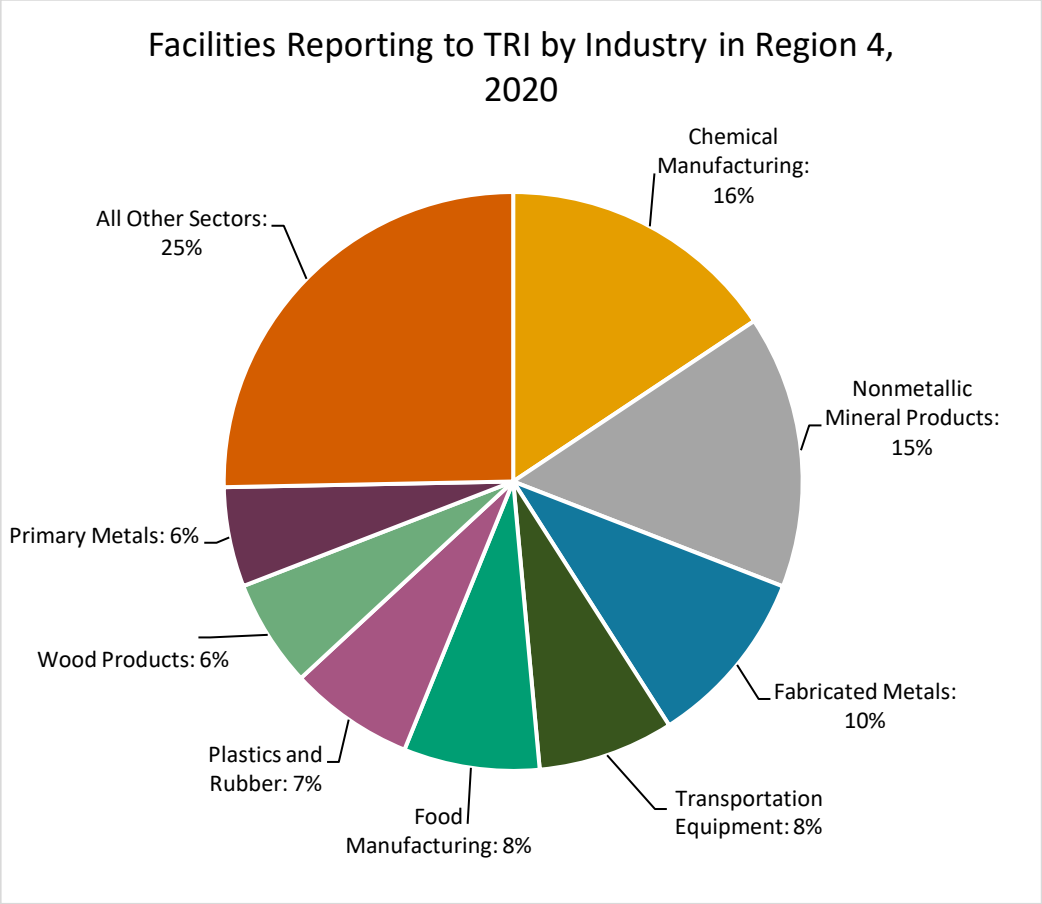
This section examines TRI reporting in EPA Region 4. Region 4 includes Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, and 6 tribes.



For state- and tribe-specific TRI data, see the Where You Live section and the Tribal Communities section.

Industry Sectors

This chart shows the industry sectors with the most TRI-reporting facilities in Region 4.



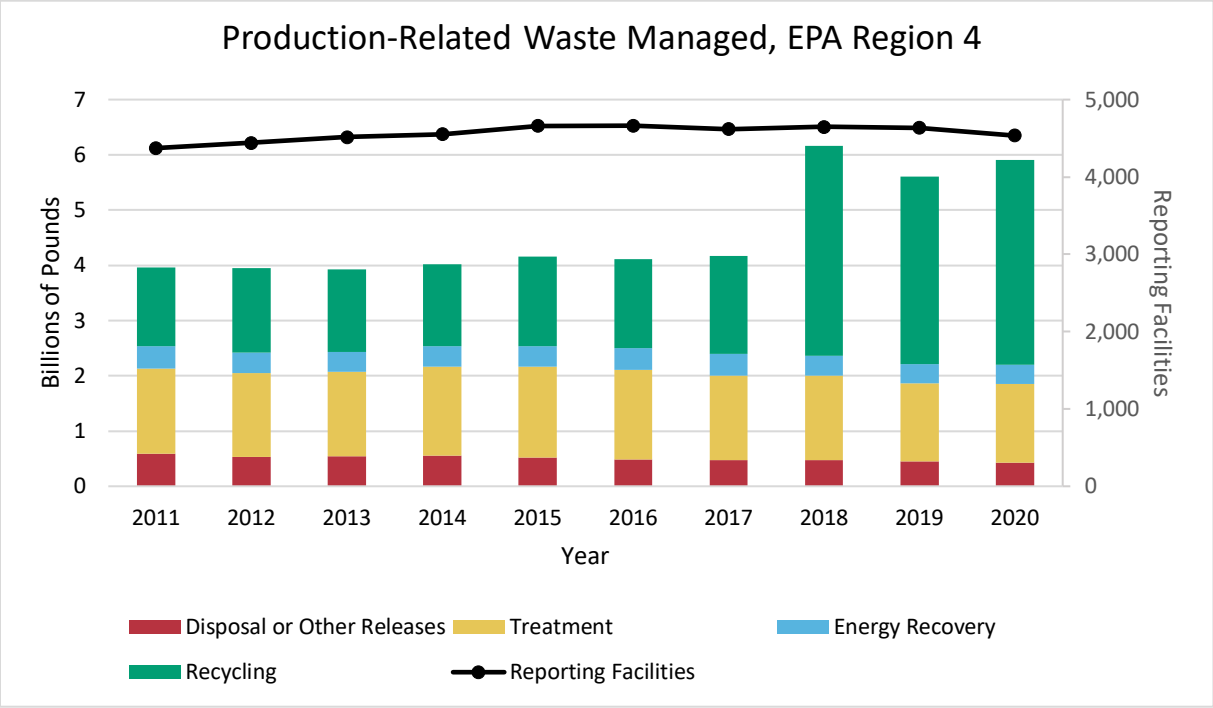
Note: Percentages do not sum to 100% due to rounding

In 2020:

- 4,539 facilities in Region 4 reported to TRI, similar to reporting for 2019. The sectors with the most facilities were the chemical manufacturing and nonmetallic mineral products (including cement manufacturing) sectors.
- While the figure shows the sectors with the most TRI facilities in the region, the sectors that reported the largest TRI releases in Region 4 were the chemical manufacturing, paper manufacturing, primary metals (including iron and steel mills), and electric utilities sectors. Note that relatively few facilities in the paper manufacturing and electric utilities sectors reported to TRI in this region and those sectors are included in "All Other Sectors" in the pie chart above.

Waste Management Trend Region 4

The following graph shows the 10-year trend in quantities of TRI chemicals managed as production-related waste by facilities located in Region 4.



Note: For comparability, trend graphs include only those chemicals that were reportable to TRI for all years presented.

From 2011 to 2020:

- Total production-related waste managed increased by 1.9 billion pounds (49%), driven by one facility that reported recycling over 1.5 billion pounds of dichloromethane (methylene chloride) each year from 2018 through 2020. [Click to view facility details in the TRI P2 Search Tool]. Excluding this facility, waste managed decreased by 55.8 million pounds (-1%), and quantities of waste managed by every method other than recycling (i.e., treatment, energy recovery, and disposal and releases) decreased while recycling increased by 278 million pounds (19%).
    - Nationally, quantities of waste managed increased by 22%, driven by increased recycling.

In 2020:

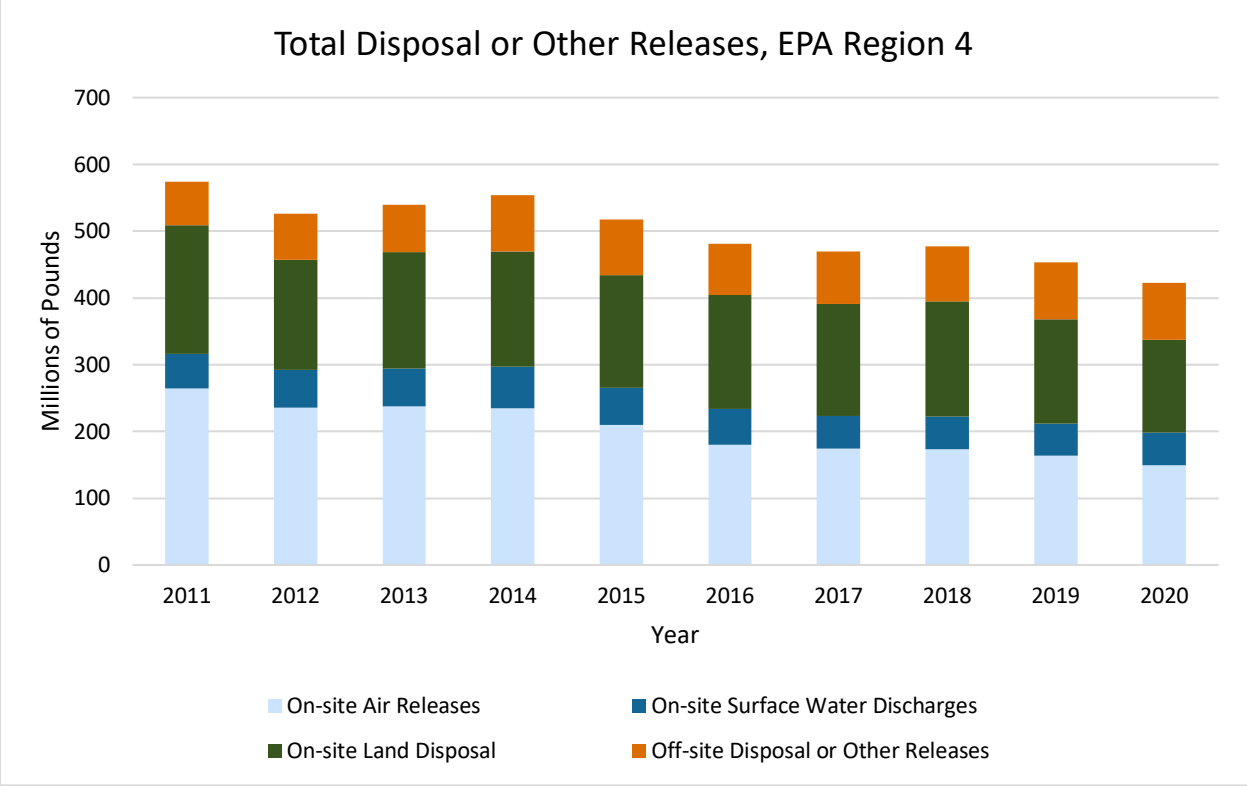
- Facilities in Region 4 managed 6.03 billion pounds of production-related waste, 93% of which was recycled, combusted for energy recovery, or treated. Only 7% was disposed of or otherwise released into the environment, compared to 11% nationally.
- Since 2019, quantities of waste managed increased by 5%, largely driven by increased recycling.

Source Reduction

In 2020, 6% of facilities in Region 4 (250 facilities) reported implementing new source reduction activities. Source reduction reporting rates in the region were among the highest in the transportation equipment manufacturing sector. For example, a truck trailer manufacturer in Region 4 produced less manganese-containing waste by auditing raw material sizes to reduce the amount of scrap metal produced. [Click to view facility details in the TRI P2 Search Tool].

Release Trend Region 4

The following graph shows the 10-year trend in quantities of TRI chemicals released by facilities located in Region 4.



Note: For comparability, trend graphs include only those chemicals that were reportable to TRI for all years presented.

From 2011 to 2020:

- Releases in Region 4 decreased by 152 million pounds (-26%). Nationally, the decrease in releases was also 26%.
- Quantities of chemicals released to air, water, and land all decreased, with the largest reduction in releases to air. The quantity of chemicals transferred off site for disposal increased.

In 2020:

- Facilities in Region 4 reported releasing 433 million pounds of TRI chemicals.
- Since 2019, releases decreased by 31.2 million pounds (-7%), driven by decreased releases to land and air. Nationally, releases decreased by 10%.

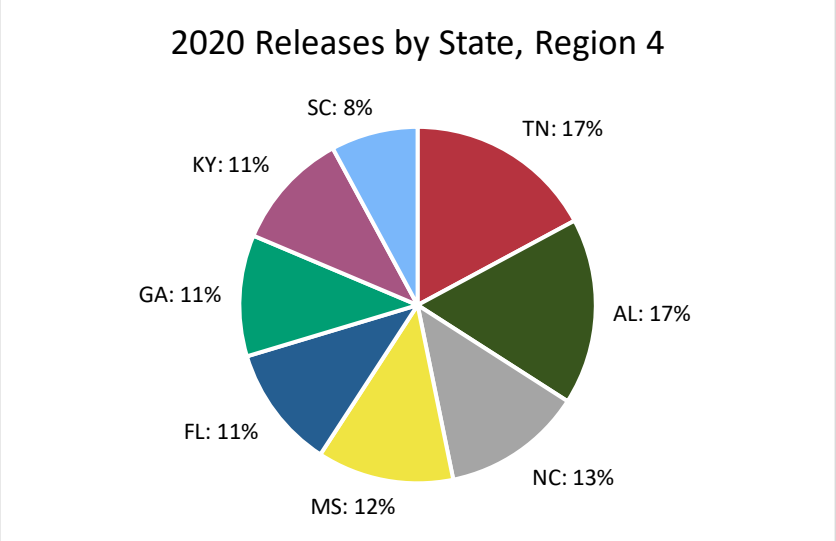
- 2020 was the first year facilities reported their releases and waste management practices for certain per- and polyfluoroalkyl substances (PFAS) to TRI. Three facilities in Region 4 reported for PFAS. Facilities in the region managed 121,229 pounds of PFAS as waste of which 4,145 pounds was released.

Regional Highlight

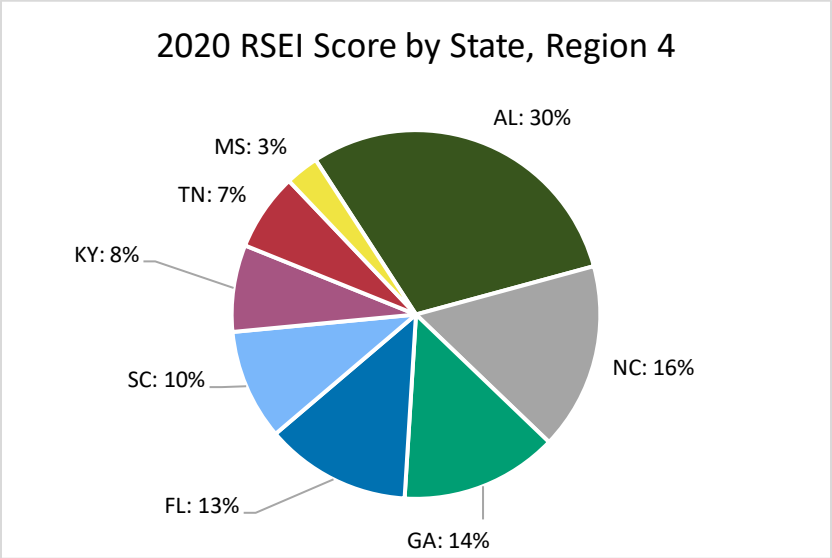
Since 2011, on-site releases to air in Region 4 decreased by 43%. The largest decrease was reported by electric utilities, which have reported decreased air releases almost every year since 2011. Decreased air releases in this sector are due to fewer facilities required to report to TRI and reduced releases of hydrochloric acid.

Releases by State

The following chart shows each state's contribution to the region's TRI chemical release quantities for 2020.



To consider the potential health risk from chronic exposure to these releases, EPA uses a risk-screening score from the RSEI model. The following pie chart shows each state's contribution to the region's total RSEI Score for 2020.



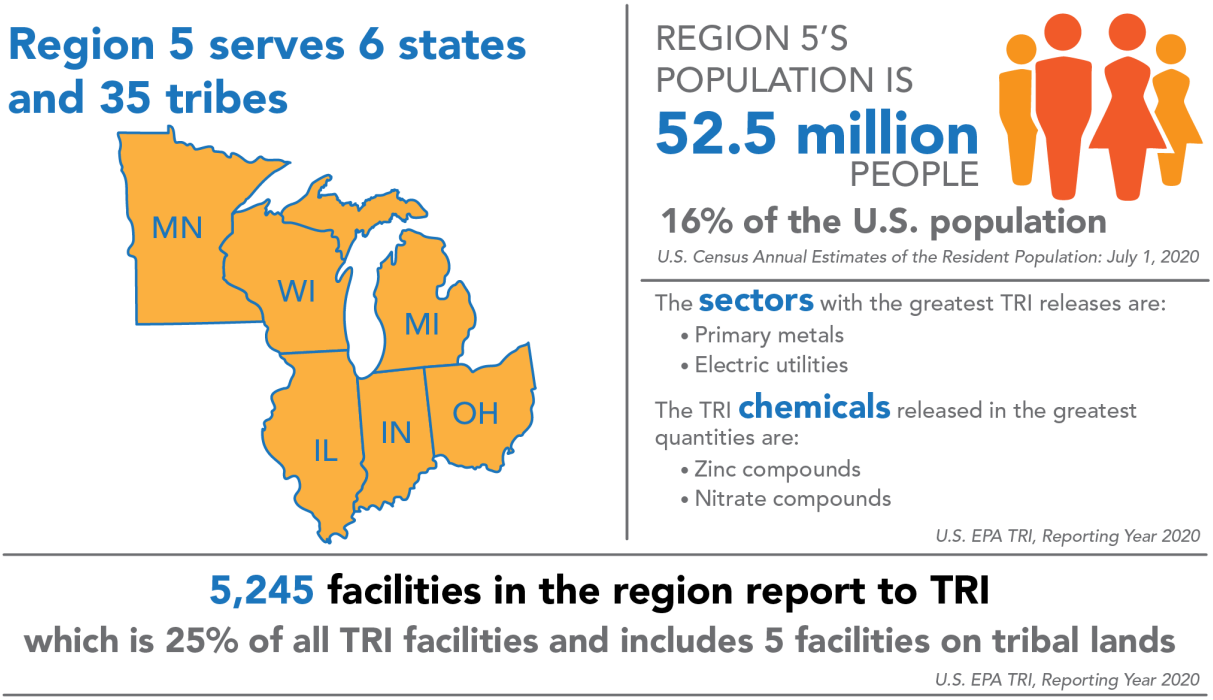
Note: Percentages do not sum to 100% due to rounding

- The RSEI model accounts for factors such as a chemical's toxicity, its movement in the environment, and population density, in addition to the pounds of TRI chemicals released. RSEI models releases to the air and water but does not model land disposal quantities. These factors can lead to significant differences between a state's contribution to regional releases and its contribution to the regional RSEI Score.

For information on the Region 4 facilities with the largest releases, see the Region 4 TRI factsheet.

Regional Profile for EPA Region 5

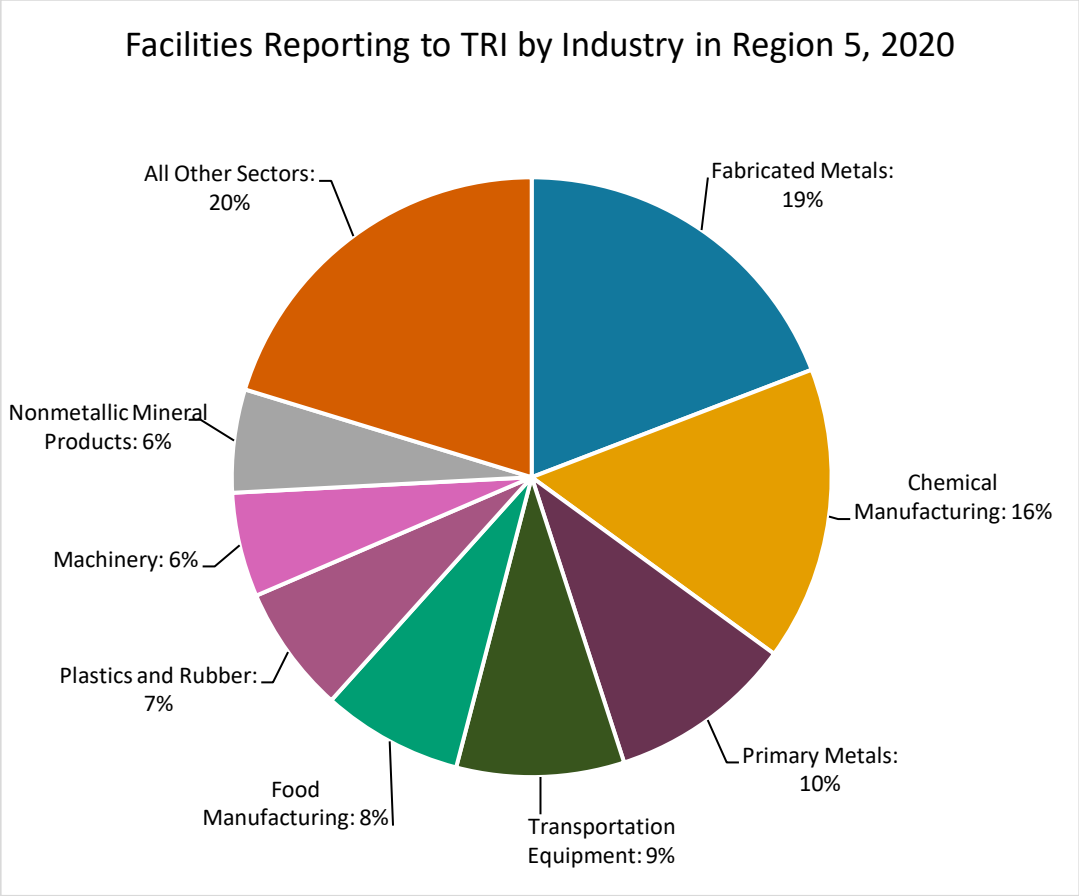
This section examines TRI reporting in EPA Region 5. Region 5 includes Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin, and 35 tribes.



For state- and tribe-specific TRI data, see the Where You Live section and the Tribal Communities section.

Industry Sectors

This chart shows the industry sectors with the most TRI-reporting facilities in Region 5.



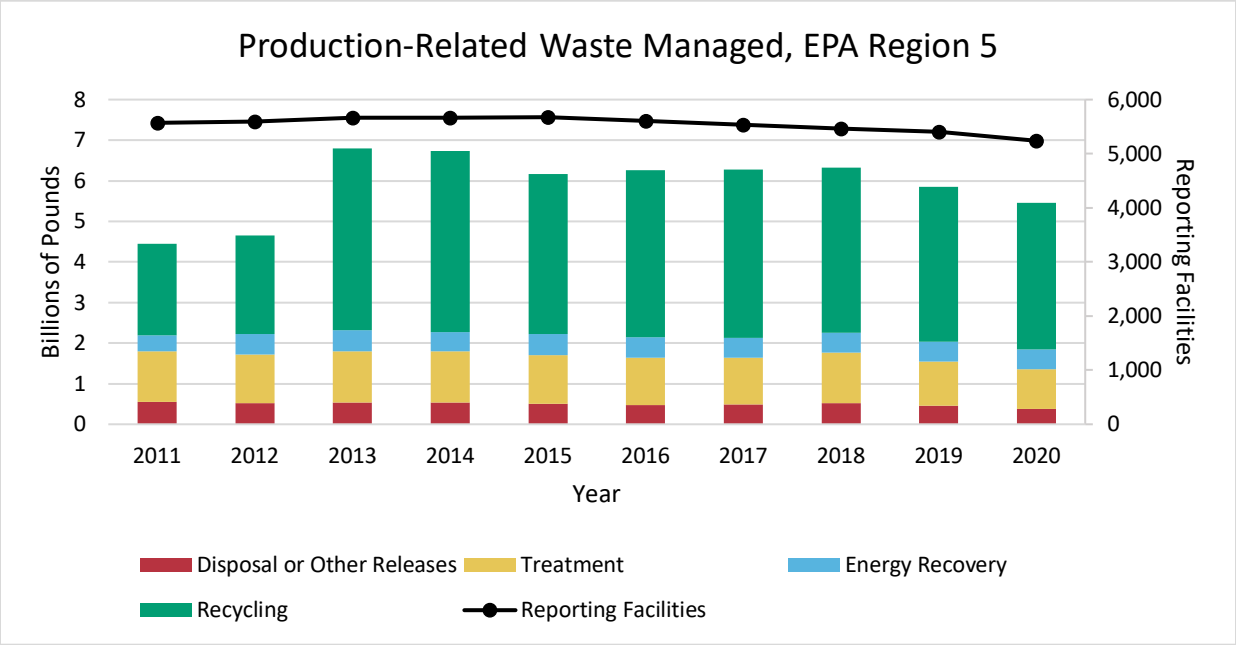
Note: Percentages do not sum to 100% due to rounding

In 2020:

- 5,245 facilities in Region 5 reported to TRI, slightly fewer than reported for 2019. The sectors with the most facilities were the fabricated metals (i.e., manufacture of metal products) and chemical manufacturing sectors.
- While the figure shows the sectors with the most TRI facilities in the region, the sectors that reported the largest TRI releases in Region 5 were the primary metals (including iron and steel manufacturing and foundries), electric utilities, chemical manufacturing, food manufacturing, and hazardous waste management sectors. Note that relatively few facilities in the electric utilities and hazardous waste management sectors reported to TRI in this region and those sectors are included in "All Other Sectors" in the pie chart above.

Waste Management Trend Region 5

The following graph shows the 10-year trend in quantities of TRI chemicals managed as production-related waste by facilities located in Region 5.



Note: For comparability, trend graphs include only those chemicals that were reportable to TRI for all years presented.

From 2011 to 2020:

- Total production-related waste managed increased by 1.01 billion pounds (23%), driven by one plastics manufacturing facility that reported recycling more than a billion pounds of waste, mostly dichloromethane (methylene chloride), annually from 2013 to 2020, and one food manufacturer that reported a 600-million-pound increase in *n*-hexane recycling from 2011 to 2020. Excluding these facilities, waste managed decreased by 660 million pounds (-18%).

In 2020:

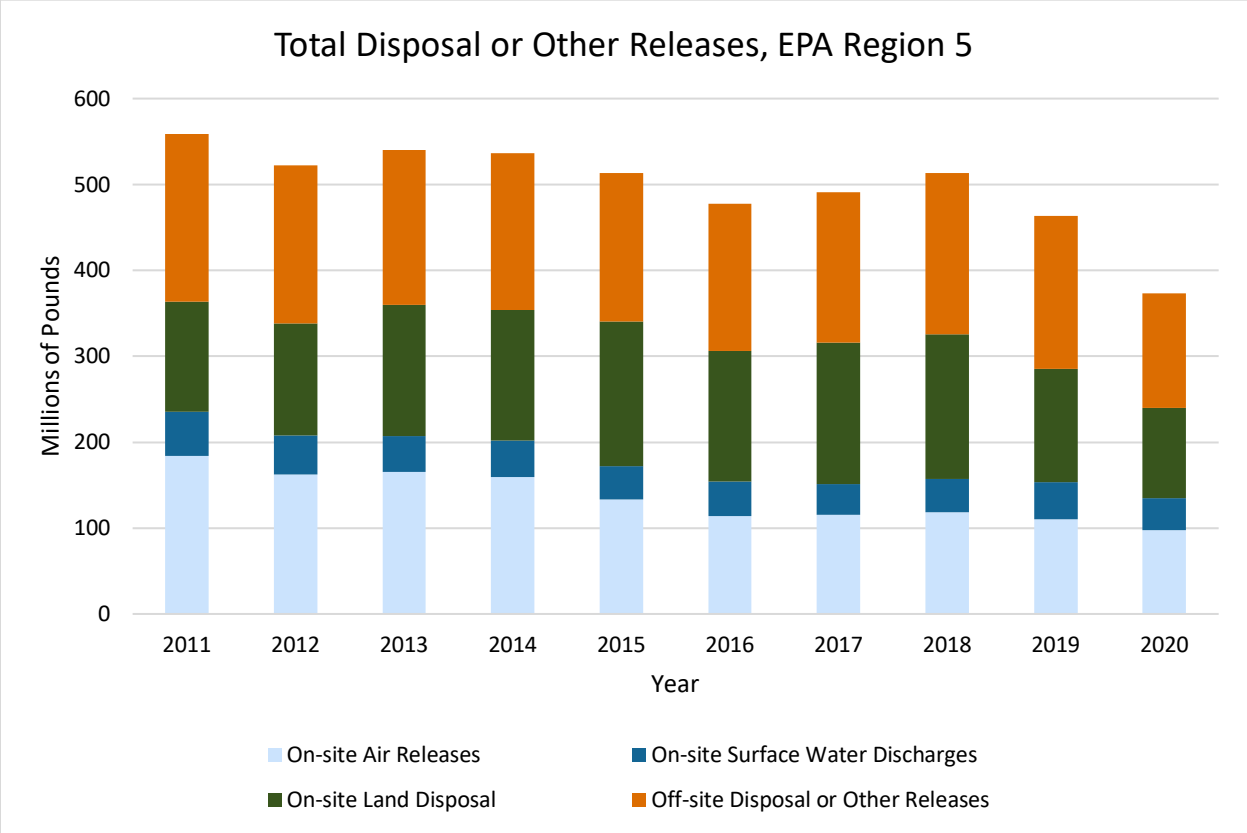
- Facilities in Region 5 managed 5.50 billion pounds of production-related waste, 66% of which was managed through recycling, compared to 54% nationally.
- Since 2019, quantities of waste managed in the region decreased by 7%. Quantities of waste managed by all methods (i.e., recycling, energy recovery, treatment, and disposal or other release) all decreased.

Source Reduction

In 2020, 6% of facilities in Region 5 (307 facilities) reported implementing new source reduction activities. Source reduction reporting rates in the region were highest in the computers and electronic products manufacturing sector. For example, a printed circuit assembly manufacturer purchased and installed a new wave soldering machine which reduced the amount of lead waste generated. [Click to view facility details in the TRI P2 Search Tool].

Release Trend Region 5

The following graph shows the 10-year trend in quantities of TRI chemicals released by facilities located in Region 5.



Note: For comparability, trend graphs include only those chemicals that were reportable to TRI for all years presented.

From 2011 to 2020:

- Releases in Region 5 decreased by 186 million pounds (-33%), driven by reduced releases from electric utilities and the primary metals sector. Nationally, releases decreased by 26%.
- Releases to air, water, land, and transferred off site for disposal all decreased.

In 2020:

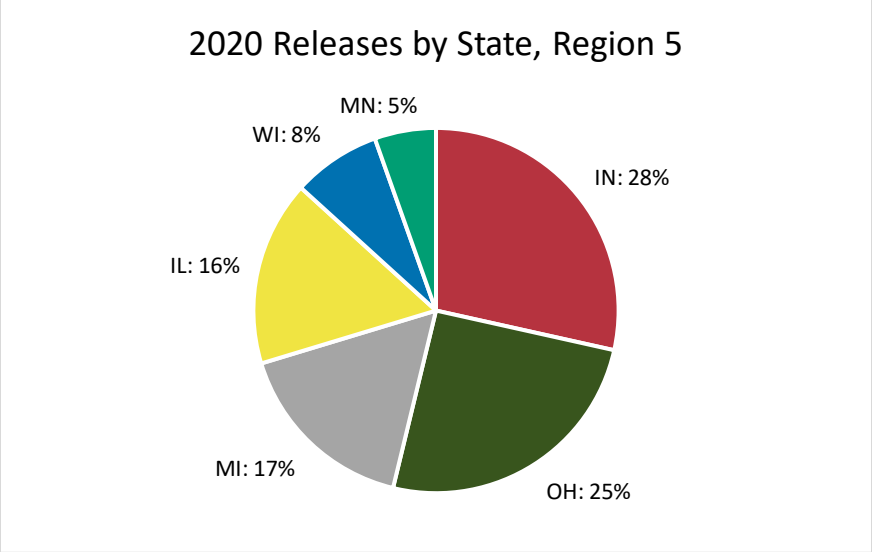
- Facilities in Region 5 reported releasing 374 million pounds of TRI chemicals.
- Since 2019, releases decreased by 90.7 million pounds (-20%). Decreases occurred across many sectors, with the largest decreases in the primary metals, electric utilities, and hazardous waste management sectors. Releases decreased to all environmental media. Nationally, releases decreased by 10%.
- 2020 was the first year facilities reported their releases and waste management practices for certain per- and polyfluoroalkyl substances (PFAS) to TRI. 10 facilities in Region 5 reported for PFAS. Facilities in the region managed 31,057 pounds of PFAS as waste of which 1,808 pounds was released.

Regional Highlight

From 2019 to 2020, total releases in Region 5 decreased by 90.7 million pounds. The decrease was driven by decreased quantities transferred off site for disposal by facilities in the primary metals and hazardous waste sectors and reduced on-site land releases by electric utilities.

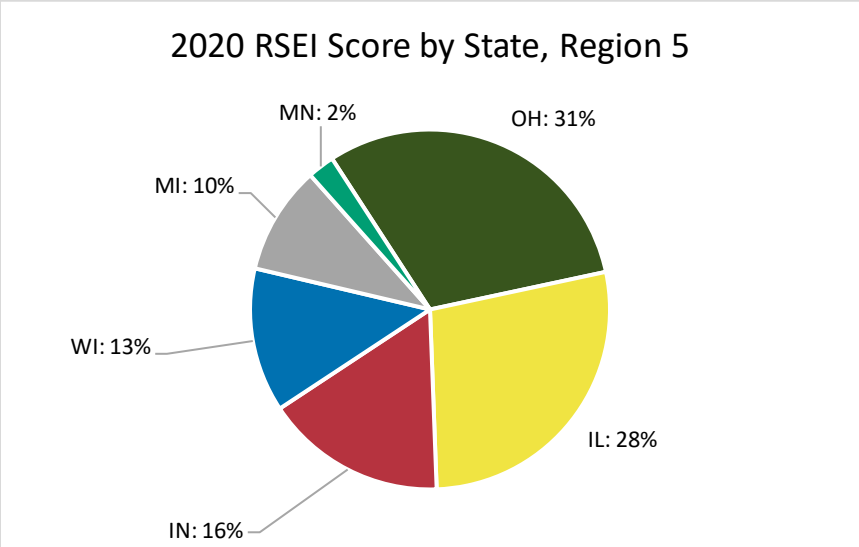
Releases by State

The following chart shows each state's contribution to the region's TRI chemical release quantities for 2020.



Note: Percentages do not sum to 100% due to rounding

To consider the potential health risk from chronic exposure to these releases, EPA uses a risk-screening score from the RSEI model. The following pie chart shows each state's contribution to the region's total RSEI Score for 2020.

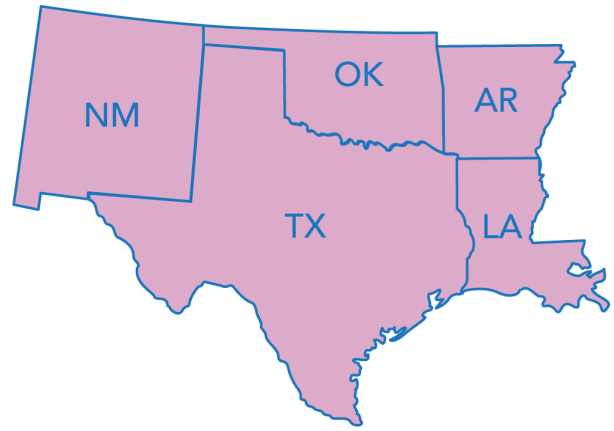


- The RSEI model accounts for factors such as a chemical's toxicity, its movement in the environment, and population density, in addition to the pounds of TRI chemicals released. RSEI models releases to the air and water but does not model land disposal quantities. These factors can lead to significant differences between a state's contribution to regional releases and its contribution to the regional RSEI Score.

For information on the Region 5 facilities with the largest releases, see the Region 5 TRI factsheet.

Regional Profile for EPA Region 6

This section examines TRI reporting in EPA Region 6. Region 6 includes Arkansas, Louisiana, New Mexico, Oklahoma, Texas, and 66 tribes.



REGION 6'S POPULATION IS **43.1 million** PEOPLE

13% of the U.S. population

U.S. Census Annual Estimates of the Resident Population: July 1, 2020

The **sectors** with the greatest TRI releases are:

- Chemical manufacturing
- Paper manufacturing

The TRI **chemicals** released in the greatest quantities are:

- Ammonia
- Methanol

U.S. EPA TRI, Reporting Year 2020

2,865 facilities in the region report to TRI

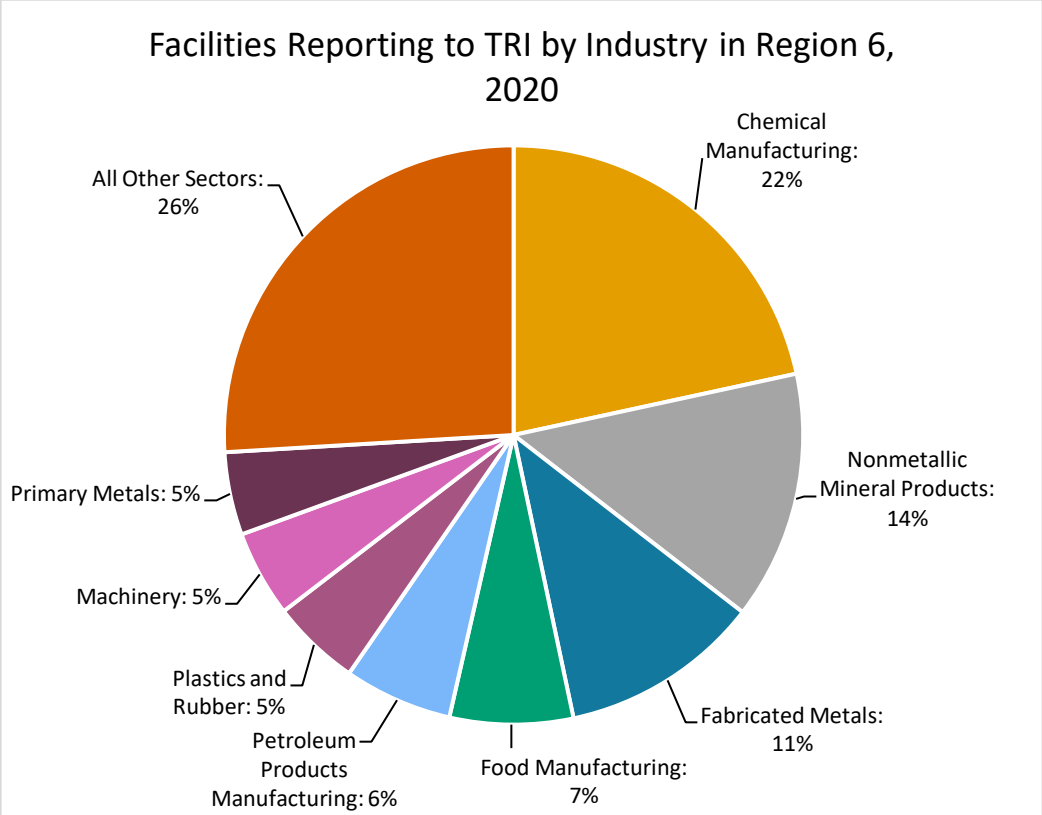
which is 14% of all TRI facilities and includes 6 facilities on tribal lands

U.S. EPA TRI, Reporting Year 2020

For state- and tribe-specific TRI data, see the Where You Live section and the Tribal Communities section.

Industry Sectors

This chart shows the industry sectors with the most TRI-reporting facilities in Region 6.



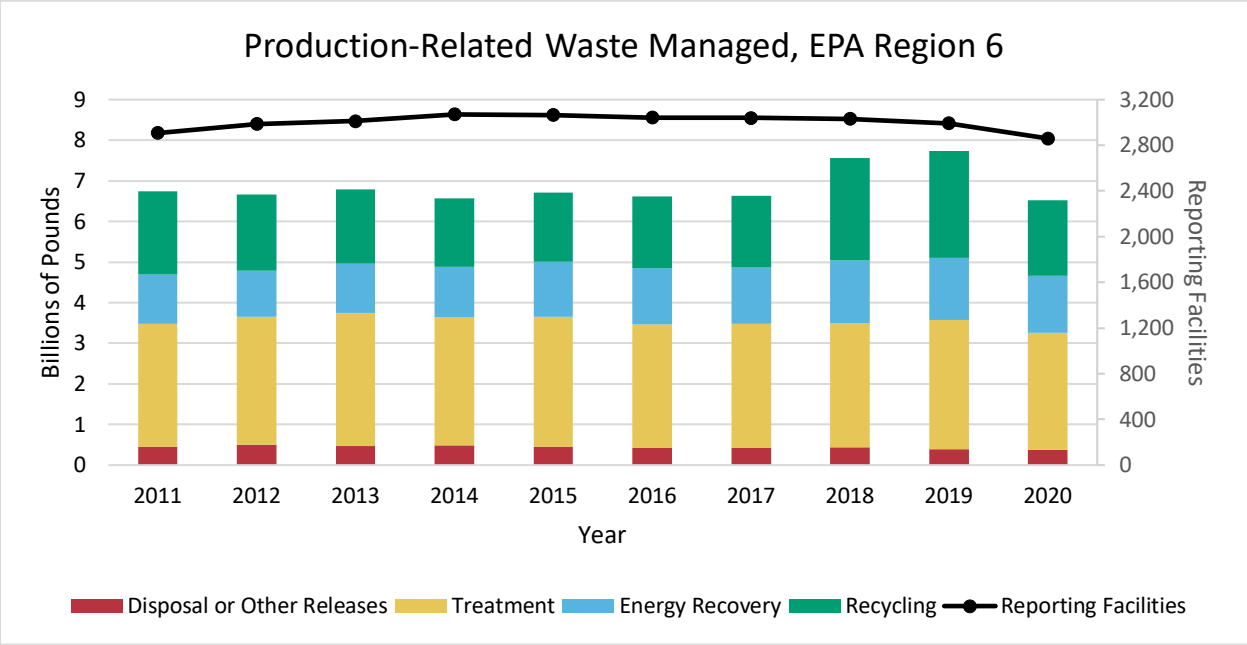
Note: Percentages do not sum to 100% due to rounding

In 2020:

- 2,865 facilities in Region 6 reported to TRI, slightly fewer than reported for 2019. The sectors with the most facilities were the chemical manufacturing and nonmetallic mineral products (including cement manufacturing) sectors.
- While the figure shows the sectors with the most TRI facilities in the region, the sectors that reported the largest TRI releases in Region 6 were the chemical manufacturing, paper manufacturing, petroleum products manufacturing, and electric utilities sectors. Note that relatively few facilities in the paper manufacturing and electric utilities sectors reported to TRI in this region and those sectors are included in "All Other Sectors" in the pie chart above.

Waste Management Trend Region 6

The following graph shows the 10-year trend in quantities of TRI chemicals managed as production-related waste by facilities located in Region 6.



Note: For comparability, trend graphs include only those chemicals that were reportable to TRI for all years presented.

From 2011 to 2020:

- Total production-related waste managed decreased by 216 million pounds (-3%), driven by reduced recycling and treatment.

In 2020:

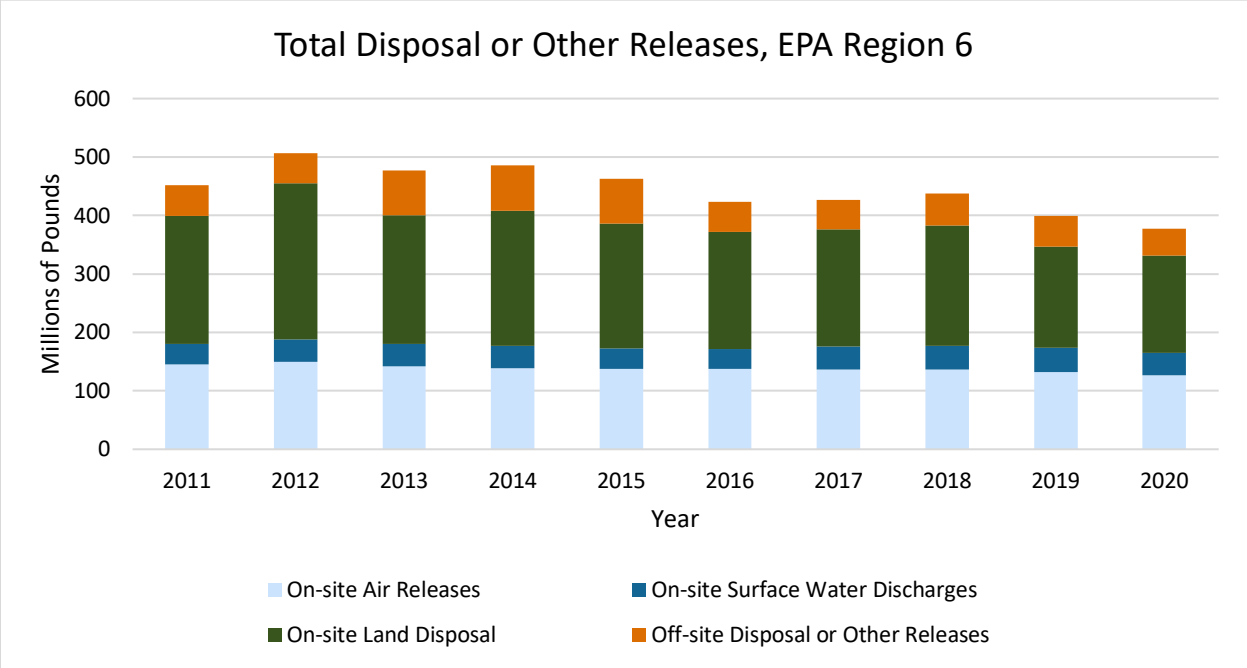
- Facilities in Region 6 managed 6.72 billion pounds of production-related waste, 44% of which was treated and 28% of which was recycled. Nationally, 25% of waste was managed through treatment and 54% was recycled.
- Since 2019, quantities of waste managed decreased by 16%, primarily driven by decreased quantities of waste recycled and treated.

Source Reduction

In 2020, 5% of facilities in Region 6 (154 facilities) reported implementing new source reduction activities. As one example, a specialty chemical manufacturer formulated a new line of formaldehyde-free resins to meet industry's evolving regulatory and environmental demands. [Click to view facility details in the TRI P2 Search Tool].

Releases Trend Region 6

The following graph shows the 10-year trend in quantities of TRI chemicals released by facilities located in Region 6.



Note: For comparability, trend graphs include only those chemicals that were reportable to TRI for all years presented.

From 2011 to 2020:

- Releases in Region 6 decreased by 74.0 million pounds (-16%), compared to a 26% decrease nationally.
- Quantities of chemicals released to air, land, and off-site transfers for disposal decreased, while quantities of chemicals released to water increased.

Regional Highlight

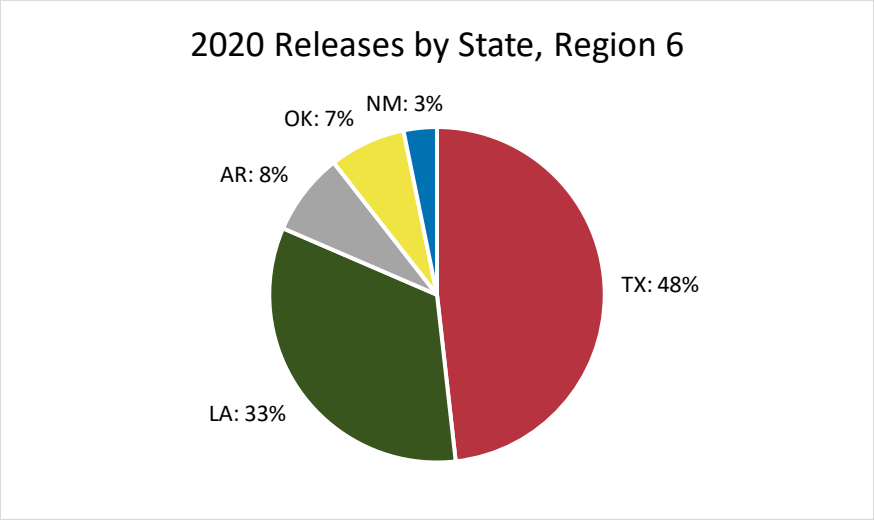
Since 2019, releases in Region 6 decreased by 23.3 million pounds, driven by reductions in the chemical manufacturing, electric utilities, and petroleum product manufacturing sectors.

In 2020:

- Facilities in Region 6 reported releasing 390 million pounds of TRI chemicals.
- Since 2019, releases decreased by 23.3 million pounds (-6%). Releases to air, land, water, and off-site transfers for disposal all decreased. Nationally, releases decreased by 10%.
- 2020 was the first year facilities reported their releases and waste management practices for certain per- and polyfluoroalkyl substances (PFAS) to TRI. Seven facilities in Region 6 reported for PFAS. Facilities in the region managed 382,628 pounds of PFAS as waste of which 3,951 pounds was released.

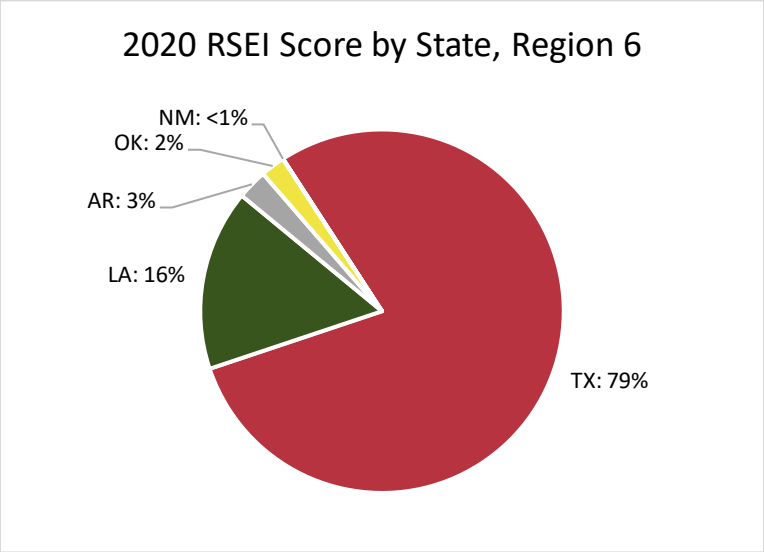
Releases by State

The following chart shows each state's contribution to the region's TRI chemical release quantities for 2020.



Note: Percentages do not sum to 100% due to rounding

To consider the potential health risk from chronic exposure to these releases, EPA uses a risk-screening score from the RSEI model. The following chart shows each state's contribution to the region's TRI chemical release quantities for 2020.



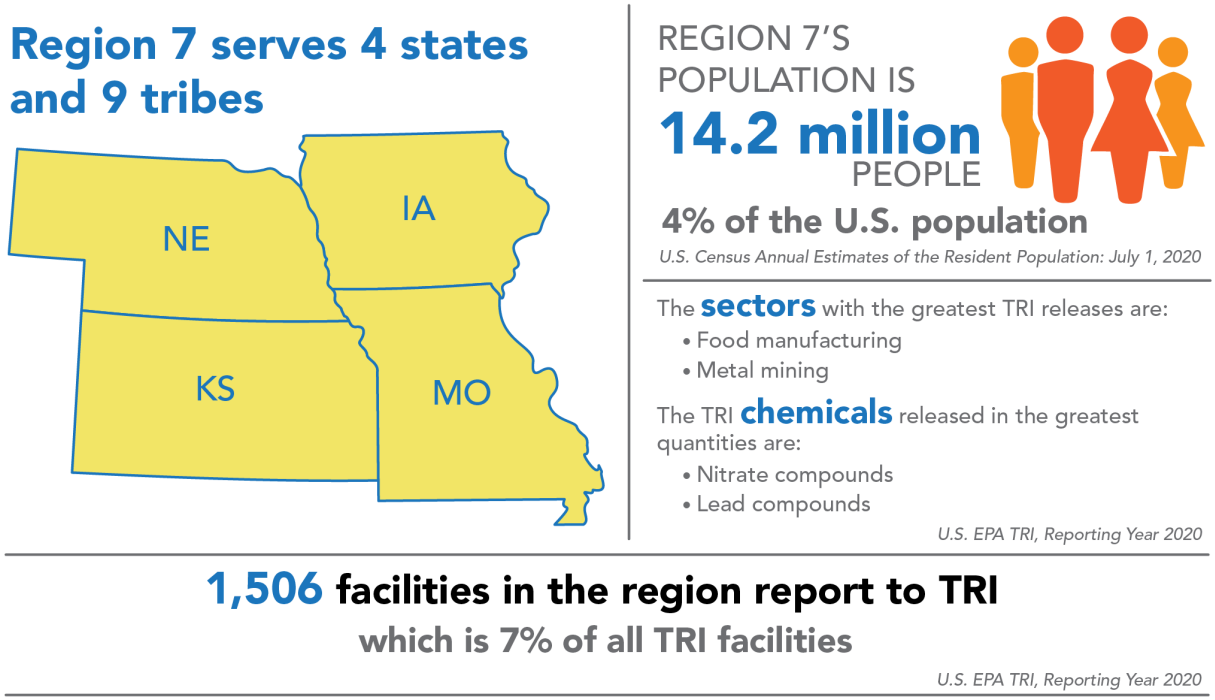
- The RSEI model accounts for factors such as a chemical's toxicity, its movement in the environment, and population density, in addition to the pounds of TRI chemicals

released. RSEI models releases to the air and water but does not model land disposal quantities. These factors can lead to significant differences between a state's contribution to regional releases and its contribution to the regional RSEI Score.

For information on Region 6 facilities with the largest releases, see the Region 6 TRI factsheet.

Regional Profile for EPA Region 7

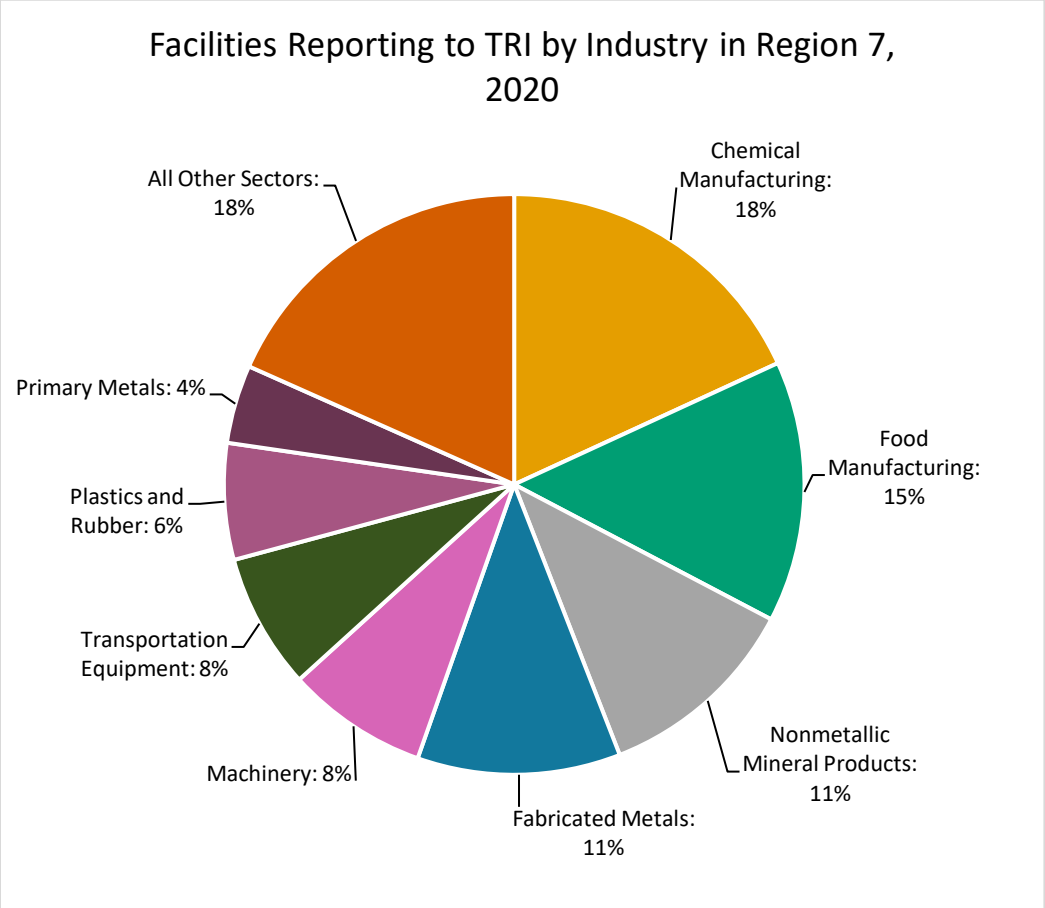
This section examines TRI reporting in EPA Region 7. Region 7 includes Iowa, Kansas, Missouri, Nebraska, and 9 tribes.



For state- and tribe-specific TRI data, see the Where You Live section and the Tribal Communities section.

Industry Sectors

This chart shows the industry sectors with the most TRI-reporting facilities in Region 7.



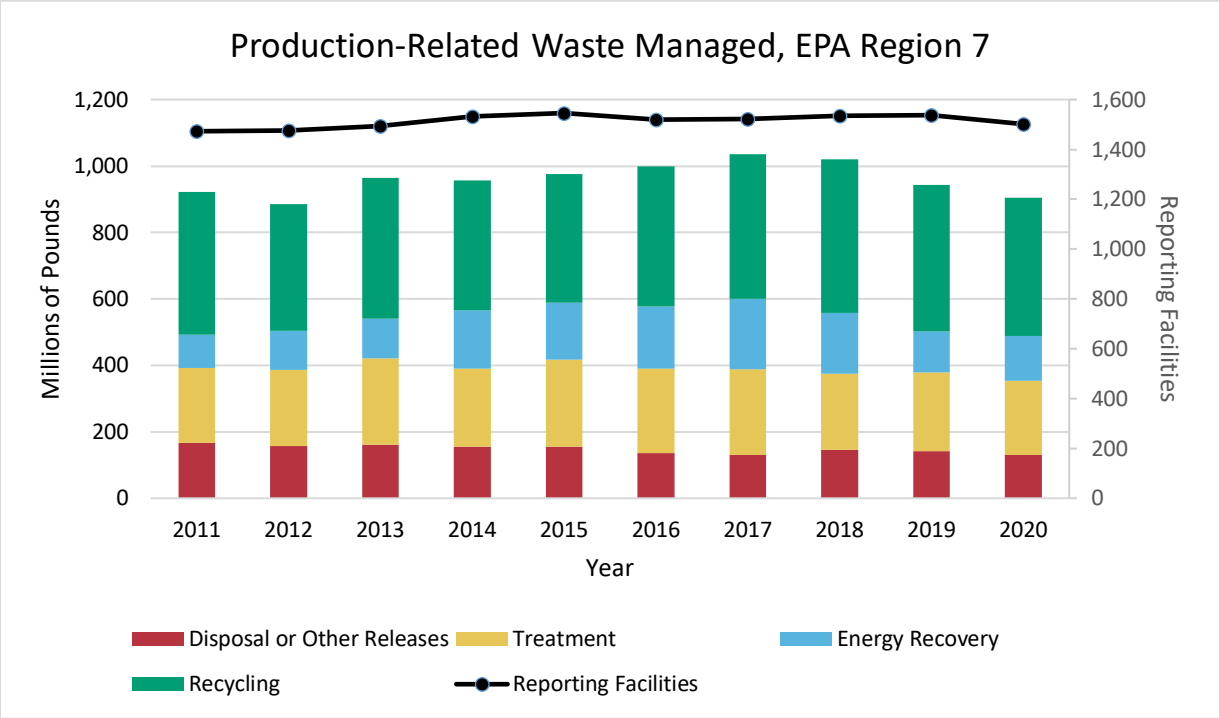
Note: Percentages do not sum to 100% due to rounding.

In 2020:

- 1,506 facilities in Region 7 reported to TRI, similar to reporting for 2019. The sectors with the most facilities were the chemical manufacturing and food manufacturing sectors.
- While the figure shows the sectors with the most TRI facilities in the region, the sectors that reported the largest TRI releases in Region 7 were the food manufacturing, metal mining, chemical manufacturing, and electric utilities sectors. Note that relatively few facilities in the electric utilities and metal mining sectors reported to TRI in this region and those sectors are included in "All Other Sectors" in the pie chart above.

Waste Management Trend Region 7

The following graph shows the 10-year trend in quantities of TRI chemicals managed as production-related waste by facilities located in Region 7.



Note: For comparability, trend graphs include only those chemicals that were reportable to TRI for all years presented.

From 2011 to 2020:

- Total production-related waste managed decreased by 16.8 million pounds (-2%). Quantities of waste recycled, treated, and disposed of or otherwise released all decreased, while quantities of waste combusted for energy recovery increased.

In 2020:

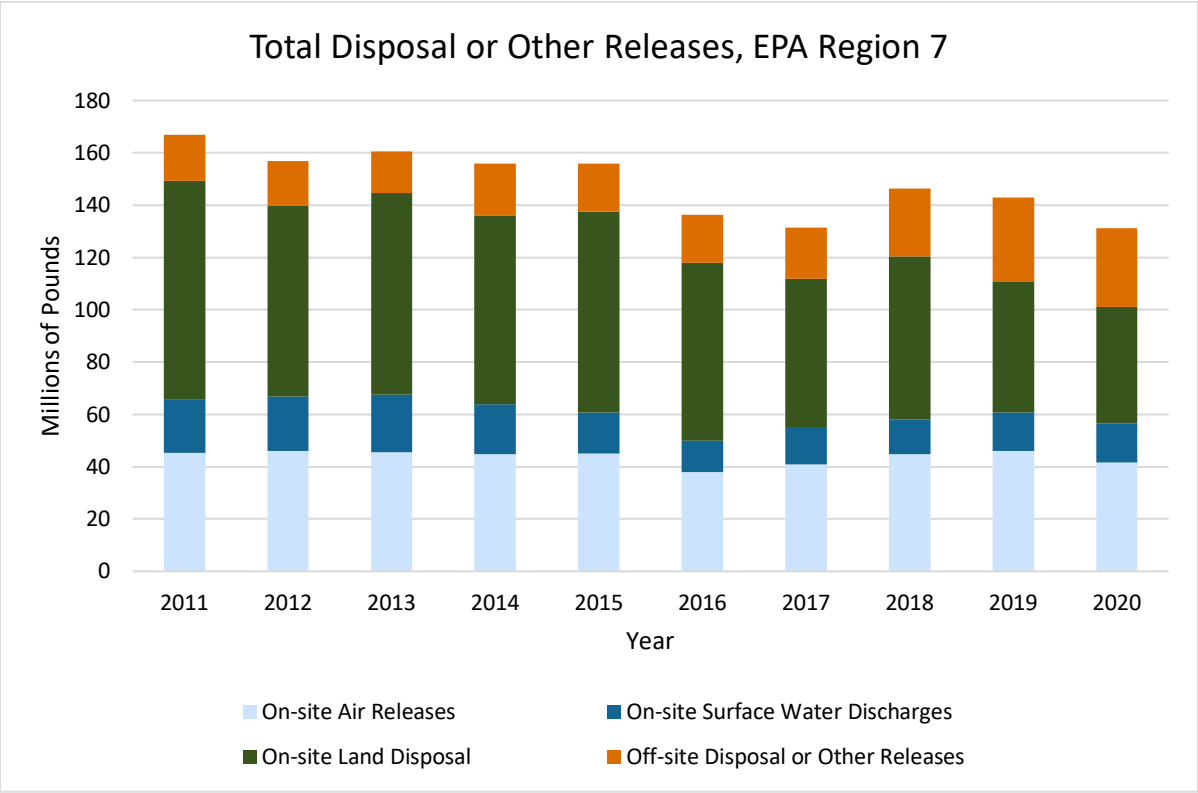
- Facilities in Region 7 managed 980 million pounds of production-related waste, 87% of which was recycled, combusted for energy recovery, or treated. 13% was disposed of or otherwise released into the environment, compared to 11% nationally.
- Since 2019, quantities of waste managed decreased by 4%, driven by decreased quantities of waste recycled and treated.

Source Reduction

In 2020, 5% of facilities in Region 7 (70 facilities) reported implementing new source reduction activities. Source reduction reporting rates in the region were among the highest in the food product manufacturing sector. For example, a pet food manufacturer changed ingredients and reformulated products to reduce the use of zinc. [Click to view facility details in the TRI P2 Search Tool].

Releases Trend Region 7

The following graph shows the 10-year trend in quantities of TRI chemicals released by facilities located in Region 7.



Note: For comparability, trend graphs include only those chemicals that were reportable to TRI for all years presented.

From 2011 to 2020:

- Releases in Region 7 decreased by 35.7 million pounds (-21%). This decrease was driven by reduced releases from the electric utilities, metal mining, and primary metals sectors. Nationally, releases decreased by 26%.
- Quantities of chemicals released to air, water, and land decreased while quantities transferred off site for disposal increased.

Regional Highlight

Releases in Region 7 decreased from 2019 to 2020 primarily due to reduced land releases from electric utilities.

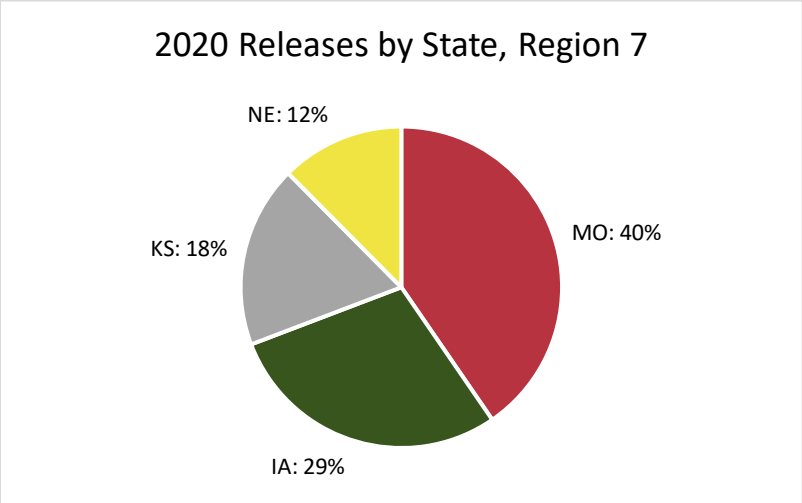
In 2020:

- Facilities in Region 7 reported releasing 132 million pounds of TRI chemicals.

- Since 2019, releases decreased by 11.5 million pounds (-8%). Releases decreased to all media except water. Nationally, releases decreased by 10%.
- 2020 was the first year facilities reported their releases and waste management practices for certain per- and polyfluoroalkyl substances (PFAS) to TRI. Six facilities in Region 7 reported for PFAS. Facilities in the region managed 1,489 pounds of PFAS as waste and released 543 pounds of PFAS.

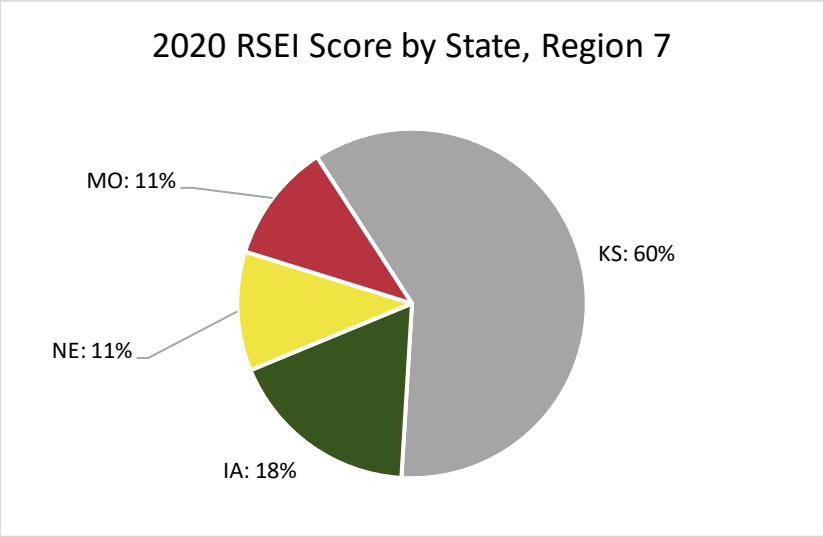
Releases by State

The following chart shows each state's contribution to the region's TRI chemical release quantities for 2020.



Note: Percentages do not sum to 100% due to rounding

To consider the potential health risk from chronic exposure to these releases, EPA uses a risk-screening score from the RSEI model. The following chart shows each state's contribution to the region's TRI chemical release quantities for 2020.



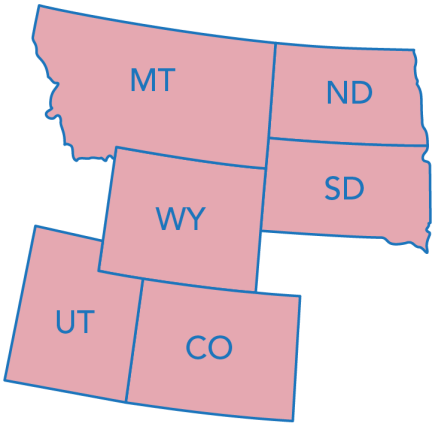
- The RSEI model accounts for factors such as a chemical's toxicity, its movement in the environment, and population density, in addition to the pounds of TRI chemicals released. RSEI models releases to the air and water but does not model land disposal quantities. These factors can lead to significant differences between a state's contribution to regional releases and its contribution to the regional RSEI Score.

For information on the Region 7 facilities with the largest releases, see the Region 7 TRI factsheet.

Regional Profile for EPA Region 8

This section examines TRI reporting in EPA Region 8. Region 8 includes Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 28 tribes.

Region 8 serves 6 states and 28 tribes



REGION 8'S POPULATION IS **12.4 million** PEOPLE

4% of the U.S. population

U.S. Census Annual Estimates of the Resident Population: July 1, 2020

The **sectors** with the greatest TRI releases are:

- Metal mining
- Electric utilities

The TRI **chemicals** released in the greatest quantities are:

- Lead compounds
- Copper compounds

U.S. EPA TRI, Reporting Year 2020

724 facilities in the region report to TRI

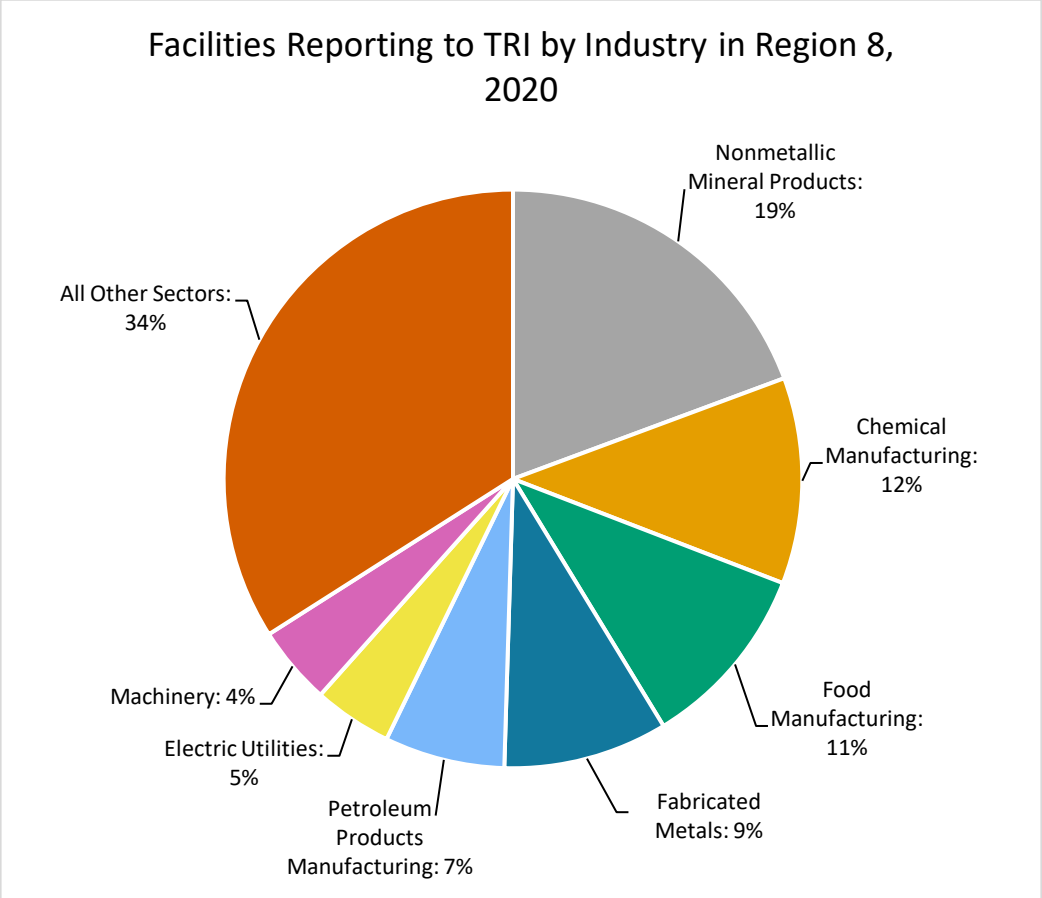
which is 3% of all TRI facilities and includes 2 facilities on tribal lands

U.S. EPA TRI, Reporting Year 2020

For state- and tribe-specific TRI data, see the Where You Live section and the Tribal Communities section.

Industry Sectors

This chart shows the industry sectors with the most TRI-reporting facilities in Region 8.



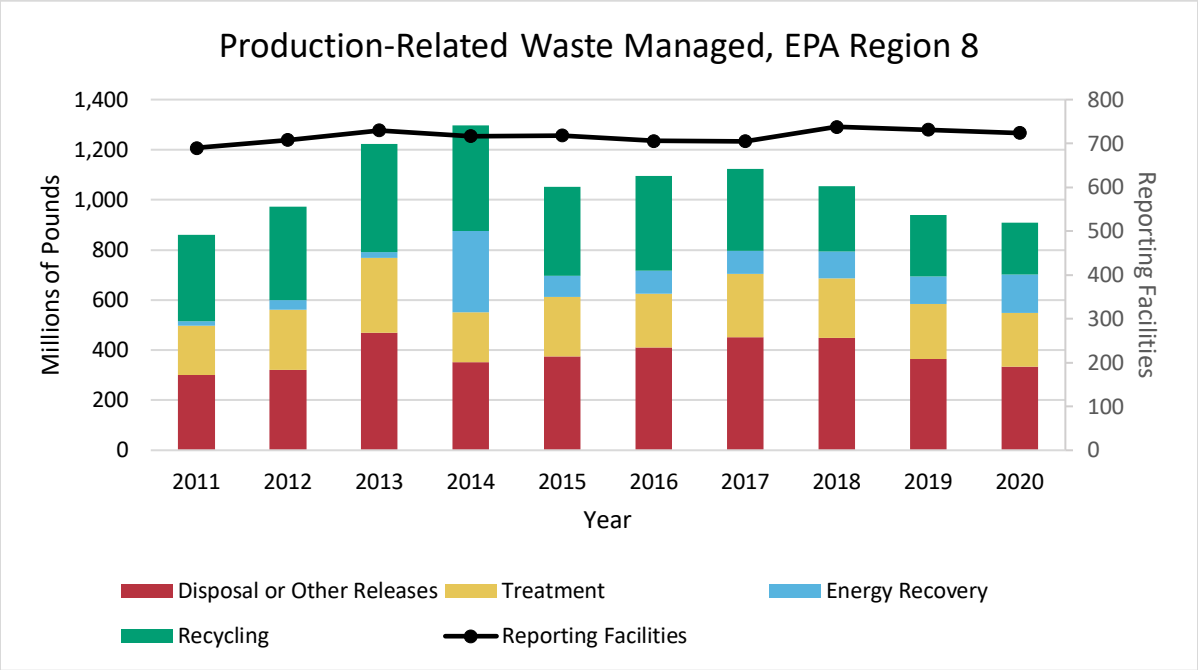
Note: Percentages do not sum to 100% due to rounding.

In 2020:

- 724 facilities in Region 8 reported to TRI, similar to reporting for 2019. The sectors with the most facilities were the nonmetallic mineral products (including cement manufacturing), chemical manufacturing, and food manufacturing sectors.
- While the figure shows the sectors with the most TRI facilities in the region, the sector that reported the largest TRI releases in Region 8 was the metal mining sector, which accounted for 56% of releases reported in the region. After metal mining, the electric utilities, primary metals (including smelters), and chemical manufacturing sectors reported the largest releases. Note that relatively few facilities in the metal mining and primary metals sectors reported to TRI in this region and those sectors are included in "All Other Sectors" in the pie chart above.

Waste Management Trend Region 8

The following graph shows the 10-year trend in quantities of TRI chemicals managed as production-related waste by facilities located in Region 8.



Note: For comparability, trend graphs include only those chemicals that were reportable to TRI for all years presented.

In 2020:

- Facilities in Region 8 managed 917 million pounds of production-related waste, 37% of which was disposed of or otherwise released, compared to 11% nationally. Primary metal manufacturers and metal mines drive the quantity of waste released in Region 8.
- Since 2019, quantities of waste managed in the region decreased by 3%.

From 2011 to 2020:

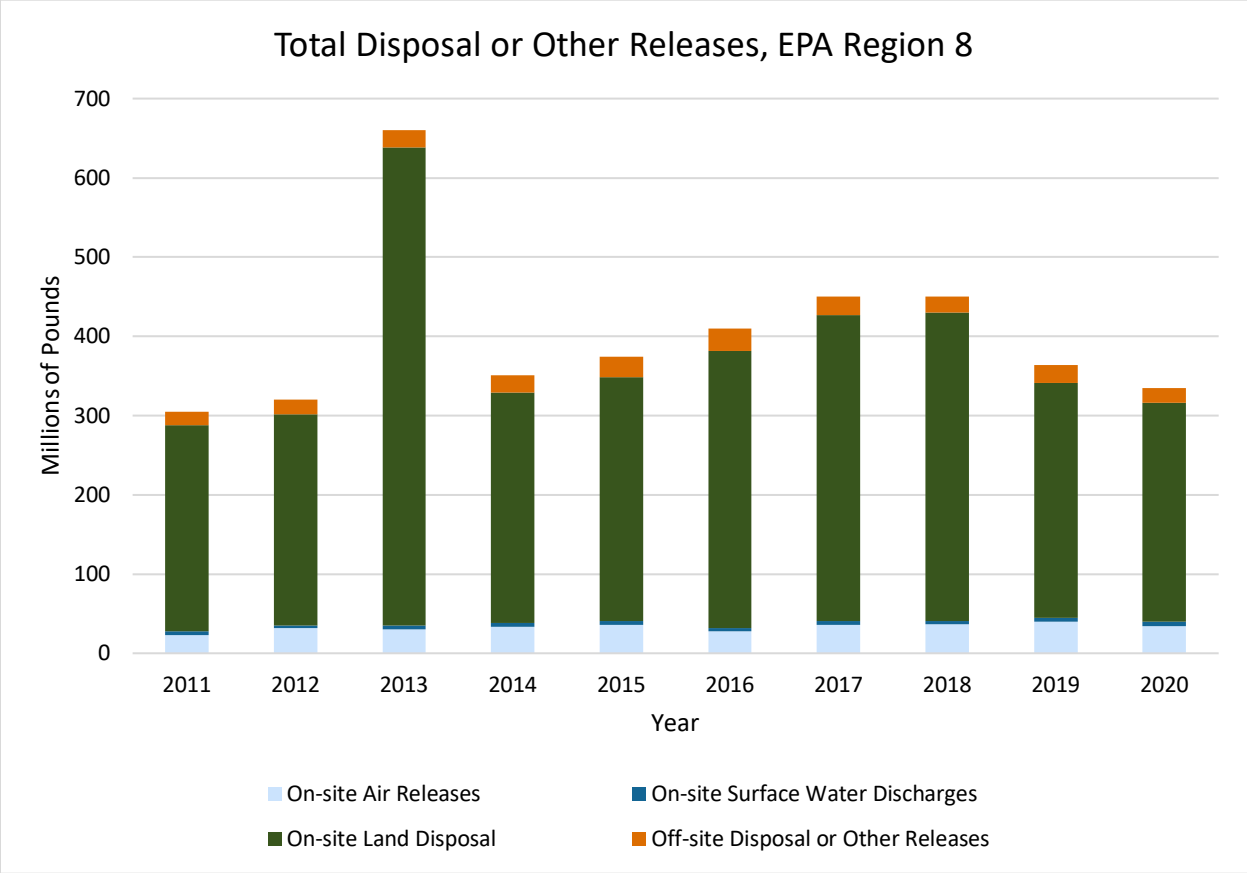
- Total production-related waste managed increased by 48.4 million pounds (6%). Quantities of waste combusted for energy recovery, treated, and disposed of or otherwise released increased, while quantities recycled decreased. Nationally, quantities of waste managed increased by 22%, driven by increased recycling.

Source Reduction

In 2020, 5% of facilities in Region 8 (33 facilities) reported implementing new source reduction activities. For example, to reduce xylene waste, a structural metal products manufacturer assigned dedicated day and night shift paint technicians to operate pumps effectively and prevent leaks. [Click to view facility details in the TRI P2 Search Tool].

Release Trend Region 8

The following graph shows the 10-year trend in quantities of TRI chemicals released by facilities located in Region 8.



Note: For comparability, trend graphs include only those chemicals that were reportable to TRI for all years presented.

From 2011 to 2020:

- Releases in Region 8 have fluctuated since 2011, largely driven by changes in the quantities of metal waste disposed of to land by metal mines. Changes in production volumes and in the chemical composition of the extracted ore can vary substantially from year to year at metal mines, impacting waste quantities reported to TRI. The 2013 spike in land disposal was driven by two metal mines in Utah.
    - Excluding the metal mining sector, releases decreased by 20.4 million pounds (-16%).

Regional Highlight

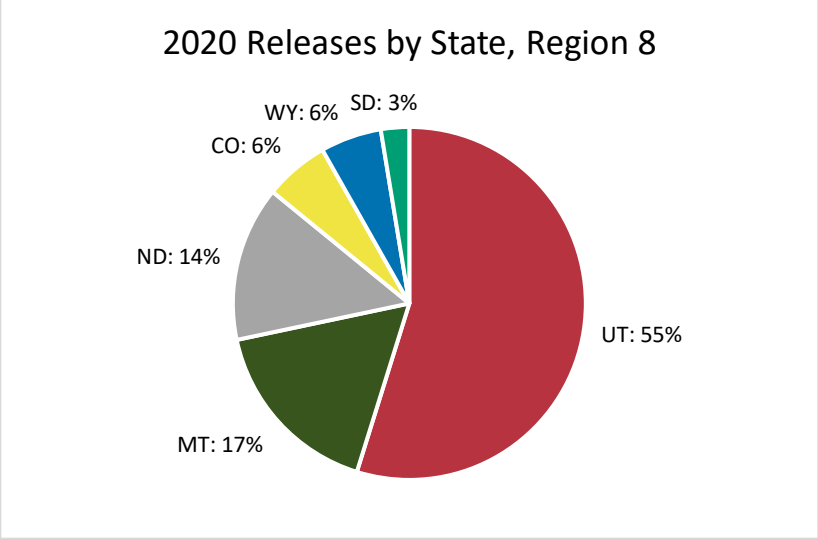
For 2020, 56% of total disposal or other releases reported in Region 8 were from the metal mining sector, largely driven by one copper mine in Utah [view facility details].

In 2020:

- Facilities in Region 8 reported releasing 335 million pounds of TRI chemicals.
- Since 2019, releases decreased by 28.3 million pounds (-8%), driven by reduced releases to land. Nationally, releases decreased by 10%.
- 2020 was the first year facilities reported their releases and waste management practices for certain per- and polyfluoroalkyl substances (PFAS) to TRI. Three facilities in Region 8 reported for PFAS. Facilities in the region managed 3,328 pounds of PFAS as waste of which less than a pound was released.

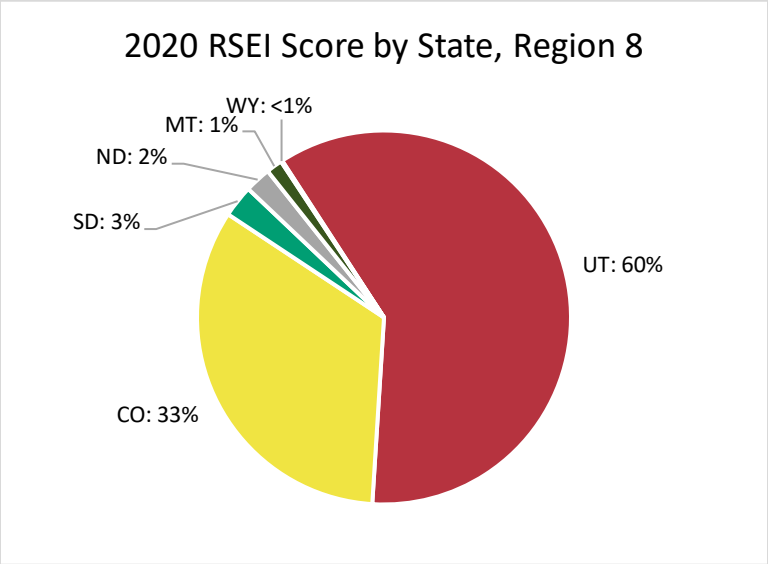
Releases by State

The following chart shows each state's contribution to the region's TRI chemical release quantities for 2020.



Note: Percentages do not sum to 100% due to rounding

To consider the potential health risk from chronic exposure to these releases, EPA uses a risk-screening score from the RSEI model. The following chart shows each state's contribution to the region's TRI chemical release quantities for 2020.



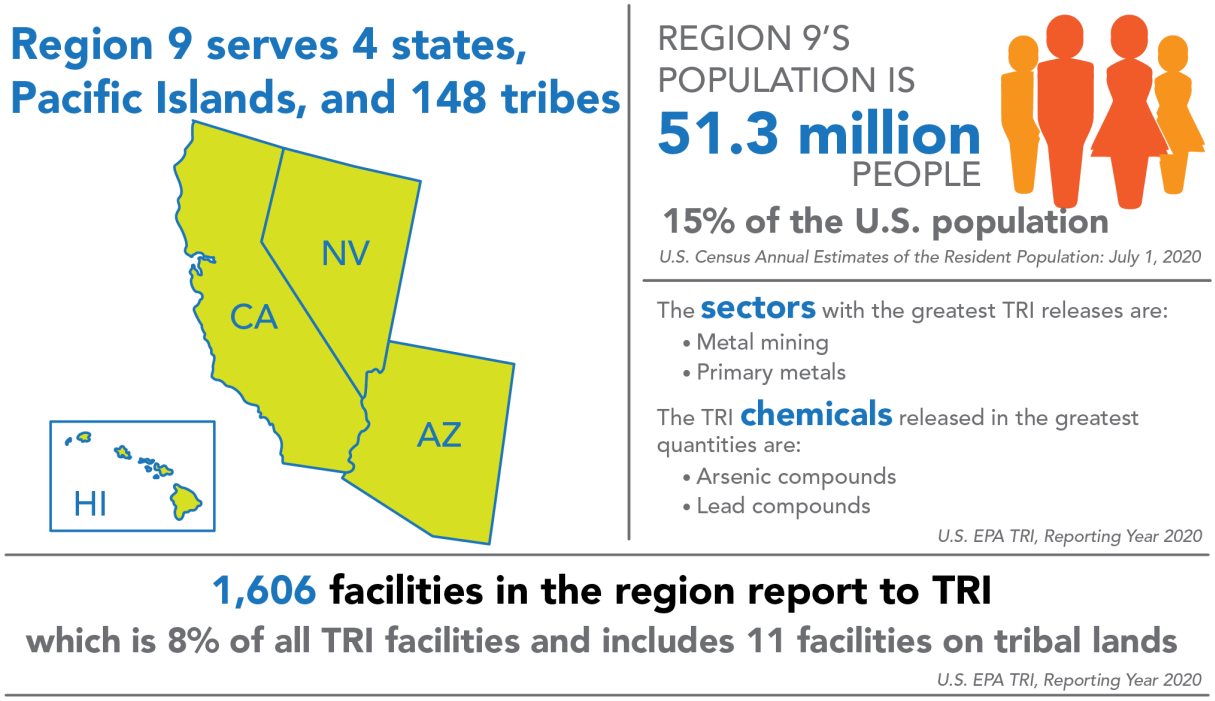
Note: Percentages do not sum to 100% due to rounding

- The RSEI model accounts for factors such as a chemical's toxicity, its movement in the environment, and population density, in addition to the pounds of TRI chemicals released. RSEI models releases to the air and water but does not model land disposal quantities, which drive the high release quantities for Utah. These factors can lead to significant differences between a state's contribution to regional releases and its contribution to the regional RSEI Score.

For information on the Region 8 facilities with the largest releases, see the Region 8 TRI factsheet.

Regional Profile for EPA Region 9

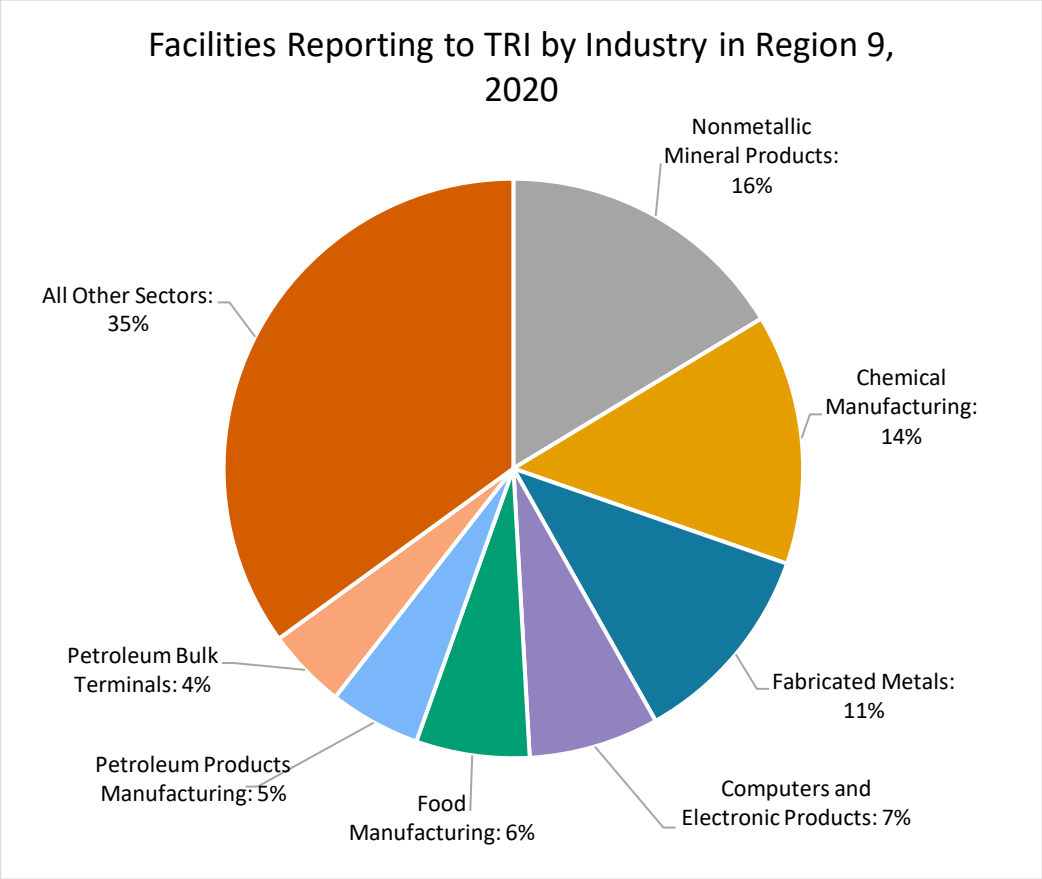
This section examines TRI reporting in EPA Region 9. Region 9 includes Arizona, California, Hawaii, Nevada, the Pacific Islands (American Samoa, Guam, and the Northern Mariana Islands), and 148 tribes.



For state- and tribe-specific TRI data, see the Where You Live section and the Tribal Communities section.

Industry Sectors

This chart shows the industry sectors with the most TRI-reporting facilities in Region 9.



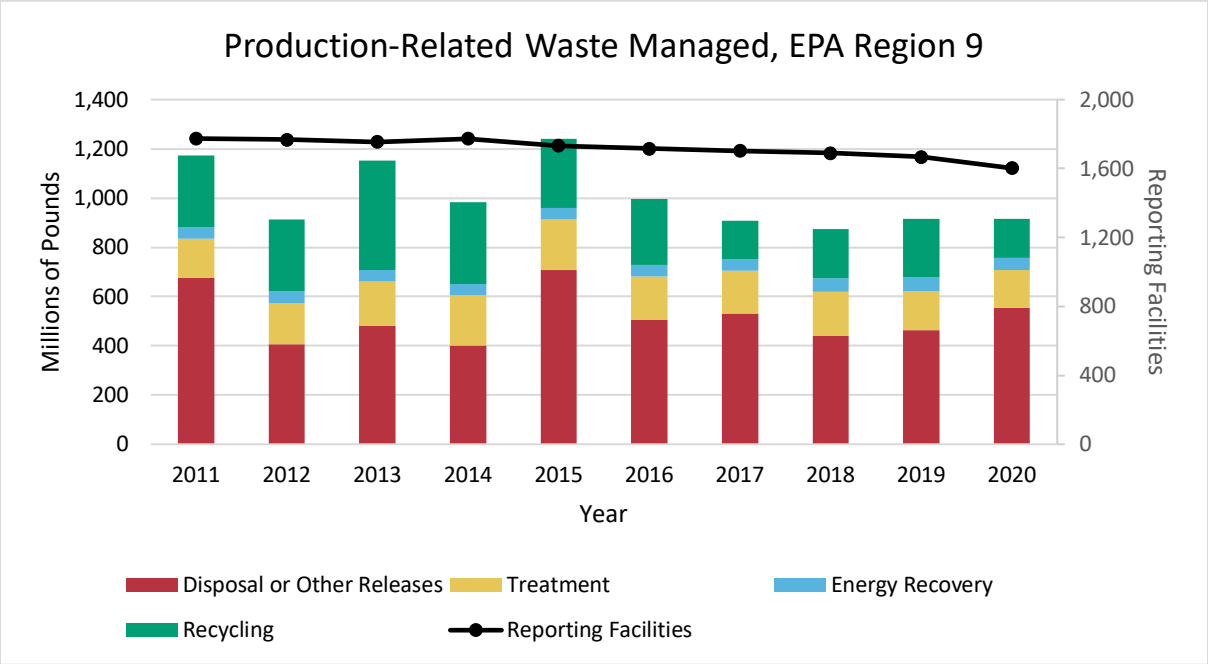
Note: Percentages do not sum to 100% due to rounding

In 2020:

- 1,606 facilities in Region 9 reported to TRI, slightly fewer than reported for 2019. The sectors with the most facilities were the nonmetallic mineral products (including cement manufacturing) and chemical manufacturing sectors.
- While the figure shows the sectors with the most TRI facilities in the region, the most TRI releases in Region 9 were from the metal mining sector, which accounted for 86% of the region's releases for 2020. After metal mining, the primary metals (including smelting), hazardous waste management, and petroleum products manufacturing sectors reported the largest releases. Note that relatively few facilities in the metal mining, primary metals, and hazardous waste management sectors reported to TRI in this region and those sectors are included in "All Other Sectors" in the pie chart above.

Waste Management Trend Region 9

The following graph shows the 10-year trend in quantities of TRI chemicals managed as production-related waste by facilities located in Region 9.



Note: For comparability, trend graphs include only those chemicals that were reportable to TRI for all years presented.

From 2011 to 2020:

- Total production-related waste managed decreased by 258 million pounds (-22%), driven by decreased recycling by the primary metals sector and decreased quantities disposed of by metal mines.

In 2020:

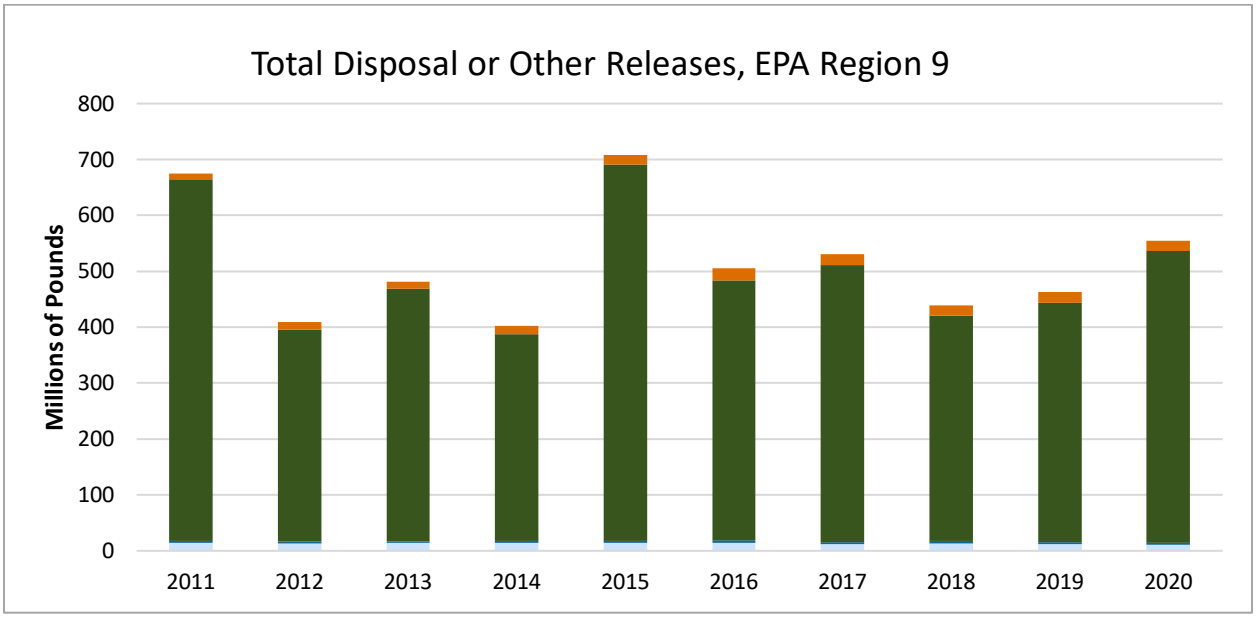
- Facilities in Region 9 managed 916 million pounds of production-related waste, 61% of which was disposed of or otherwise released, compared to 11% nationally. Metal mines drive the quantity of waste managed in the region, due to large quantities of metal-containing waste disposed to land; for 2020, metal mines managed 55% of all production-related waste managed in the region.
- Since 2019, quantities of production-related waste managed in Region 9 decreased by less than 1%. While the quantities of waste that were recycled, combusted for energy recovery, or treated all decreased, an increase in waste disposed of or otherwise released diminished the overall reduction.

Source Reduction

In 2020, 6% of facilities in Region 9 (91 facilities) reported implementing new source reduction activities. Source reduction reporting rates in the region were among the highest in the fabricated metals sector. For example, a sheet metal products manufacturer enacted a preventative maintenance program to run machines more efficiently and reduce manganese waste. [Click to view facility details in the TRI P2 Search Tool].

Release Trend Region 9

The following graph shows the 10-year trend in quantities of TRI chemicals released by facilities located in Region 9.



Note: For comparability, trend graphs include only those chemicals that were reportable to TRI for all years presented.

From 2011 to 2020:

- Releases in Region 9 have fluctuated since 2011, largely driven by changes in the quantities of metal waste disposed of to land by metal mines. Changes in production volumes and in the chemical composition of the extracted ore can vary substantially from year to year, impacting waste quantities reported to TRI.
  - Excluding the metal mining sector, releases in Region 9 decreased by 26.8 million pounds (-25%).

Regional Highlight

43 metal mines in Region 9 reported to TRI for 2020, more than in any other region, accounting for 86% of the region's releases. Most of the mining releases were reported by gold mines in Nevada.

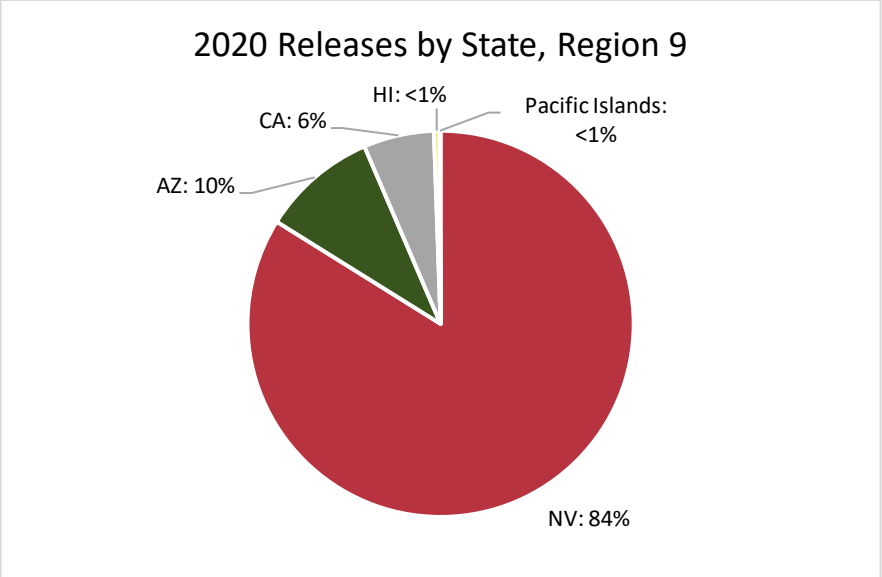
In 2020:

- Facilities in Region 9 released 555 million pounds of TRI chemicals.
- Since 2019, releases increased by 91.9 million pounds (20%), while nationally, releases decreased by 10%.
- 2020 was the first year facilities reported their releases and waste management practices for certain per- and polyfluoroalkyl substances (PFAS) to TRI. One facility in Region 9

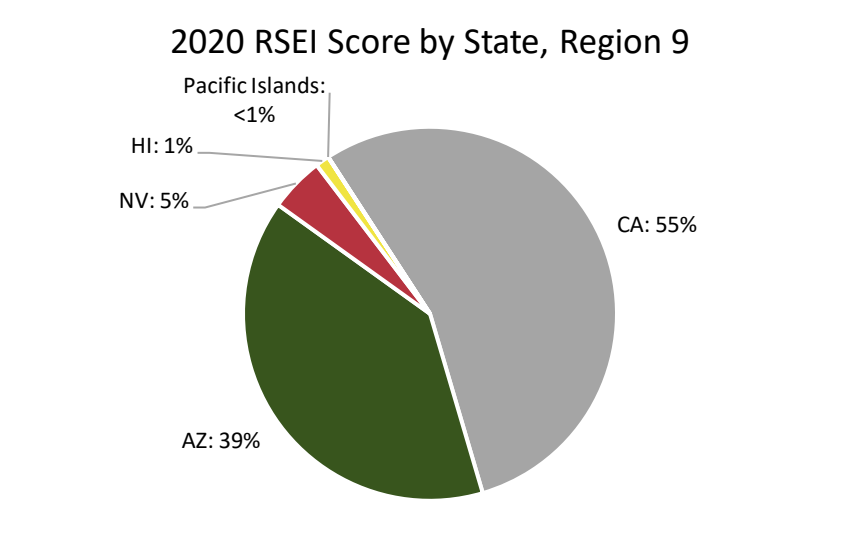
reported managing 20 pounds of PFAS as waste, all of which was released. A second facility in the region reported for a PFAS in error and subsequently withdrew the report.

Releases by State

The following chart shows each state's contribution to the region's TRI chemical release quantities for 2020.



To consider the potential health risk from chronic exposure to these releases, EPA uses a risk-screening score from the RSEI model. The following chart shows each state's contribution to the region's TRI chemical release quantities for 2020.

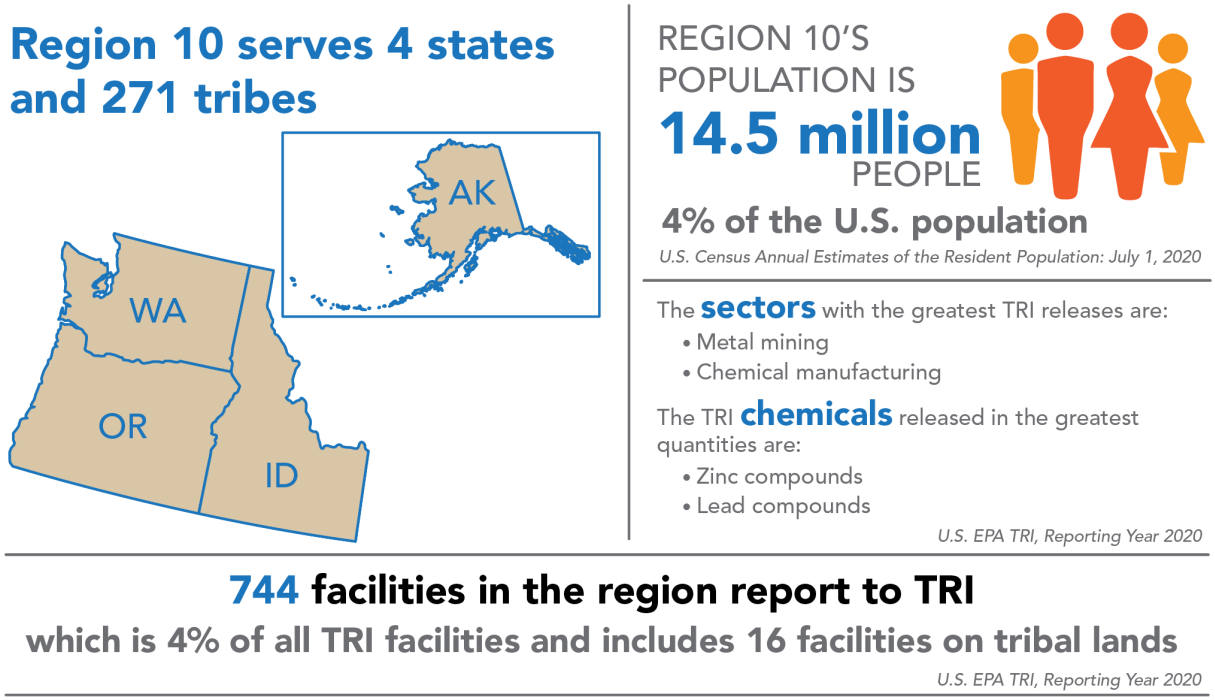


- The RSEI model accounts for factors such as a chemical's toxicity, its movement in the environment, and population density, in addition to the pounds of TRI chemicals released. RSEI models releases to the air and water but does not model land disposal quantities, which drive the high release quantities for Nevada. These factors can lead to significant differences between a state's contribution to regional releases and its contribution to the regional RSEI Score.

For information on the Region 9 facilities with the largest releases, see the TRI Region 9 factsheet.

Regional Profile for EPA Region 10

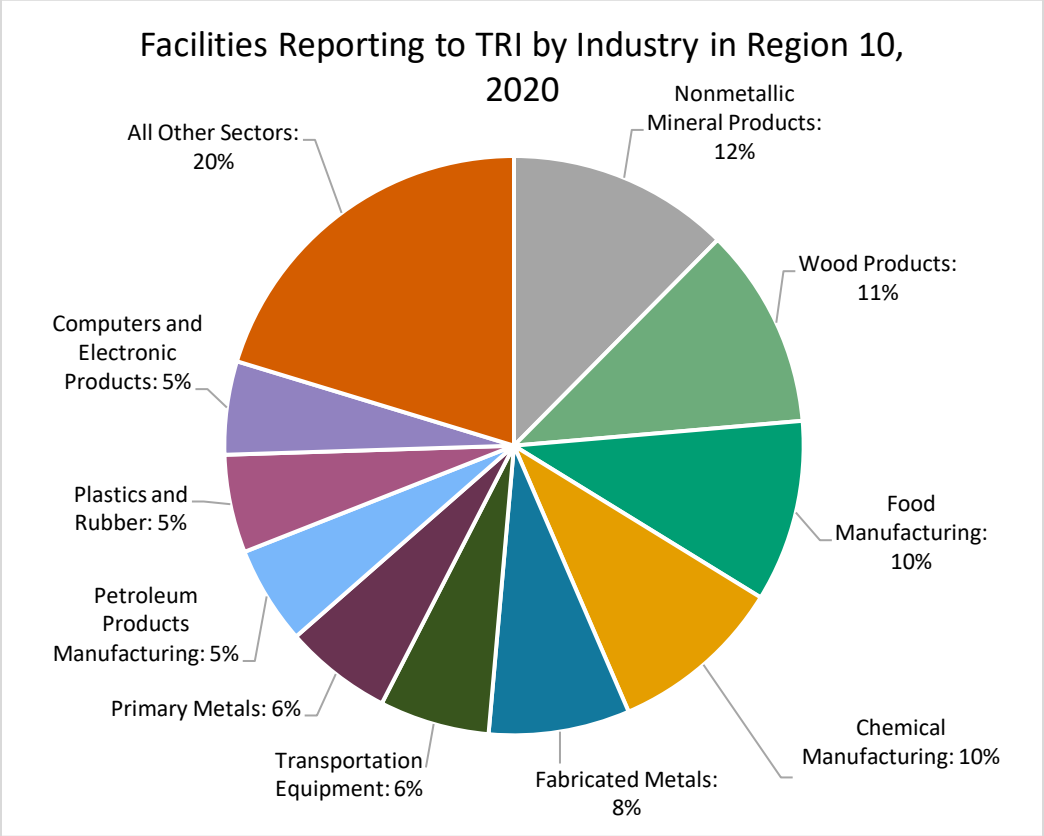
This section examines TRI reporting in EPA Region 10. Region 10 includes Alaska, Idaho, Oregon, Washington, and 271 tribes.



For state- and tribe-specific TRI data, see the Where You Live section and the Tribal Communities section.

Industry Sectors

This chart shows the industry sectors with the most TRI-reporting facilities in Region 10.



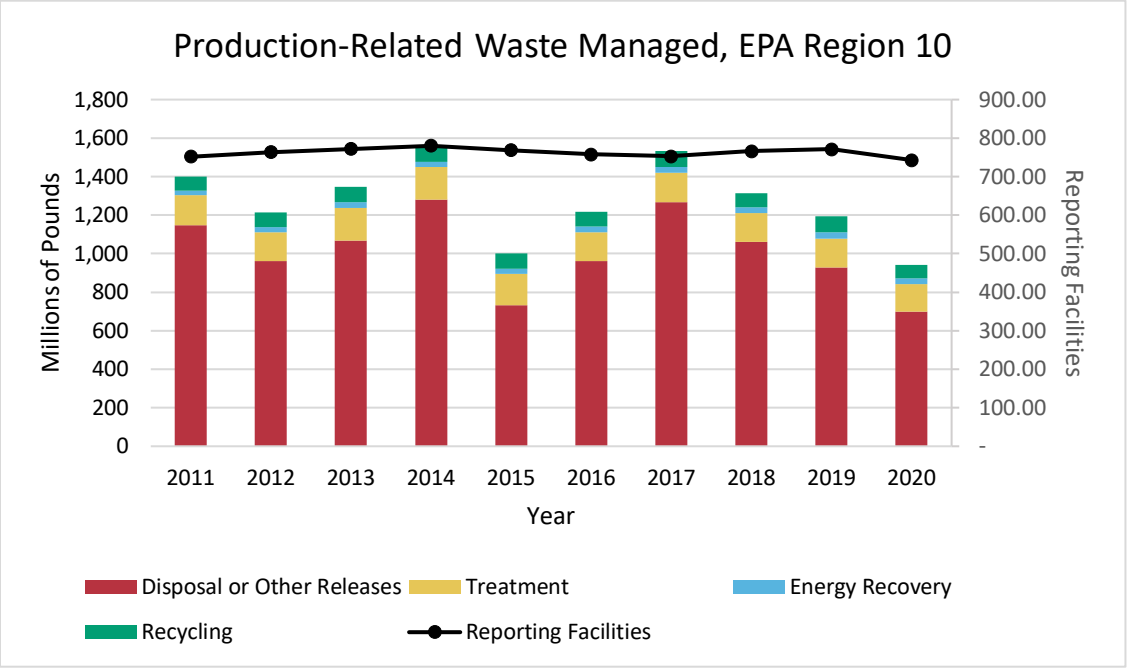
Note: Percentages do not sum to 100% due to rounding.

In 2020:

- 744 facilities in Region 10 reported to TRI, similar to reporting for 2019. The sectors with the most facilities were the nonmetallic mineral products (including cement manufacturing) and wood product manufacturing sectors.
- While the figure shows the sectors with the most TRI facilities in the region, the most TRI releases in Region 10 were from the metal mining sector, which accounted for 92% of the region's releases for 2020. After metal mining, the chemical manufacturing, food manufacturing, and paper manufacturing sectors reported the largest releases. Note that relatively few facilities in the metal mining sector or paper manufacturing sectors reported to TRI in this region and those sectors are included in "All Other Sectors" in the pie chart above.

Waste Management Trend Region 10

The following graph shows the 10-year trend in quantities of TRI chemicals managed as production-related waste by facilities in Region 10.



Note: For comparability, trend graphs include only those chemicals that were reportable to TRI for all years presented.

From 2011 to 2020:

- Total production-related waste managed decreased by 457 million pounds (-33%), driven by decreased releases reported by metal mines. Excluding metal mines, waste managed decreased by 26.7 million pounds (-8%).

In 2020:

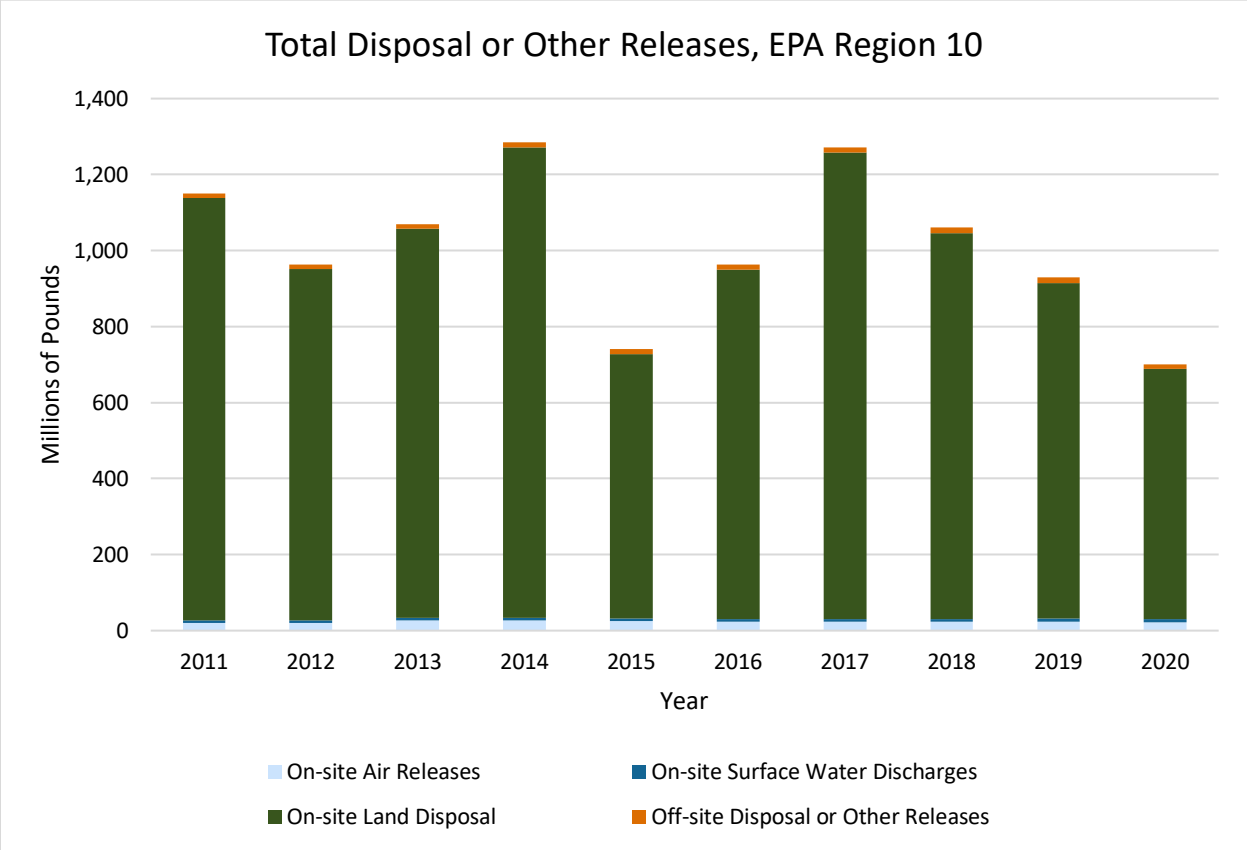
- Facilities in Region 10 managed 978 million pounds of production-related waste, 72% of which was disposed of or otherwise released, compared to 11% nationally. Metal mines drive the quantity of waste managed in the region, due to large quantities of metal-containing waste disposed to land; for 2020, metal mines managed 66% of all production-related waste managed in the region.
- Since 2019, quantities of production-related waste managed in the region decreased by 22%, driven by decreased disposal quantities from metal mines. Excluding metal mines, waste managed in Region 10 decreased by 48.6 million pounds (-13%).

Source Reduction

In 2020, 4% of facilities in Region 10 (28 facilities) reported implementing new source reduction activities. As one example of source reduction in Region 10, an agricultural chemical manufacturer began using a liquid raw material with fewer impurities which generated less filter cake waste containing zinc. [Click to view facility details in the TRI P2 Search Tool].

Releases Trend Region 10

The following graph shows the 10-year trend in quantities of TRI chemicals released by facilities located in Region 10.



Note: For comparability, trend graphs include only those chemicals that were reportable to TRI for all years presented.

From 2011 to 2020:

- Releases in Region 10 have fluctuated since 2011, largely driven by changes in the quantities of waste disposed of to land by metal mines. Changes in production volumes and in the chemical composition of the extracted ore can vary substantially from year to year, impacting waste quantities reported to TRI.
    - Excluding the metal mining sector, releases decreased by 19.3 million pounds (-25%).

Regional Highlight

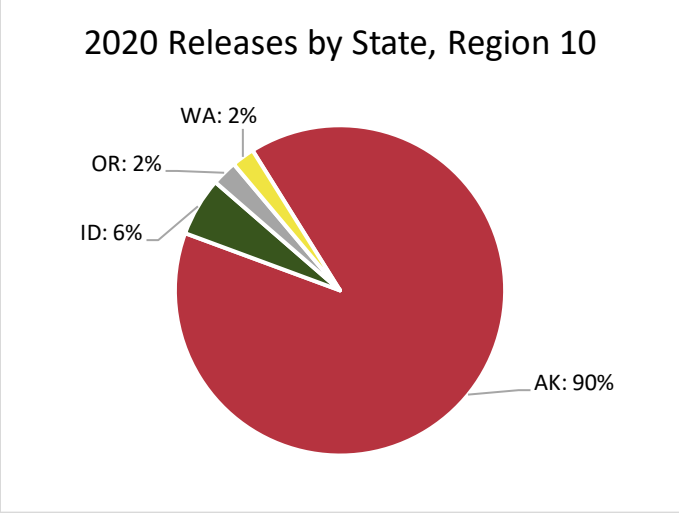
TRI chemical releases in Region 10 are dominated by one metal mine. For 2020, the Red Dog mine in Alaska reported 78% of the region's releases [View facility details].

In 2020:

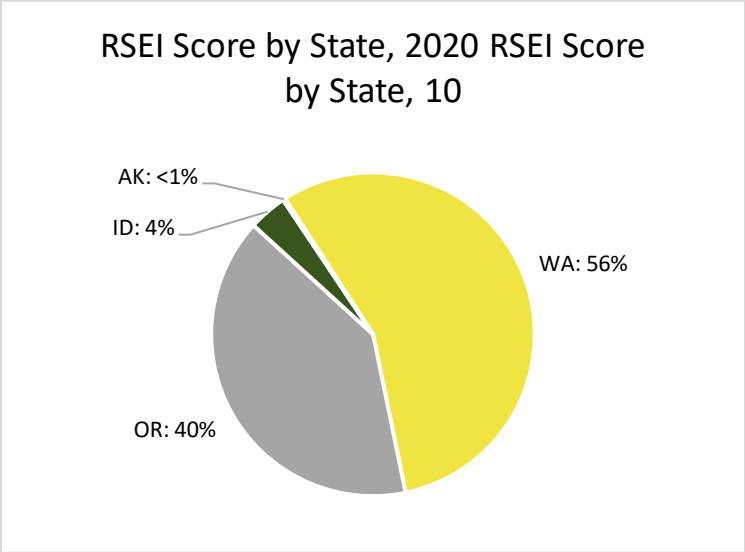
- Facilities in Region 10 reported releasing 701 million pounds of TRI chemicals.
- Since 2019, releases decreased by 230 million pounds (-25%), compared to a 10% decrease nationally. The decrease in Region 10 releases was driven by the metal mining sector.
    - Excluding metal mining, releases decreased by 6.9 million pounds (-10%) since 2019.
- 2020 was the first year facilities reported their releases and waste management practices for certain per- and polyfluoroalkyl substances (PFAS) to TRI.

Releases by State

The following chart shows each state's contribution to the region's TRI chemical release quantities for 2020.



To consider the potential health risk from chronic exposure to these releases, EPA uses a risk-screening score from the RSEI model. The following chart shows each state's contribution to the region's TRI chemical release quantities for 2020.



- The RSEI model accounts for factors such as a chemical's toxicity, its movement in the environment, and population density, in addition to the pounds of TRI chemicals released. RSEI models releases to the air and water but does not model land disposal quantities, which drive the high release quantities for Alaska. These factors can lead to significant differences between a state's contribution to regional releases and its contribution to the regional RSEI Score.

For information on the Region 10 facilities with the largest releases, see the Region 10 TRI factsheet.