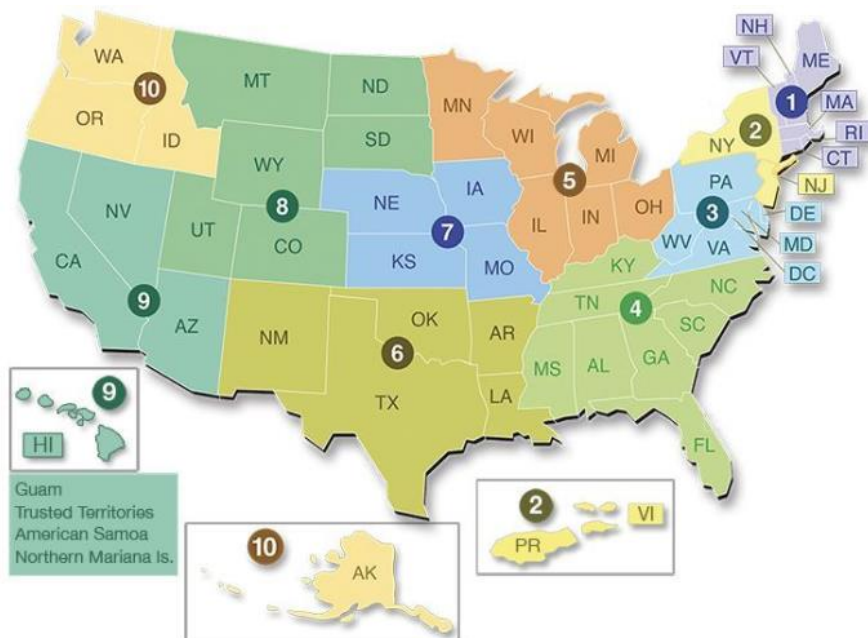


EPA Regional Profiles

This section of the National Analysis looks at production-related waste management and releases of Toxics Release Inventory (TRI) chemicals at the EPA regional level during 2018. EPA has 10 regional offices (shown on the map below) across the country, each of which is responsible for several states and in some cases, territories and tribes.

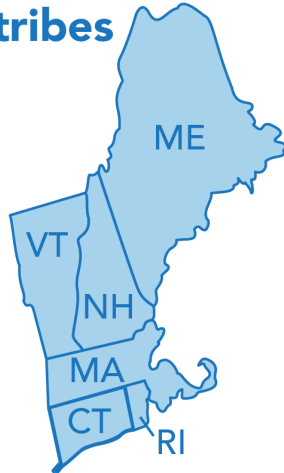


EPA regions vary significantly in many important characteristics, including size, population, and the types of facilities located in the region. These factors can result in significant differences between national and regional trends. For example, certain activities such as [metal mining](#) are geographically concentrated and report large quantities of TRI chemical waste disposed of, therefore release trends in regions with many metal mines often do not mirror national release trends.

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.

**Region 1 serves 6 states
and 10 tribes**



REGION 1'S
POPULATION IS
14.9 million
PEOPLE



U.S. Census Annual Estimates of the Resident Population: July 1, 2018

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

- Paper
- Food

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

- Nitrate compounds
- Zinc and zinc compounds

U.S. EPA TRI, Reporting Year 2018

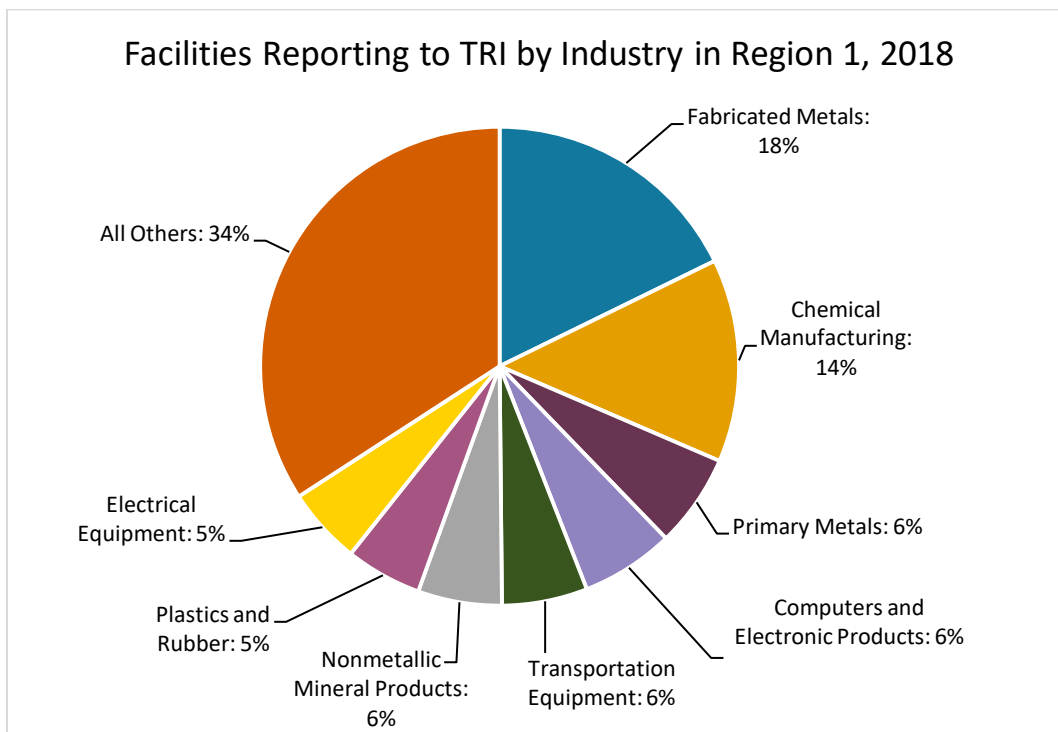
967 facilities in the region report to TRI

U.S. EPA TRI, Reporting Year 2018

Region 1 covers 4% of the US population and includes 4% of all facilities that report to TRI. 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.



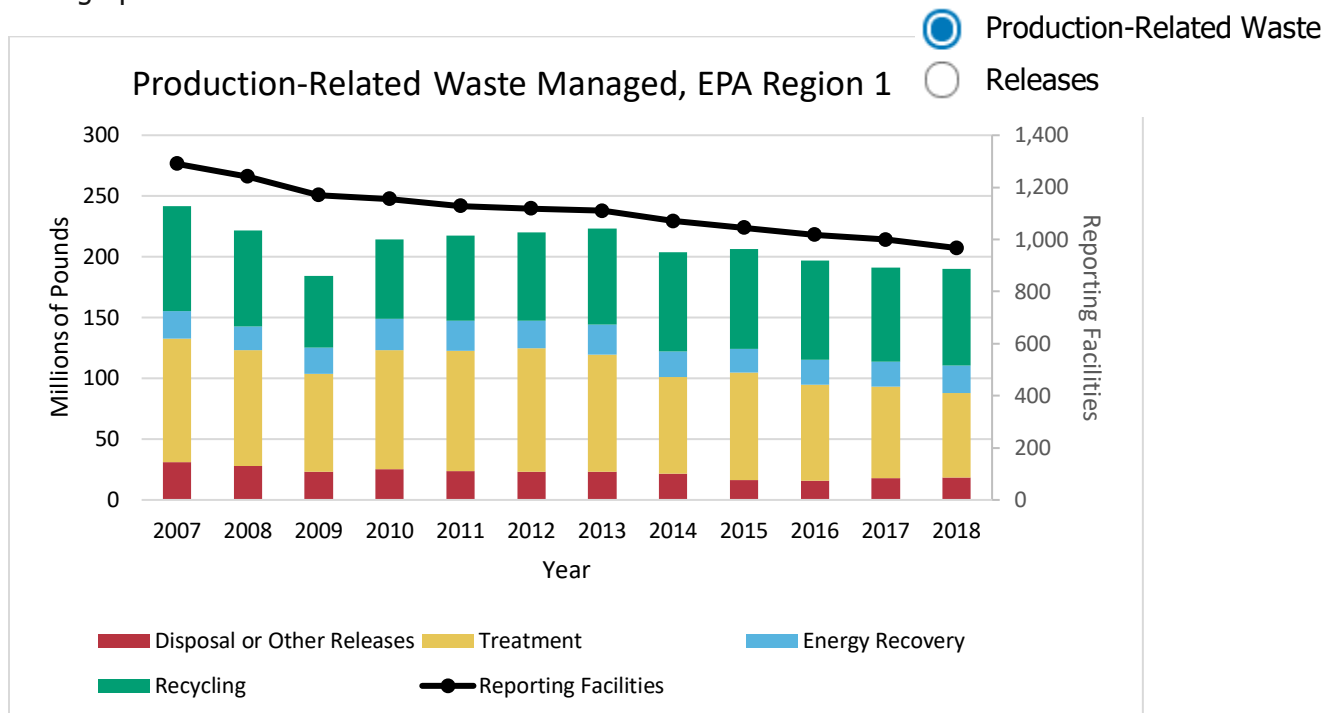
In 2018:

- 967 facilities in Region 1 reported to TRI. These facilities were most commonly in the fabricated metals (i.e., manufacture of metal products) or chemical manufacturing sectors. The number of facilities and sectors reporting for 2018 were similar to 2017 reporting for the region.
- Most releases in Region 1 were from the paper manufacturing, food manufacturing, chemical manufacturing, and fabricated metals (i.e., manufacture of metal products) 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 Others” in the pie chart above. Nationwide, the metal mining, chemical manufacturing, electric utilities, and primary metals (including iron and steel manufacturing, and foundries) sectors reported the highest releases.

For information on the facilities with the greatest releases in the region, see the [Region 1 TRI Factsheet](#).

TRI Waste Management Trend

The following graph shows the annual quantities of TRI chemicals in production-related waste managed by facilities located in Region 1. For more details on quantities released, toggle to the Releases graph.



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

In 2018:

- Facilities reported managing 193 million pounds of production-related waste, 90% of which was recycled, combusted for energy recovery, or treated. Only 10% was disposed of or otherwise released into the environment. Nationally, 12% of production-related waste was disposed of or otherwise released into the environment.
- Since 2017, quantities of production-related waste managed decreased by 1%.
 - Quantities of waste treated decreased, while quantities of waste recycled and combusted for energy recovery increased. Quantities of production-related waste disposed of or otherwise released were comparable to 2017 quantities.

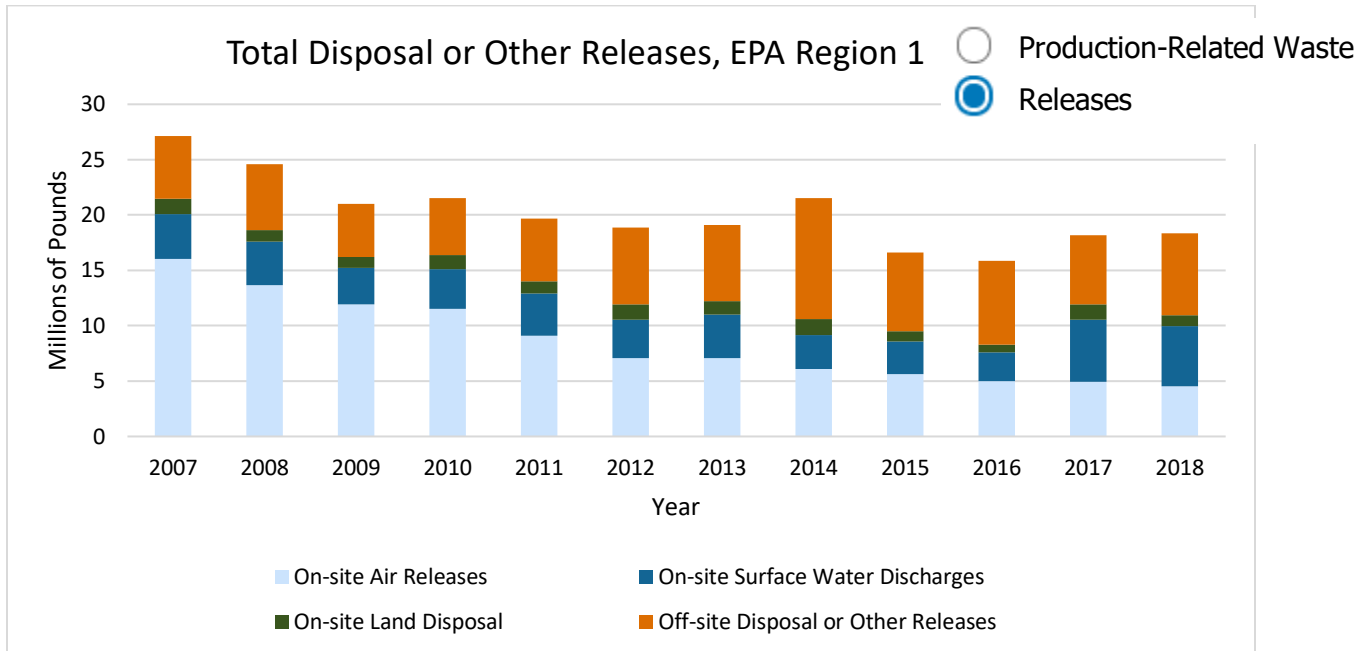
From 2007 to 2018:

- Total production-related waste managed decreased by 52 million pounds (21%), driven by reductions in the quantities of production-related waste disposed of or otherwise

released (41% decrease, 13 million pounds) and treated (32% decrease, 32 million pounds). Production-related waste managed by most sectors in the region decreased, with the largest decreases in the paper and primary metals sectors.

- Nationally, quantities of production-related waste managed increased by 28% since 2007, driven by increased recycling.

The following graph shows the annual 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.

In 2018:

- Facilities reported 19 million pounds of releases.
- The chemicals released in the greatest quantities by medium were:
 - methanol and ammonia to air;
 - nitrate compounds to water;
 - zinc and zinc compounds and manganese and manganese compounds to land; and
 - zinc and zinc compounds and nitrate compounds transferred off site for disposal.
- Since 2017, releases increased by 163 thousand pounds (<1%). On-site releases to air, land, and water decreased while off-site transfers for disposal increased. Nationally, releases decreased by 3% since 2017.
- Contribution by state to the Region 1 releases in pounds were: Maine (61%), Massachusetts (21%), Connecticut (11%), Rhode Island (2%), New Hampshire (2%), and Vermont (2%).
- To consider the potential health risk from chronic exposure to these releases, EPA uses a [risk-screening score from the RSEI model](#). Contributions by state to the RSEI score for

2018 Highlight

Production-related waste managed in Region 1 decreased by 21% since 2007, driven by reductions in production-related waste managed by paper manufacturing and chemical manufacturing facilities in the region.

Region 1 were: Connecticut (59%), Massachusetts (35%), Maine (4%), Rhode Island (1%), New Hampshire (1%), and Vermont (<1%).

From 2007 to 2018:

- Releases in Region 1 decreased by 8.8 million pounds (32%). This reduction was driven by decreased air releases by electric utilities. Nationally, total disposal or other releases of TRI chemicals decreased by 9% since 2007.
- Quantities of chemicals released to air and land decreased, while quantities of chemicals released to water and transferred off-site for disposal increased.

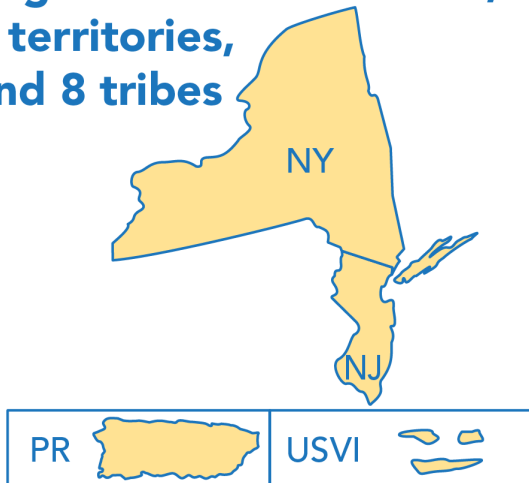
Source Reduction

In 2018, 10% of facilities in Region 1 (97 facilities) reported implementing new source reduction activities. Source reduction reporting rates in the region were among the highest in the chemical manufacturing sector, where 14% of facilities reported source reduction activities. For example, one biodiesel manufacturer reported adding a [methanol](#) recovery system to reuse the chemical in the process. [[Click to view facility details in the P2 tool](#)].

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.

**Region 2 serves 2 states,
2 territories,
and 8 tribes**



REGION 2'S
POPULATION IS
31.6 million
PEOPLE



U.S. Census Annual Estimates of the Resident Population: July 1, 2018

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

- Hazardous waste
- Chemicals

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

- Nitrate compounds
- Asbestos

U.S. EPA TRI, Reporting Year 2018

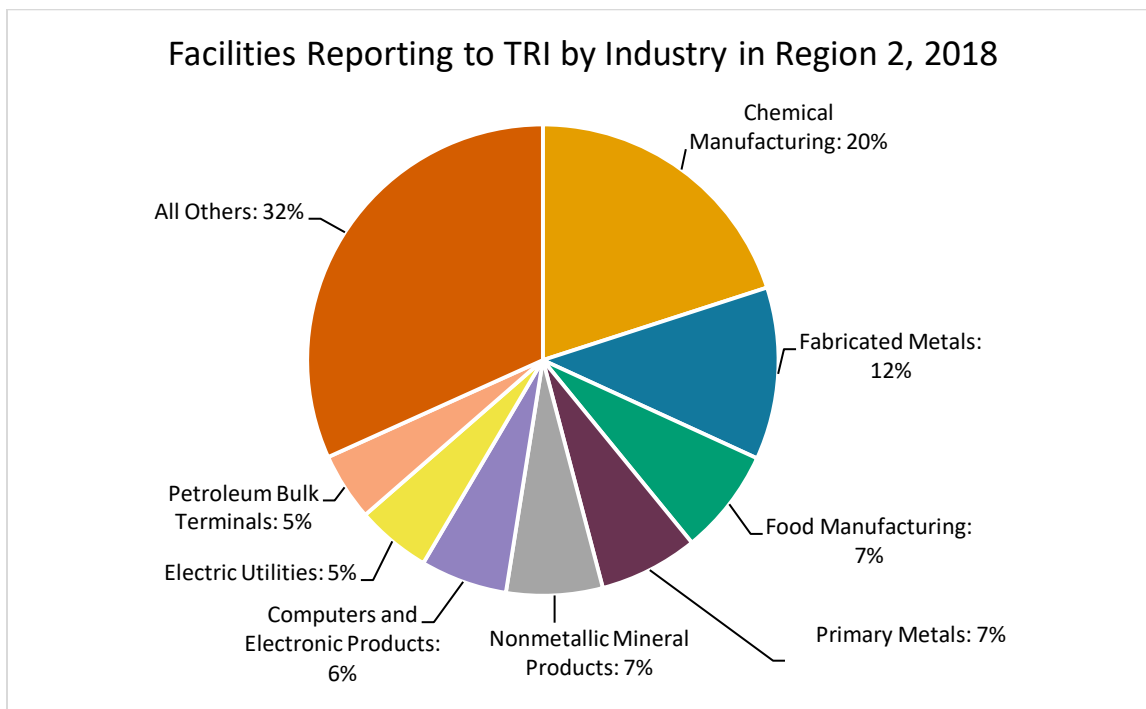
1,074 facilities in the region report to TRI

U.S. EPA TRI, Reporting Year 2018

Region 2 covers 10% of the US population and includes 5% of all facilities that report to TRI. 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 may not sum to 100% due to rounding.

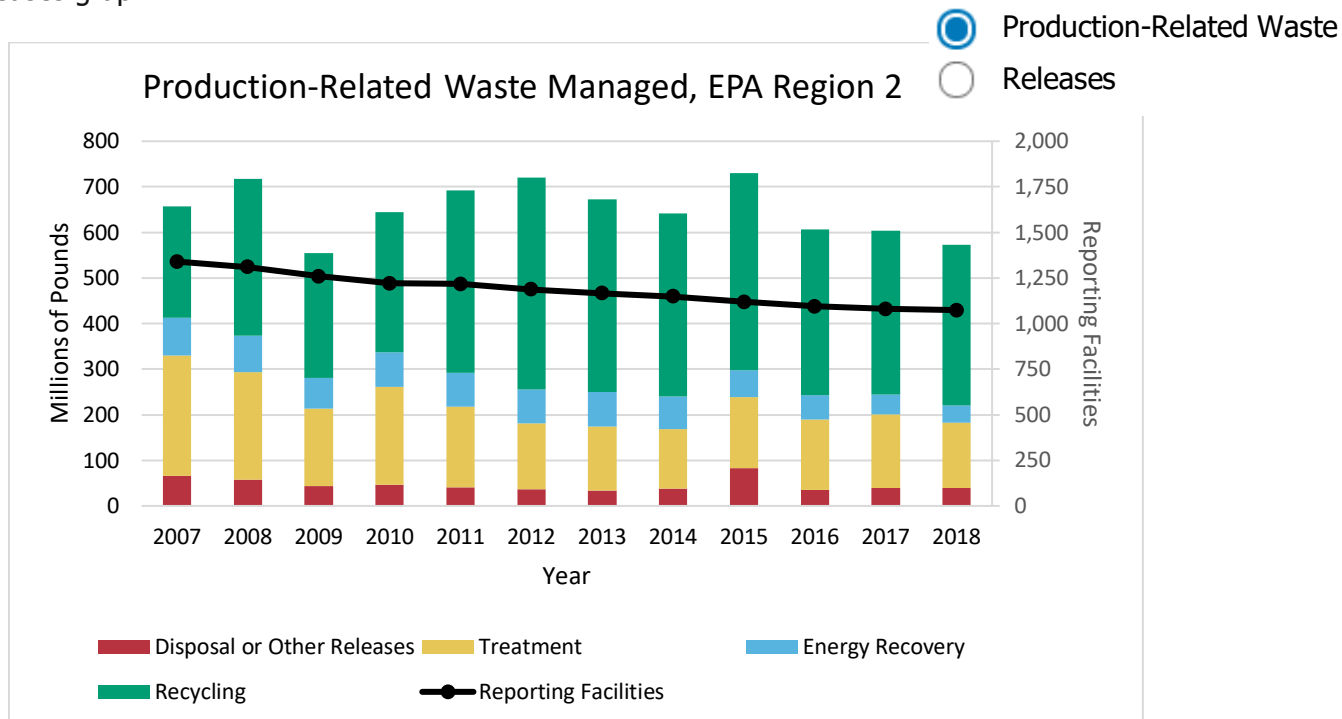
In 2018:

- 1,074 facilities in Region 2 reported to TRI. These facilities were most commonly in the chemical manufacturing or fabricated metals (i.e., manufacture of metal products) sectors. The number of facilities and sectors reporting for 2018 were similar to 2017 reporting for the region.
- Most releases in Region 2 were from the hazardous waste management, chemical manufacturing, petroleum products manufacturing, electric utilities, and primary metals (including iron and steel manufacturing, and foundries) sectors. Note that relatively few facilities in the hazardous waste management and petroleum products sectors reported to TRI in this region and those sectors are included in "All Others" in the pie chart above. Nationwide, the metal mining, chemical manufacturing, electric utilities, primary metals, and hazardous waste management sectors reported the highest releases.

For information on the facilities with the greatest releases in the region, see the [TRI Region 2 TRI Factsheet](#).

TRI Waste Management Trend

The following graph shows the annual quantities of TRI chemicals in production-related waste managed by facilities located in Region 2. For more details on quantities released, toggle to the Releases graph.



Note: For comparability, trend graphs include only those chemicals that were reportable to TRI for all years presented. Total production-related waste reported for 2018 in Region 2 was higher than shown here due to large treatment quantities of hydrogen sulfide, which was added to the TRI chemical list in 2012.

In 2018:

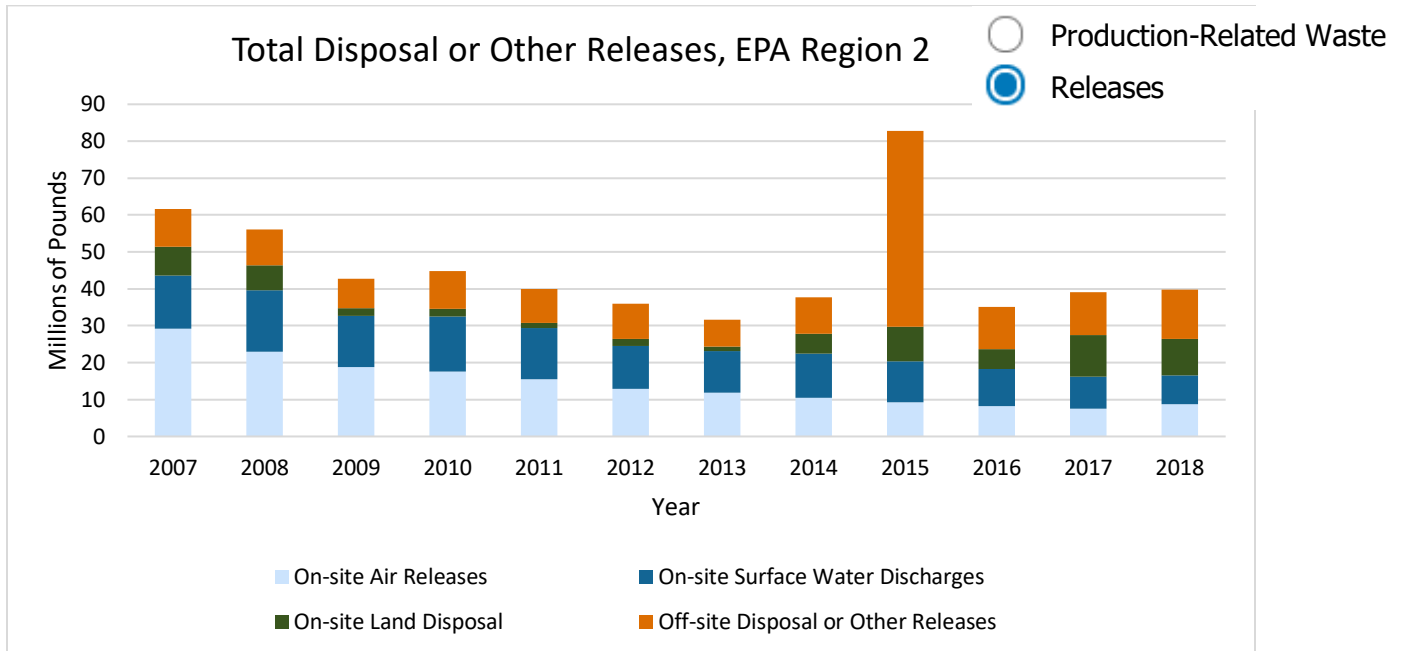
- Facilities reported managing 760 million pounds of production-related waste, 95% of which was recycled, combusted for energy recovery, or treated. Only 5% was disposed of or otherwise released into the environment. Nationally, 12% of production-related waste was disposed of or otherwise released into the environment.
- Since 2017, quantities of production-related waste managed decreased by 5%, driven by a reduction in the quantity of waste treated.

From 2007 to 2018:



- Total production-related waste managed decreased by 85 million pounds (13%). Quantities of production-related waste treated, combusted for energy recovery, and disposed of or otherwise released decreased, while quantities of production-related waste recycled increased. Nationally, quantities of production-related waste managed increased by 28% since 2007, driven by increased recycling.

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.

In 2018:

- Facilities reported 40 million pounds of releases.
- The chemicals released in the greatest quantities by medium were:
 - ammonia and sulfuric acid to air;
 - nitrate compounds to water;
 - asbestos to land; and
 - zinc and zinc compounds and nitrate compounds transferred off site for disposal.
- Since 2017, releases increased by 749,000 pounds (2%). Air releases and off-site transfers for disposal increased, while water and land releases decreased. Nationally, releases decreased by 3% since 2017.
- Contribution by state or territory to the Region 2 releases in pounds were: New York (53%), New Jersey (31%), Puerto Rico (15%), and US Virgin Islands (<1%).
- To consider the potential health risk from chronic exposure to these releases, EPA uses a [risk-screening score from the RSEI model](#). Contributions by state or territory to the

2018 Highlight

Variability in TRI releases in Region 2 is due to changes in releases reported by hazardous waste management facilities, where release quantities can vary widely year to year. In recent years, the sector's releases in the region have fluctuated by 2.5 million to 46 million pounds per year.

RSEI score for Region 2 were: New Jersey (42%), New York (40%), Puerto Rico (18%), and US Virgin Islands (<1%).

From 2007 to 2018:

- Releases in Region 2 decreased by 22 million pounds (35%), driven by reduced releases from electric utilities. Nationally, total disposal or other releases of TRI chemicals decreased by 9% since 2007.
- Quantities of chemicals released to air and water substantially decreased, while releases to land and off-site transfers for disposal increased.
- The increased releases for 2015 shown in the graph were caused by off-site transfers for disposal of several chemicals from a hazardous waste management facility in Kearny, New Jersey. [[Click to view facility details in the P2 tool](#)].

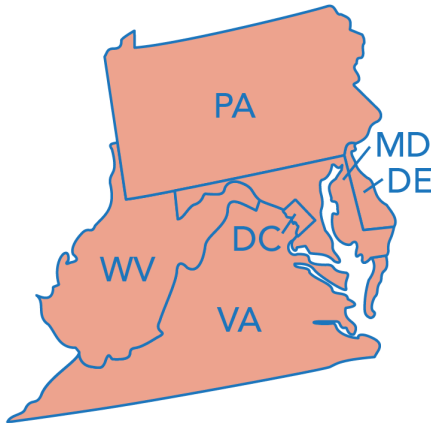
Source Reduction

In 2018, 7% of facilities in Region 2 (73 facilities) reported implementing new source reduction activities. Source reduction reporting rates in the region were among the highest in the computers and electronic products sector, where 11% of facilities reported source reduction activities. As one example of source reduction in Region 2, a facility's metal shop uses a nesting software program to help mate dissimilar parts into one blank of raw material. This reduces raw material use and waste, including material containing [copper](#). [[Click to view facility details in the P2 tool](#)].

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, and West Virginia.

Region 3 serves 5 states and District of Columbia



REGION 3'S
POPULATION IS
30.8 million
PEOPLE



U.S. Census Annual Estimates of the Resident Population: July 1, 2018

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

- Electric Utilities
- Primary Metals

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

- Nitrate compounds
- Sulfuric acid

U.S. EPA TRI, Reporting Year 2018

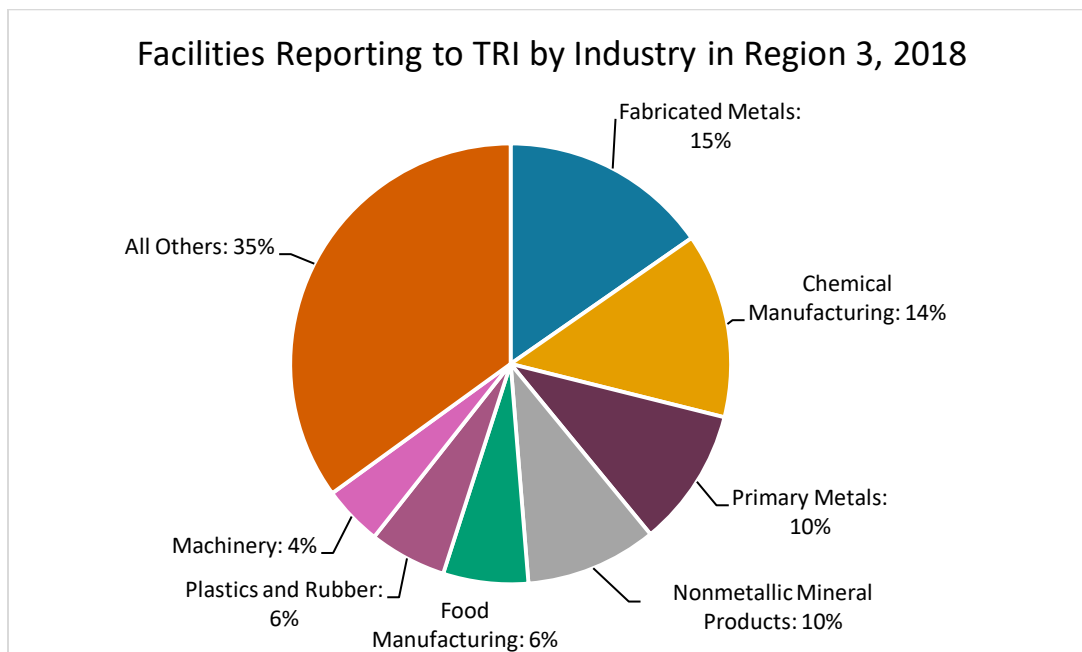
1,937 facilities in the region report to TRI

U.S. EPA TRI, Reporting Year 2018

Region 3 covers 9% of the US population and includes 9% of all facilities that report to TRI. For state-specific TRI data, [see the Where You Live section](#).

Industry Sectors

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



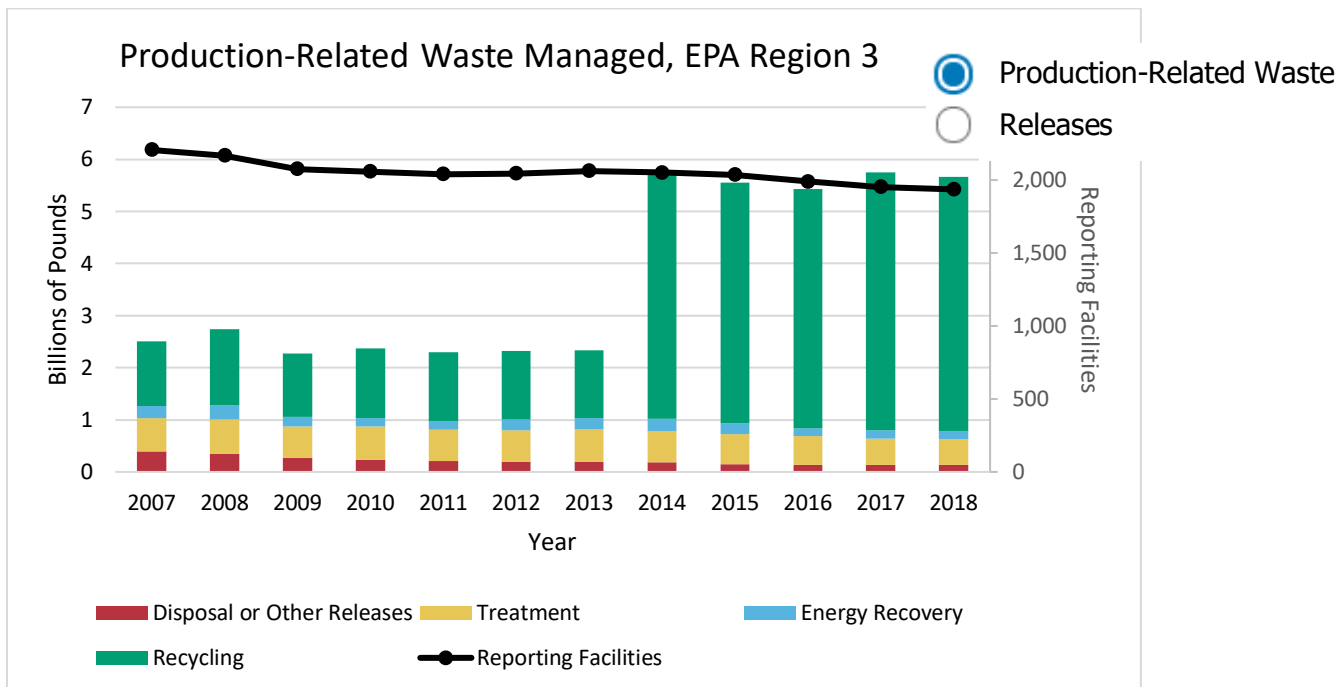
In 2018:

- 1,937 facilities in Region 3 reported to TRI. These facilities were most commonly in the fabricated metals (i.e., manufacture of metal products) or chemical manufacturing sectors. The number of facilities and sectors reporting for 2018 were similar to 2017 reporting for the region.
- Most releases in Region 3 were from the electric utilities, primary metals (including iron and steel manufacturing, and foundries), petroleum products manufacturing, and chemical manufacturing sectors. Note that relatively few facilities in the electric utilities and petroleum products sectors reported to TRI in this region and those sectors are included in "All Others" in the pie chart above. Nationwide, the metal mining, chemical manufacturing, electric utilities, and primary metals sectors reported the highest releases.

For information on the facilities with the greatest releases in the region, see the [Region 3 TRI Factsheet](#).

TRI Waste Management Trend

The following graph shows the annual quantities of TRI chemicals in production-related waste managed by facilities located in Region 3. For more details on quantities released, toggle to the Releases graph.



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

In 2018:

- Facilities reported managing 6.1 billion pounds of production-related waste, 80% of which was managed through recycling. Nationally, 53% of production-related waste was managed through recycling.
- Since 2017, quantities of production-related waste managed remained about the same.

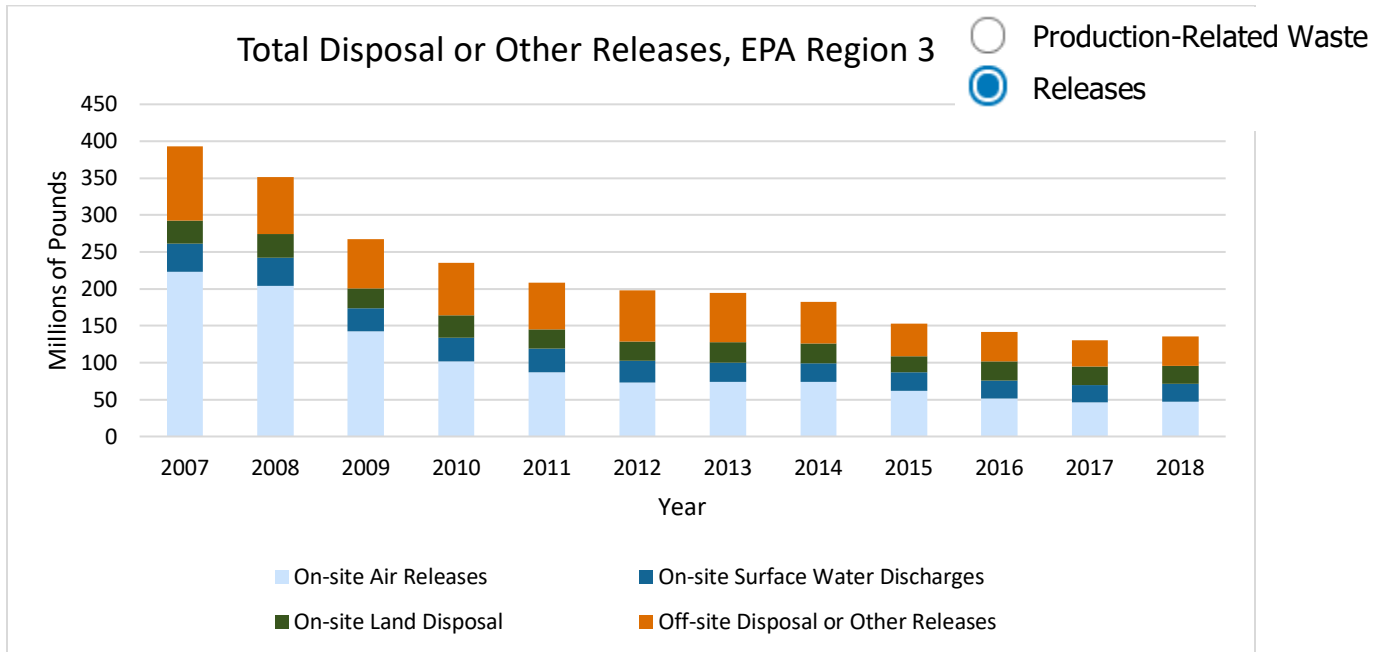
From 2007 to 2018:

- Total production-related waste managed increased by 3.1 billion pounds (126%), driven by one facility which reported over 3 billion pounds of cumene recycling each year from 2014 to 2018. [\[Click to view facility details in the P2 tool\]](#). Excluding this facility, production-related waste managed in the region decreased by 583 million pounds (23%).



- Nationally, quantities of production-related waste managed increased by 28% since 2007, driven by increased recycling.

The following graph shows the annual 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.

In 2018:

- Facilities reported 137 million pounds of releases.
- The chemicals released in the greatest quantities by medium were:
 - sulfuric acid, ammonia, and hydrochloric acid to air;
 - nitrate compounds to water;
 - manganese and manganese compounds and barium and barium compounds to land; and
 - zinc and zinc compounds and manganese and manganese compounds transferred off site for disposal.
- Since 2017, releases increased by 5.1 million pounds (4%). Releases increased to all media except land. Nationally, releases decreased by 3% since 2017.
 - The increase in releases was driven by increased releases from several sectors including primary metals, food manufacturing, and petroleum.
- Contribution by state to the Region 3 releases in pounds were: Pennsylvania (43%), Virginia (25%), West Virginia (23%), Delaware (5%), and Maryland (5%).

2018 Highlight

TRI releases in Region 3 increased from 2017 to 2018 after decreasing every year since 2007. The increase for 2018 was driven by several sectors including primary metals and petroleum products manufacturing.

- To consider the potential health risk from chronic exposure to these releases, EPA uses a [risk-screening score from the RSEI model](#). Contributions by state to the RSEI score for Region 3 were: Pennsylvania (67%), Virginia (14%), West Virginia (9%), Delaware (8%), and Maryland (1%).

From 2007 to 2018:

- Releases in Region 3 decreased by 258 million pounds (66%). Nationally, total disposal or other releases of TRI chemicals decreased by 9% since 2007.
- Quantities of chemicals released to every medium (air, water, land, and off-site transfers for disposal) decreased, with a 176 million pound reduction in air releases driving the overall decrease.

Source Reduction

In 2018, 6% of facilities in Region 3 (108 facilities) reported implementing new source reduction activities. Source reduction reporting rates in the region were among the highest in the plastics and rubber sector, where 12% of facilities reported source reduction activities. For example, a rubber products manufacturer changed the start time for a process to be based on production volume instead of production time, reducing the facility's [nitrate compound](#) consumption. [[Click to view facility details in the P2 tool](#)].

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.

Region 4 serves 8 states and 6 tribes



REGION 4'S
POPULATION IS
66.4 million
PEOPLE



U.S. Census Annual Estimates of the Resident Population: July 1, 2018

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

- Chemicals
- Paper

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

- Nitrate compounds
- Zinc and zinc compounds

U.S. EPA TRI, Reporting Year 2018

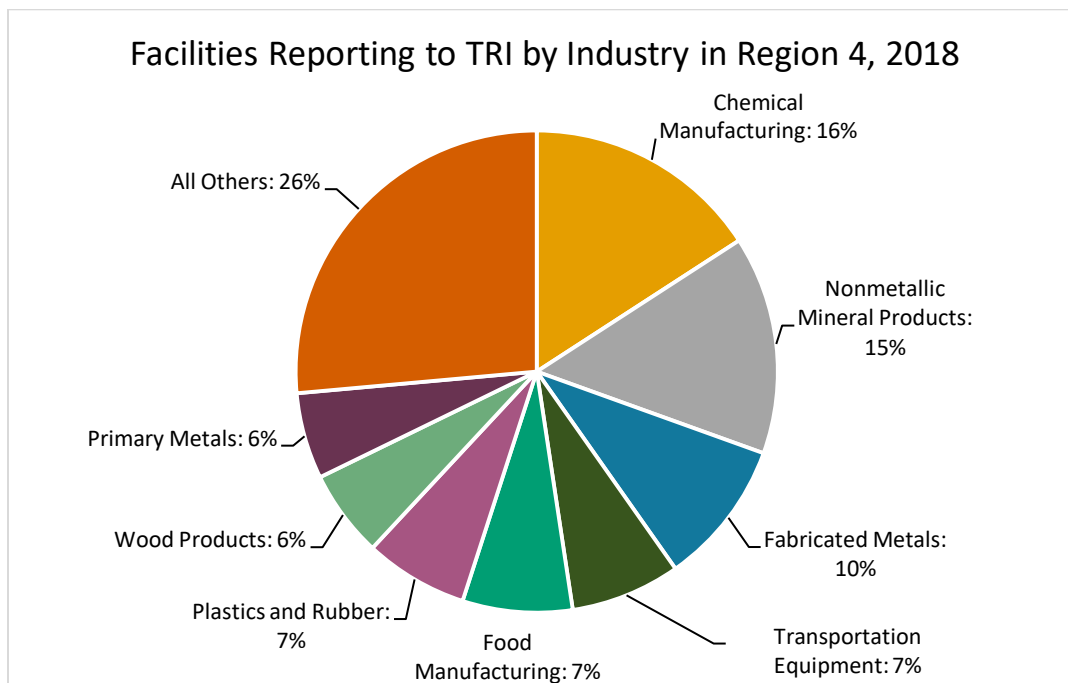
4,596 facilities in the region report to TRI

U.S. EPA TRI, Reporting Year 2018

Region 4 covers 20% of the US population and includes 21% of all facilities that report to TRI. 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.



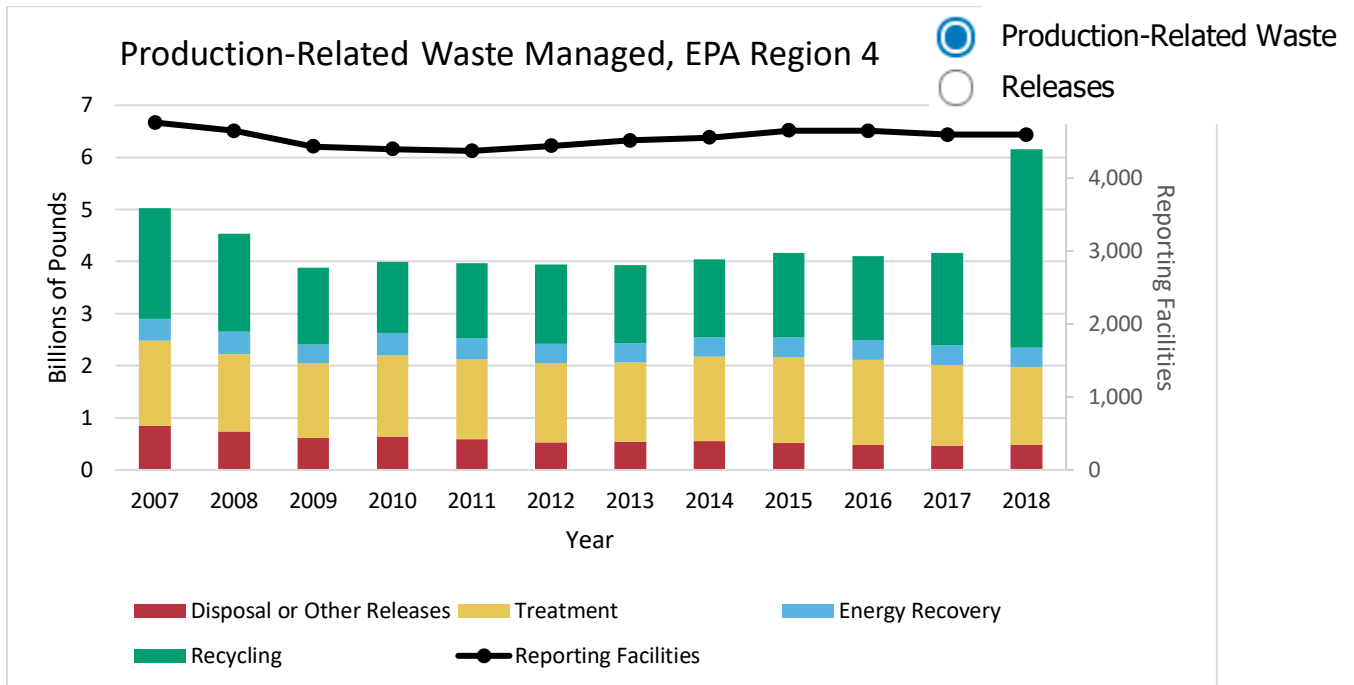
In 2018:

- 4,596 facilities in Region 4 reported to TRI. These facilities were most commonly in the chemical manufacturing or nonmetallic mineral products (including cement and concrete manufacturing) sectors. The number of facilities and sectors reporting for 2018 were similar to 2017 reporting for the region.
- Most releases in Region 4 were from the chemical manufacturing, paper manufacturing, electric utilities, and primary metals (including iron and steel mills) 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 Others" in the pie chart above. Nationwide, the metal mining, chemical manufacturing, electric utilities, and primary metals sectors reported the highest releases.

For information on the facilities with the greatest releases in the region, see the [Region 4 TRI Factsheet](#).

TRI Waste Management Trend

The following graph shows the annual quantities of TRI chemicals in production-related waste managed by facilities located in Region 4. For more details on quantities released, toggle to the Releases graph.



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

In 2018:

- Facilities reported managing 6.3 billion pounds of production-related waste, 61% of which was managed through recycling. Nationally, 53% of production-related waste was managed through recycling.
- Since 2017, quantities of production-related waste managed increased by 46%, driven by one facility that reported recycling 2 billion pounds of dichloromethane for 2018. [\[Click to view facility details in the P2 tool\]](#).
 - Excluding that facility, production-related waste managed in Region 4 increased by 19 million pounds (<1%).

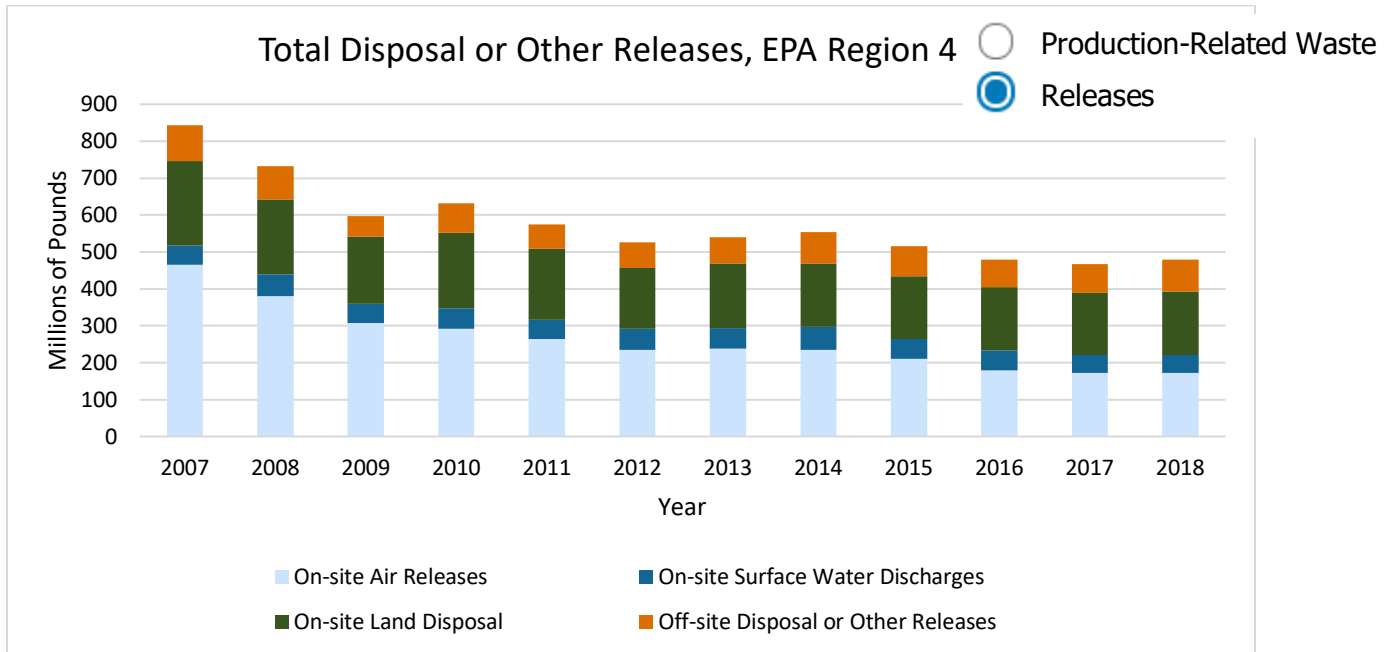
From 2007 to 2018:

- Total production-related waste managed increased by 1.1 billion pounds (22%), driven by one facility that reported recycling 2 billion pounds of dichloromethane for 2018.

Excluding this facility, production-related waste managed in the region decreased by 910 million pounds (18%). Quantities of waste managed by every method (i.e., recycling, treatment, energy recovery, and disposal and releases) decreased.

- Nationally, quantities of production-related waste managed increased by 28% since 2007, driven by increased recycling.

The following graph shows the annual 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.

In 2018:

- Facilities reported 491 million pounds of releases.
- The chemicals released in the greatest quantities by medium were:
 - methanol and ammonia to air;
 - nitrate compounds to water;
 - manganese and manganese compounds and zinc and zinc compounds to land; and
 - zinc and zinc compounds, manganese and manganese compounds, and nitrate compounds transferred off site for disposal.
- Since 2017, releases increased by 12.4 million pounds (3%), driven by increased off-site transfers for disposal. Nationally, releases decreased by 3% since 2017.
 - The increase in releases was driven by one facility which reported a 7.2 million pound increase in releases from 2017 to 2018 [[Click to view facility details in the P2 tool](#)].

2018 Highlight

On-site air releases in Region 4 decreased by 61% since 2007. The largest decrease in air releases was reported by electric utilities, which continued to report decreased air releases from 2017 to 2018.

- Contribution by state to the Region 4 releases in pounds were: Tennessee (18%), Alabama (17%), Mississippi (13%), Florida (13%), North Carolina (11%), Kentucky (10%), Georgia (10%), and South Carolina (8%).
- To consider the potential health risk from chronic exposure to these releases, EPA uses a [risk-screening score from the RSEI model](#). Contributions by state to the RSEI score for Region 4 were: Florida (60%), Tennessee (12%), North Carolina (7%), Georgia (6%), Alabama (6%), South Carolina (5%), Kentucky (3%), and Mississippi (2%).

From 2007 to 2018:

- Releases in Region 4 decreased by 364 million pounds (43%). Nationally, releases of TRI chemicals decreased by 9% since 2007.
- Quantities of chemicals released to every medium (air, water, land, and off-site transfers for disposal) decreased, with the largest reduction in releases to air.

Source Reduction

In 2018, 5% of facilities in Region 4 (243 facilities) reported implementing new source reduction activities. Source reduction reporting rates in the region were among the highest in the computers and electronic products sector, where 18% of facilities reported source reduction activities. As one example of source reduction in Region 4, a railcar manufacturer in Alabama began purchasing low-[manganese](#) welding wire for use in production. [[Click to view facility details in the P2 tool](#)].

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.

Region 5 serves 6 states and 35 tribes



REGION 5'S
POPULATION IS
52.5 million
PEOPLE



U.S. Census Annual Estimates of the Resident Population: July 1, 2018

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

- Primary metals
- Electric utilities

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

- Zinc and zinc compounds
- Manganese and manganese compounds

U.S. EPA TRI, Reporting Year 2018

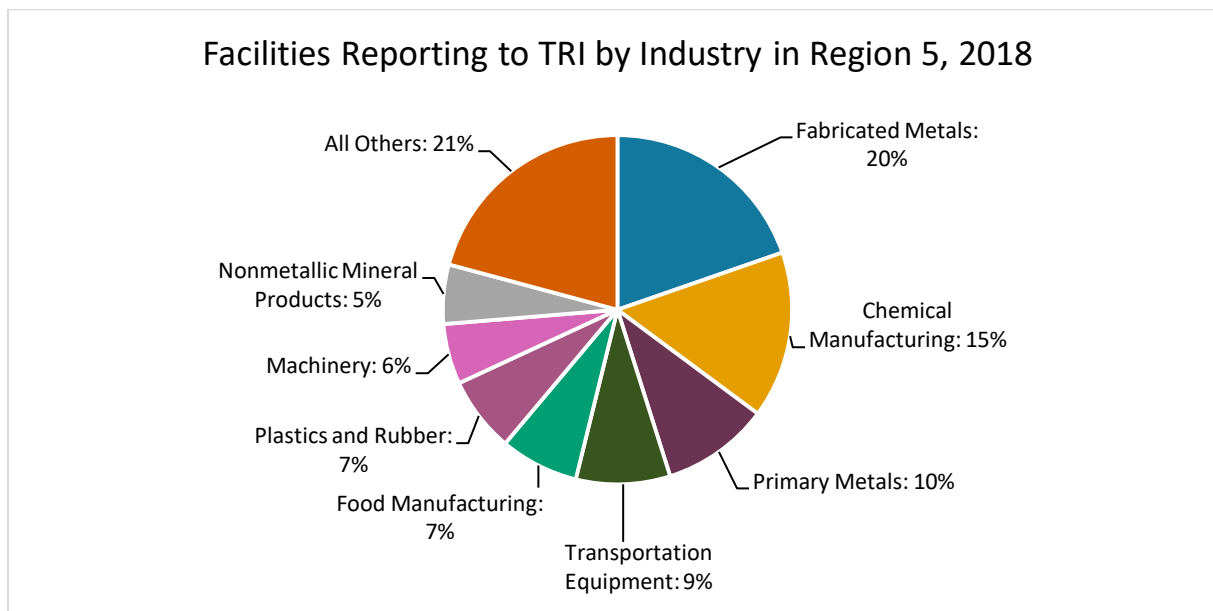
5,366 facilities in the region report to TRI

U.S. EPA TRI, Reporting Year 2018

Region 5 covers 16% of the US population and includes 25% of all facilities that report to TRI. 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.



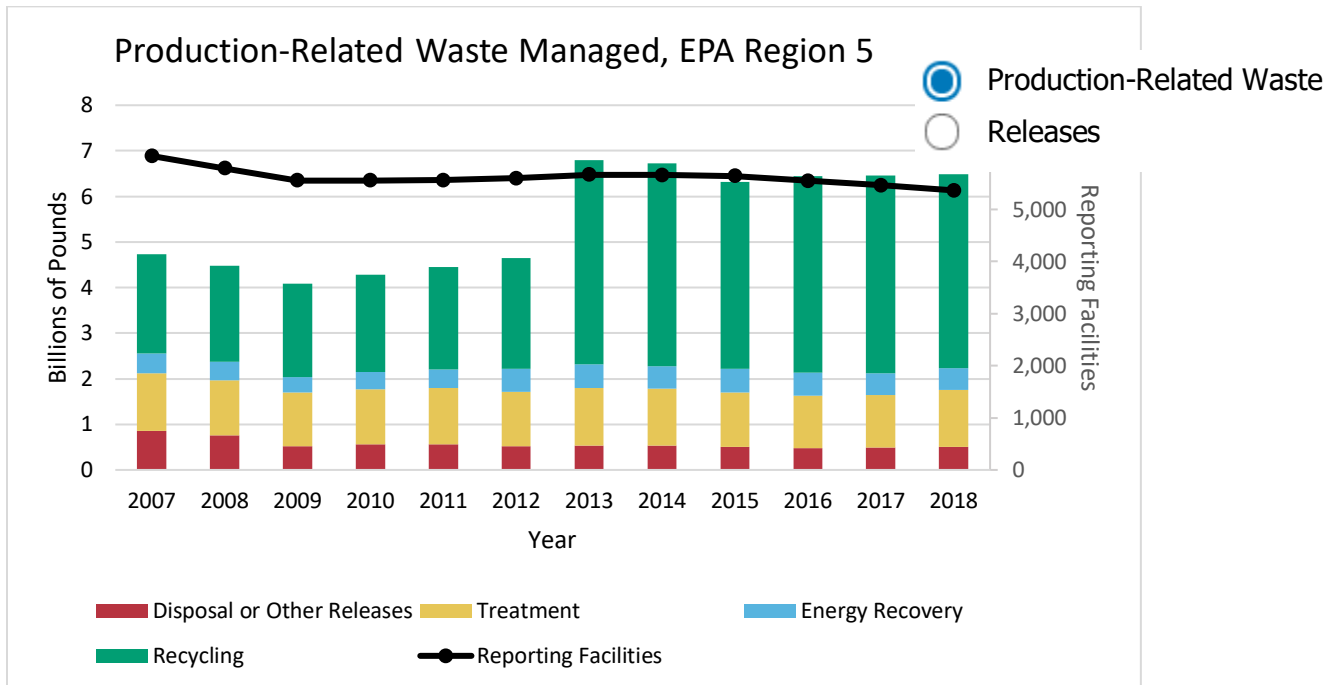
In 2018:

- 5,366 facilities in Region 5 reported to TRI. These facilities were most commonly in the fabricated metals (i.e., manufacture of metal products) or chemical manufacturing sectors. The number of facilities and sectors reporting for 2018 were similar to 2017 reporting for the region.
- Most releases in Region 5 were from the primary metals (including iron and steel manufacturing, and foundries), electric utilities, hazardous waste management, and chemical manufacturing 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 Others" in the pie chart above. Nationwide, the metal mining, chemical manufacturing, electric utilities, primary metals, and hazardous waste management sectors reported the highest releases.

For information on the facilities with the greatest releases in the region, see the [Region 5 TRI Factsheet](#).

TRI Waste Management Trend

The following graph shows the annual quantities of TRI chemicals in production-related waste managed by facilities located in Region 5. For more details on quantities released, toggle to the Releases graph.



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

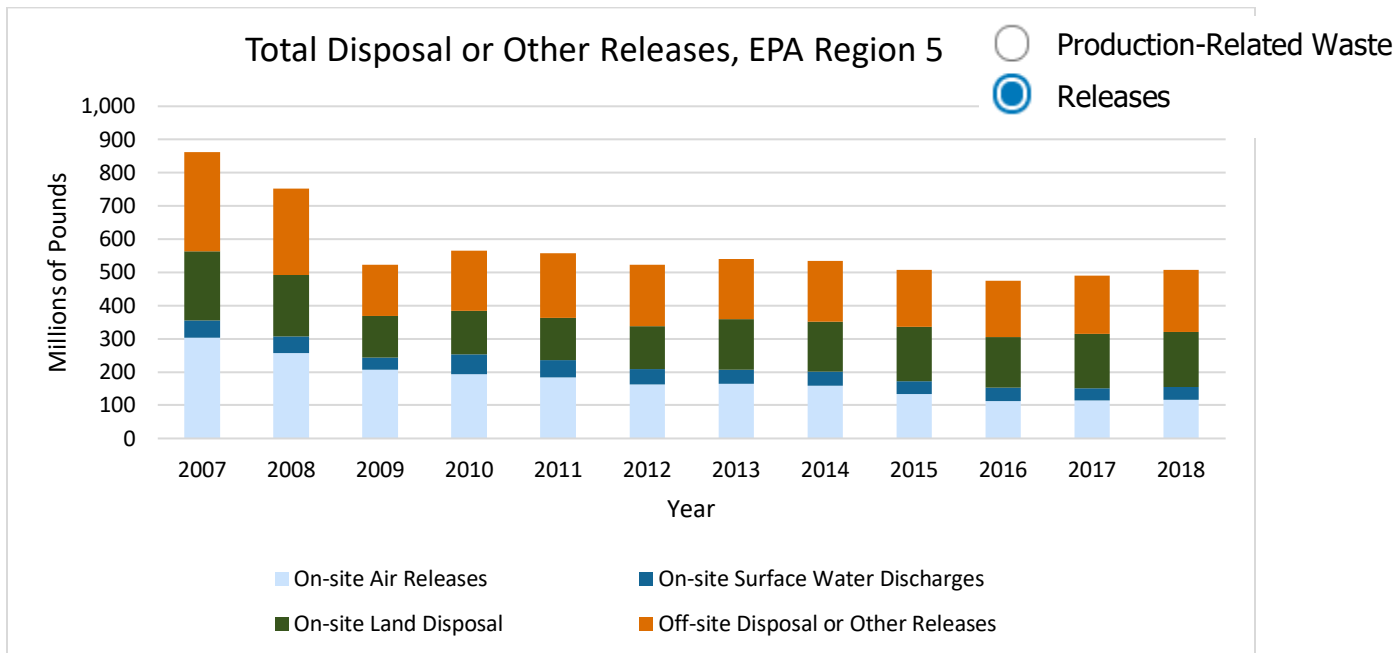
In 2018:

- Facilities reported managing 6.5 billion pounds of production-related waste, 65% of which was managed through recycling. Nationally, 53% of production-related waste was managed through recycling.
- Since 2017, quantities of production-related waste managed remained about the same.

From 2007 to 2018:

- Total production-related waste managed increased by 1.8 billion pounds (37%), driven by one facility which reported more than 1.6 billion pounds of dichloromethane recycling every year from 2013 to 2018 [[Click to view facility details in the P2 tool](#)]. Excluding this facility, production-related waste managed in the region increased by 154 million pounds (3%). Nationally, quantities of production-related waste managed increased by 28% since 2007, driven by increased recycling.

The following graph shows the annual 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.

In 2018:

- Facilities reported 509 million pounds of releases.
- The chemicals released in the greatest quantities by medium were:
 - sulfuric acid and ammonia to air;
 - nitrate compounds to water;
 - barium and barium compounds and zinc and zinc compounds to land; and
 - zinc and zinc compounds and manganese and manganese compounds transferred off site for disposal.
- Since 2017, releases increased by 17.5 million pounds (4%). The increase in releases occurred across many sectors, with the largest increases in the primary metals and hazardous waste management sectors. Releases increased to all media. Nationally, releases decreased by 3% since 2017.
- Contribution by state to the Region 5 releases in pounds were: Indiana (26%), Illinois (24%), Ohio (23%), Michigan (16%), Wisconsin (6%), and Minnesota (5%).

2018 Highlight

Although releases in Region 5 have decreased since 2007, releases increased from 2017 to 2018. The increase in releases occurred across many sectors, and releases increased to all media.

- To consider the potential health risk from chronic exposure to these releases, EPA uses a [risk-screening score from the RSEI model](#). Contributions by state to the RSEI score for Region 5 were: Ohio (37%), Illinois (29%), Indiana (13%), Michigan (12%), Wisconsin (6%), and Minnesota (3%).

From 2007 to 2017:

- Releases in Region 5 decreased by 353 million pounds (41%). This decrease was driven by decreased releases by electric utilities and the primary metals sector. Nationally, total disposal or other releases of TRI chemicals decreased by 9% since 2007.
- Quantities of chemicals released to every medium (air, water, land, and off-site transfers for disposal) decreased, with the largest decreases in releases to air and off-site transfers for disposal.

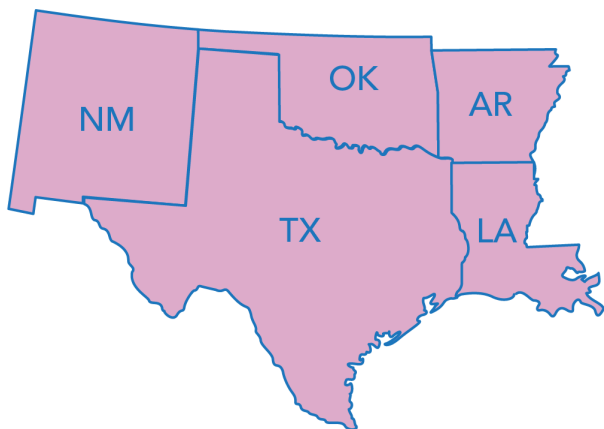
Source Reduction

In 2018, 6% of facilities in Region 5 (332 facilities) reported implementing new source reduction activities. Source reduction reporting rates in the region were among the highest in the computers and electronic products sector, where 17% of facilities reported source reduction activities. For example, a navigation systems manufacturer implemented additional nitrogen atmosphere soldering capability, reducing [lead](#) solder waste. [[Click to view facility details in the P2 tool](#)].

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 serves 5 states and 66 tribes



REGION 6'S
POPULATION IS
42.4 million
PEOPLE



U.S. Census Annual Estimates of the Resident Population: July 1, 2018

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

- Chemicals
- Paper

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

- Ammonia
- Methanol

U.S. EPA TRI, Reporting Year 2018

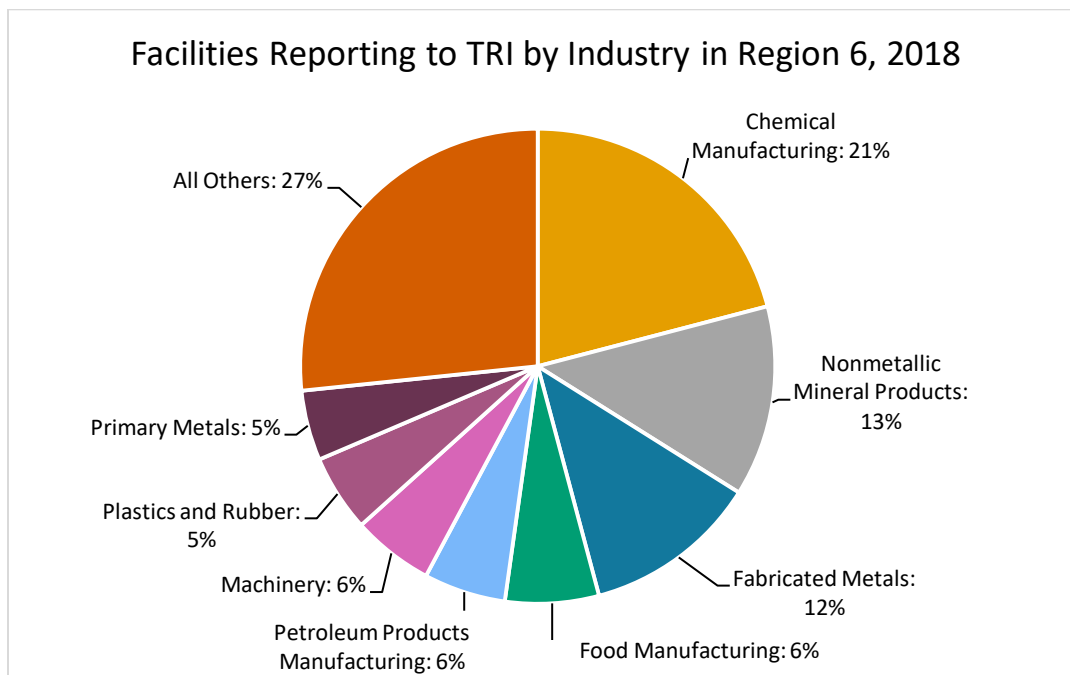
2,980 facilities in the region report to TRI

U.S. EPA TRI, Reporting Year 2018

Region 6 covers 13% of the US population and includes 14% of all facilities that report to TRI. 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 may not sum to 100% due to rounding.

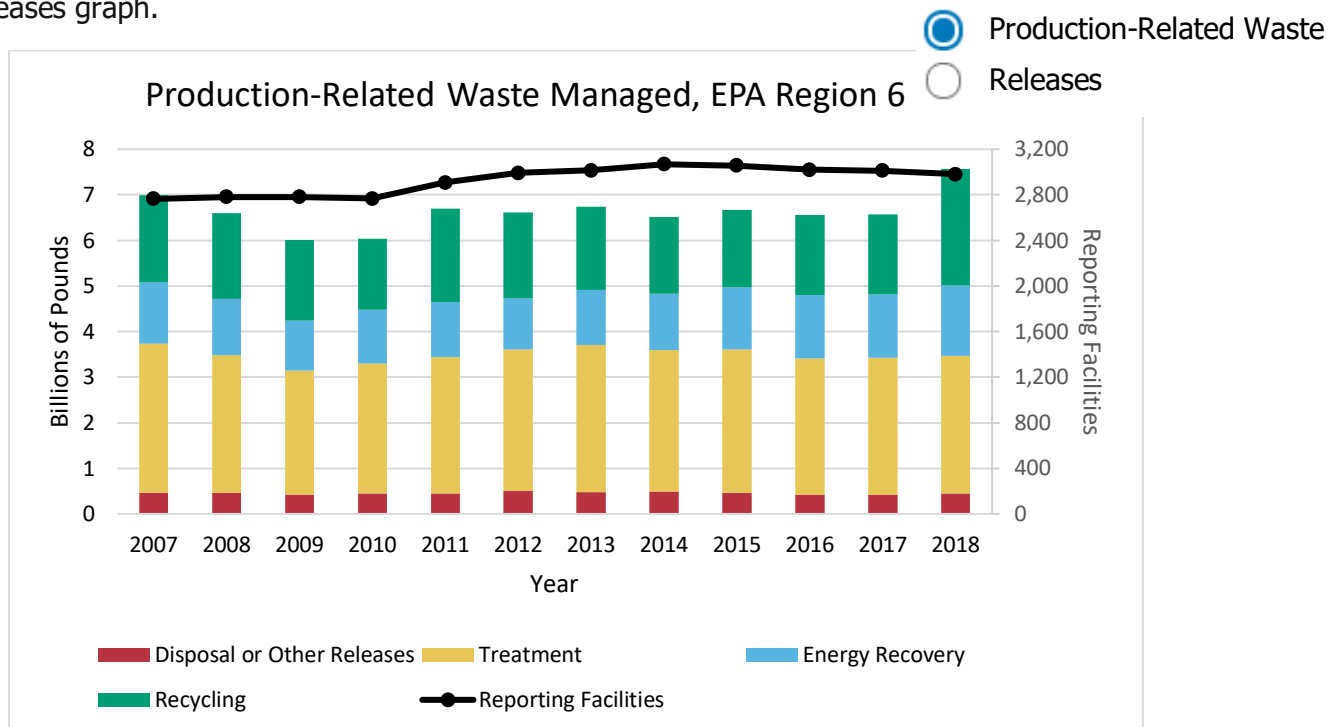
In 2018:

- 2,980 facilities in Region 6 reported to TRI. These facilities were most commonly in the chemical manufacturing or nonmetallic mineral products (including concrete manufacturing) sectors. The number of facilities and sectors reporting for 2018 were similar to 2017 reporting for the region.
- Most releases in Region 6 were from the chemical manufacturing, paper manufacturing, electric utilities, and petroleum products manufacturing 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 Others" in the pie chart above. Nationwide, the metal mining, chemical manufacturing, electric utilities, and primary metals (including iron and steel manufacturing, and foundries) sectors reported the highest releases.

For information on the facilities with the greatest releases in the region, see the [Region 6 TRI Factsheet](#).

TRI Waste Management Trend

The following graph shows the annual quantities of TRI chemicals in production-related waste managed by facilities located in Region 6. For more details on quantities released, toggle to the Releases graph.



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

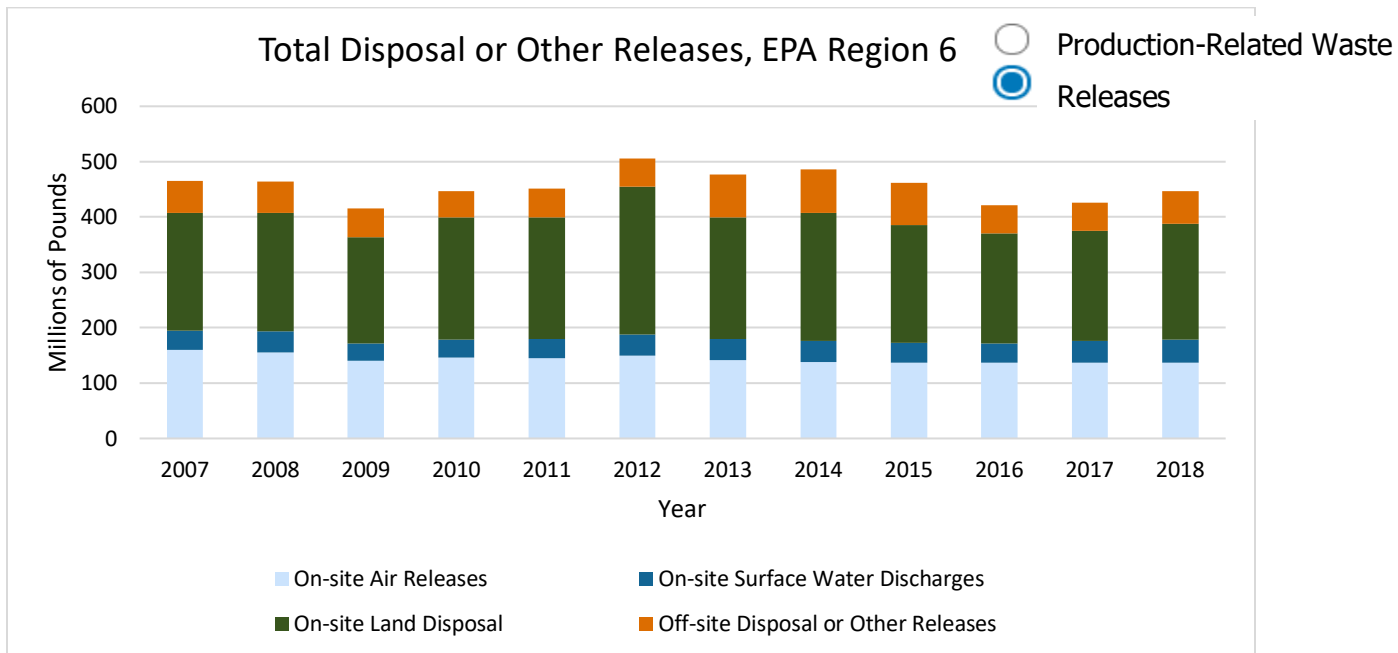
In 2018:

- Facilities reported managing 7.9 billion pounds of production-related waste, 41% of which was managed through treatment and 20% of which was combusted for energy recovery. Nationally, 26% of production-related waste was managed through treatment and 10% was combusted for energy recovery.
- Since 2017, quantities of production-related waste managed increased by 14%, driven by one facility that reported recycling 562 million pounds of n-hexane and cyclohexane in 2018 [[Click to view facility details in the P2 tool](#)].
 - Excluding that facility, production-related waste managed in Region 6 increased by 433 million pounds (6%). Releases reported by most sectors increased, with the largest increases reported by the primary metals and hazardous waste [management](#) sectors. Quantities of production-related waste combusted for energy recovery, recycled, and released all increased.

From 2007 to 2018:

- Total production-related waste managed increased by 575 million pounds (8%), driven by one facility which reported 562 million pounds of recycling for 2018. Excluding this facility, quantities of production-related waste managed in the region were about the same in 2018 as 2007.
- Nationally, quantities of production-related waste managed increased by 28% since 2007, driven by increased recycling.

The following graph shows the annual 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.

In 2018:

- Facilities reported 466 million pounds of releases.
- The chemicals released in the greatest quantities by medium were:
 - ammonia and methanol to air;
 - nitrate compounds to water;
 - ammonia and barium and barium compounds to land; and
 - zinc and zinc compounds and methanol transferred off site for disposal.
- Since 2017, releases increased by 27 million pounds (6%) across media. Nationally, releases decreased by 3% since 2017.
- Contribution by state to the Region 6 releases in pounds were: Texas (49%), Louisiana (32%), Arkansas (8%), Oklahoma (7%), and New Mexico (4%).
- To consider the potential health risk from chronic exposure to these releases, EPA uses a [risk-screening score from the RSEI model](#). Contributions by state to the RSEI score for Region 6 were: Texas (93%), Louisiana (5%), Arkansas (1%), Oklahoma (1%), and New Mexico (<1%).

2018 Highlight

Releases decreased from 2007 to 2018 and continued to decrease from 2017 to 2018 in the coal mining, electric utilities, paper, and petroleum products manufacturing sectors, among others.

From 2007 to 2018:

- Releases in Region 6 decreased by 18.4 million pounds (4%). Nationally, total disposal or other releases of TRI chemicals decreased by 9% since 2007.
- Quantities of chemicals released to air and land decreased, while releases to water and off-site transfers for disposal increased.

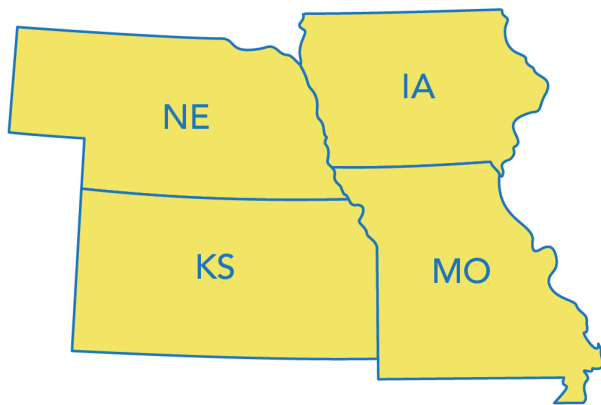
Source Reduction

In 2018, 5% of facilities in Region 6 (153 facilities) reported implementing new source reduction activities. As one example of source reduction in Region 6, a petroleum products manufacturer removed [toluene](#) from its lubricant formulas as part of an overall product strategy. It reported that all toluene had been removed from the manufacturing plant as of November 2018. [[Click to view facility details in the P2 tool](#)].

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.

Region 7 serves 4 states and 9 tribes



REGION 7'S
POPULATION IS

14.1 million
PEOPLE



U.S. Census Annual Estimates of the Resident Population: July 1, 2018

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

- Electric utilities
- Food

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

- Barium and barium compounds
- Nitrate compounds

U.S. EPA TRI, Reporting Year 2018

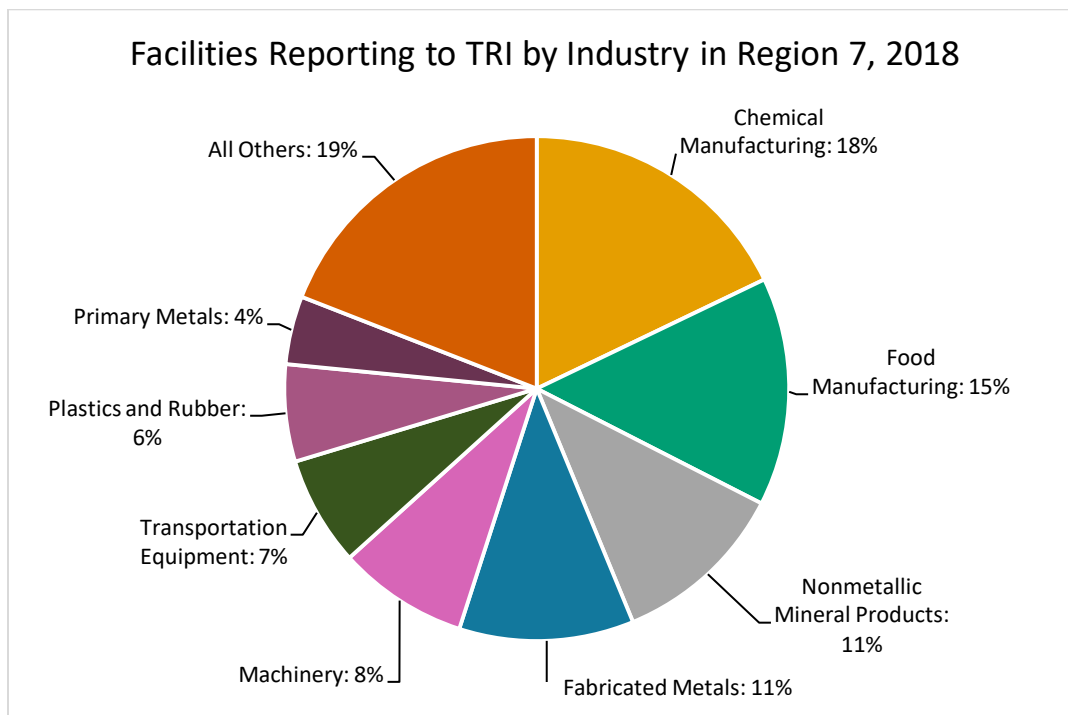
1,507 facilities in the region report to TRI

U.S. EPA TRI, Reporting Year 2018

Region 7 covers 4% of the US population and includes 7% of all facilities that report to TRI. 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 may not sum to 100% due to rounding.

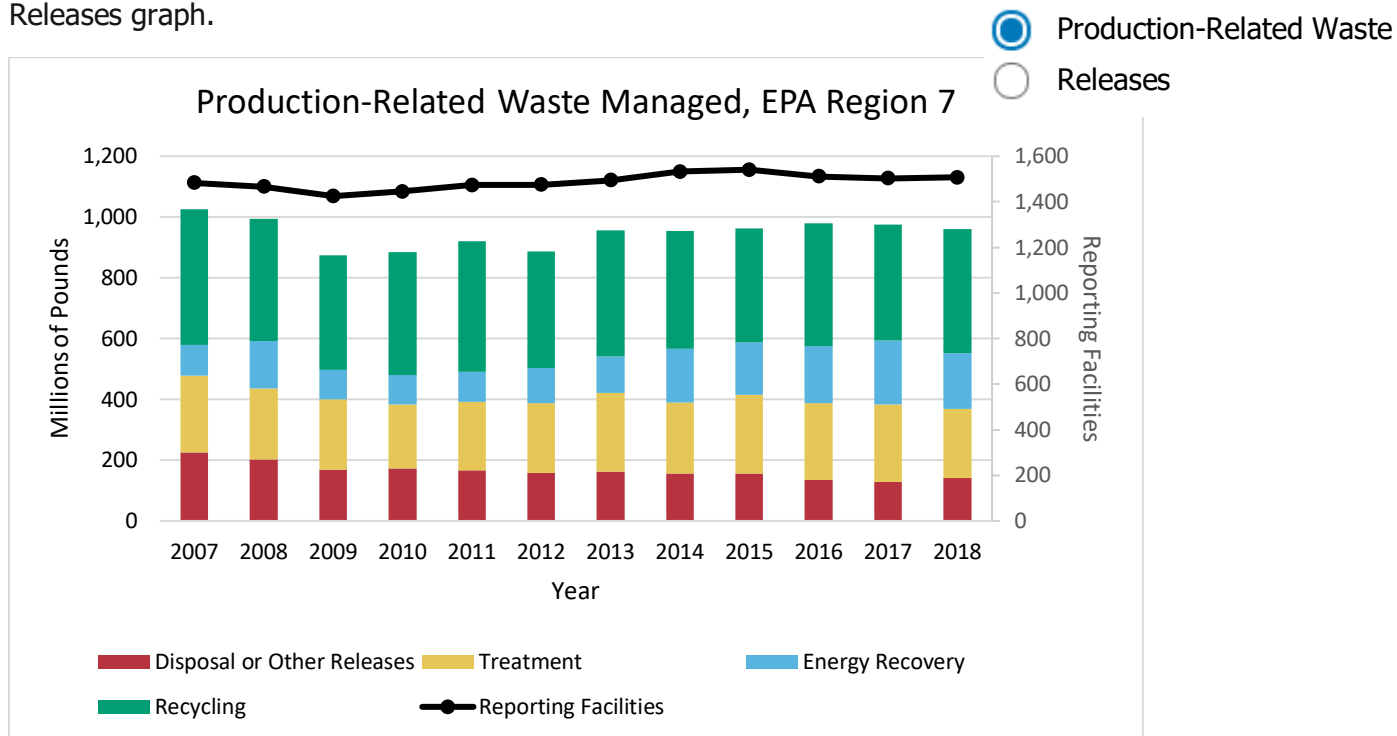
In 2018:

- 1,507 facilities in Region 7 reported to TRI. These facilities were most commonly in the chemical manufacturing or food manufacturing sectors. The number of facilities and sectors reporting for 2018 were similar to 2017 reporting for the region.
- Most releases in Region 7 were from the electric utilities, food manufacturing, metal mining, and chemical manufacturing 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 Others" in the pie chart above. Nationwide, the metal mining, chemical manufacturing, electric utilities, and primary metals (including iron and steel manufacturing, and foundries) sectors reported the highest releases.

For information on the facilities with the greatest releases in the region, see the [Region 7 TRI Factsheet](#).

TRI Waste Management Trend

The following graph shows the annual quantities of TRI chemicals in production-related waste managed by facilities located in Region 7. For more details on quantities released, toggle to the Releases graph.



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

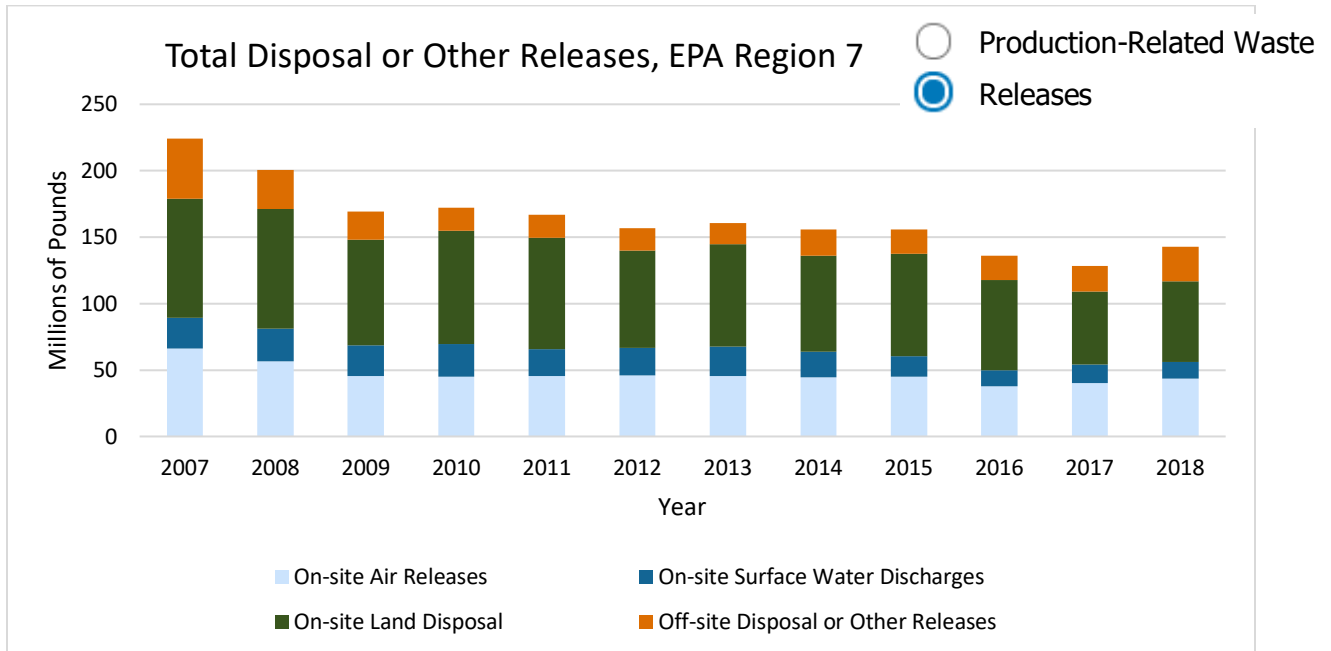
In 2018:

- Facilities reported managing 1 billion pounds of production-related waste, 17% of which was combusted for energy recovery. Nationally, 10% of production-related waste was combusted for energy recovery.
- Since 2017, quantities of production-related waste managed decreased by 5%.

From 2007 to 2018:

- Total production-related waste managed decreased by 66 million pounds (6%). Quantities of waste recycled, treated, and disposed of or otherwise released all decreased, while quantities of waste combusted for energy recovery increased. Nationally, quantities of production-related waste managed increased by 28% since 2007, driven by increased recycling.

The following graph shows the annual 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.

In 2018:

- Facilities reported 144 million pounds of releases.
- The chemicals released in the greatest quantities by medium were:
 - ammonia and n-hexane to air;
 - nitrate compounds to water;
 - barium and barium compounds and lead and lead compounds to land; and
 - nitrate compounds and barium and barium compounds transferred off site for disposal.
- Since 2017, releases increased by 14 million pounds (11%). Releases increased to all media except water. Nationally, releases decreased by 3% since 2017.
- Contribution by state to the Region 7 releases in pounds were: Missouri (42%), Iowa (28%), Kansas (17%), and Nebraska (13%).
- To consider the potential health risk from chronic exposure to these releases, EPA uses a [risk-screening score from the RSEI model](#). Contributions by state to the RSEI score for Region 7 were: Kansas (35%), Missouri (35%), Iowa (24%), and Nebraska (6%).

2018 Highlight

Although releases in Region 7 have decreased since 2007, releases increased for 2018 due to increased releases in the electric utilities, food manufacturing, metal mining, and chemical manufacturing sectors.

From 2007 to 2018:

- Releases in Region 7 decreased by 81 million pounds (36%). This decrease was driven by decreased releases in the primary metals and metal mining sectors. Nationally, total disposal or other releases of TRI chemicals decreased by 9% since 2007.
- Quantities of chemicals released to every medium (air, water, land, and off-site transfers for disposal) decreased.

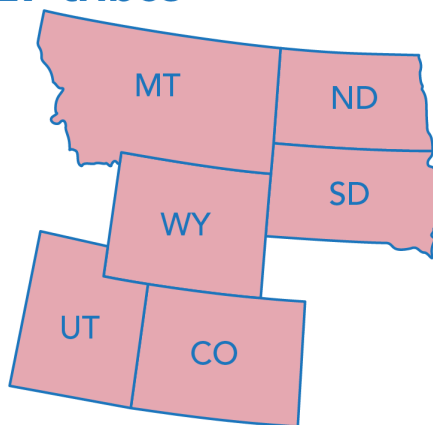
Source Reduction

In 2018, 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 chemical manufacturing sector, where 8% of facilities reported source reduction activities. For example, an organic chemical manufacturer changed equipment and software controls to better control [ammonia](#) dosing. [[Click to view facility details in the P2 tool](#)].

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 27 tribes.

Region 8 serves 6 states and 27 tribes



REGION 8'S
POPULATION IS

12.1 million
PEOPLE



U.S. Census Annual Estimates of the Resident Population: July 1, 2018

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

- Metal mining
- Electric utilities

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

- Lead and lead compounds
- Copper and copper compounds

U.S. EPA TRI, Reporting Year 2018

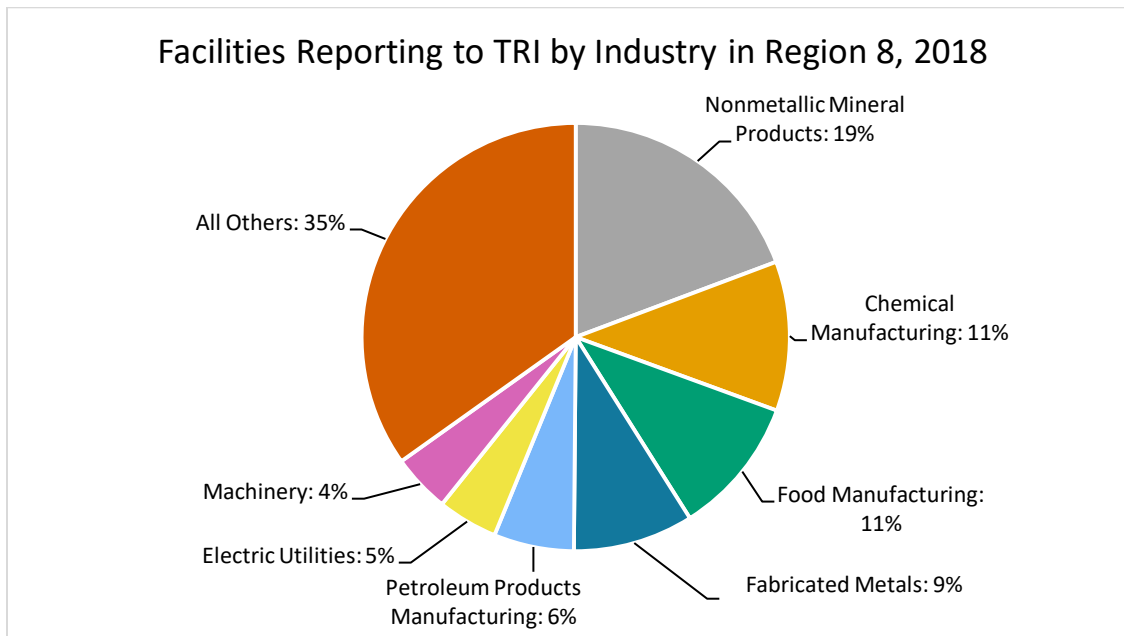
722 facilities in the region report to TRI

U.S. EPA TRI, Reporting Year 2018

Region 8 covers 4% of the US population and includes 3% of all facilities that report to TRI. 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 may not sum to 100% due to rounding.

In 2018:

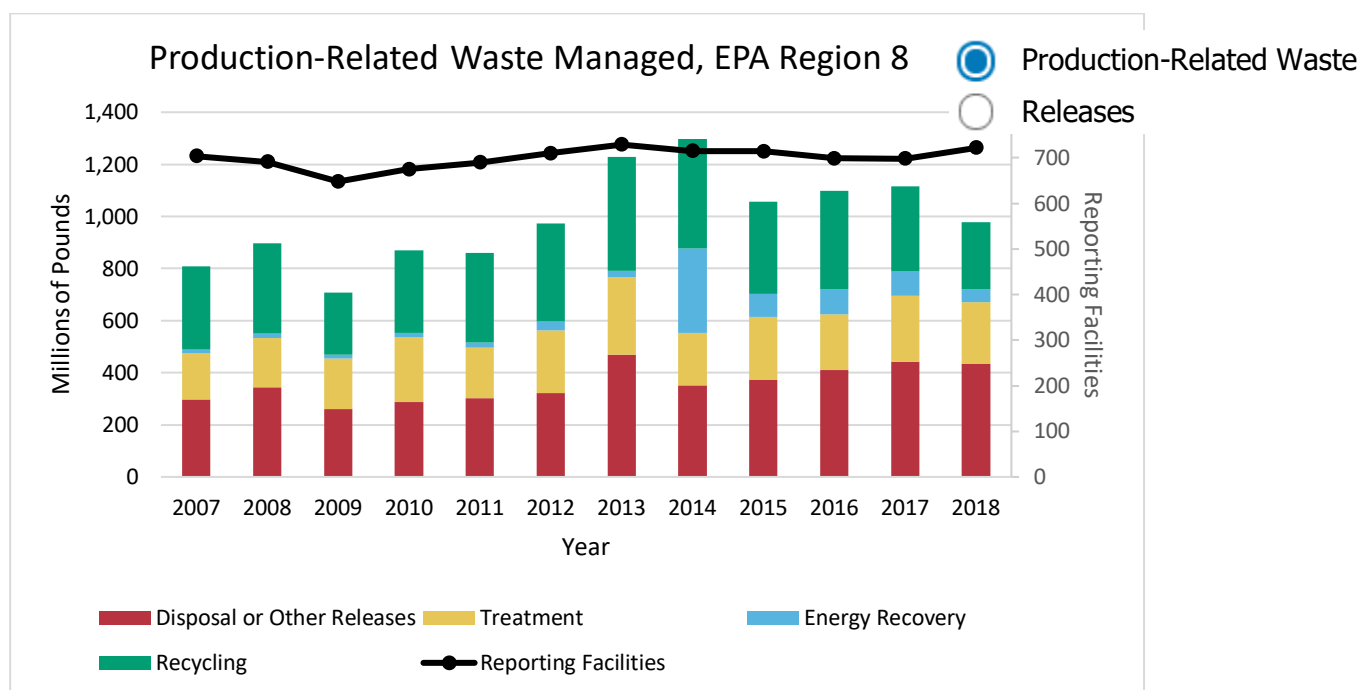
- 722 facilities in Region 8 reported to TRI. These facilities were most commonly in the nonmetallic mineral products (including concrete manufacturing), chemical manufacturing, or food manufacturing sectors. The number of nonmetallic mineral product facilities reporting for 2018 increased by 24 facilities (a 21% increase in the number of facilities reporting for that sector) from 2017. The number of facilities reporting from other sectors for 2018 was similar to the reporting for 2017 in the region.
- Most releases in Region 8 were from the metal mining sector, which accounted for 66% of releases reported in the region. After metal mining, the electric utilities, primary metals (including smelters), and chemical manufacturing sectors reported the highest 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 Others” in the pie chart above. Nationwide, the metal mining, chemical manufacturing, electric utilities, and primary metals sectors reported the highest releases.

- Metal mining facilities typically handle large volumes of material. In this sector, even a small change in the chemical composition of the mineral deposit being mined can lead to big changes in the amount of TRI-listed chemicals reported. Therefore releases in Region 8, where 13 metal mines reported to TRI for 2018, may differ from national trends. For more information on the metal mining sector, see the [metal mining sector profile](#).

For information on the facilities with the greatest releases in the region, see the [Region 8 TRI Factsheet](#).

TRI Waste Management Trend

The following graph shows the annual quantities of TRI chemicals in production-related waste managed by facilities located in Region 8. For more details on quantities released, toggle to the Releases graph.



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

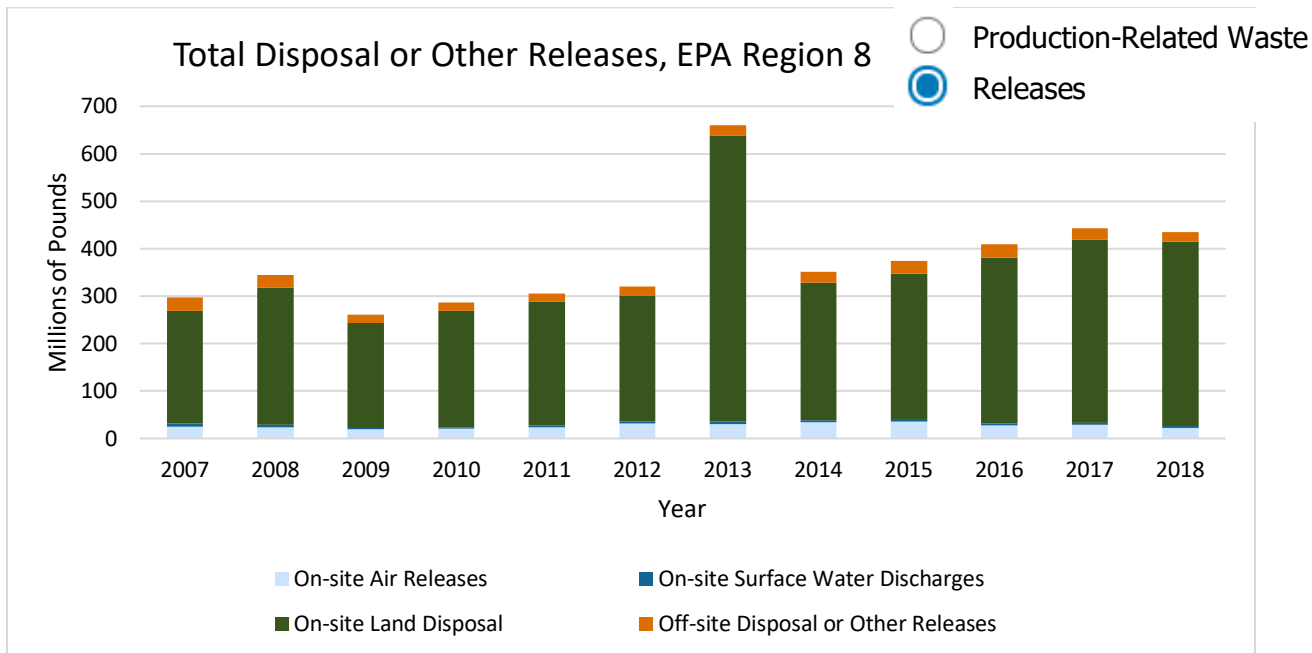
In 2018:

- Facilities reported managing 989 million pounds of production-related waste, 44% of which was disposed of or otherwise released. Nationally, 12% of production-related waste was disposed of or otherwise released. The high proportion of production-related waste that is released in Region 8 is driven by metal mines, which disposed of or otherwise released 99% of their production-related waste for 2018.
- Since 2017, quantities of production-related waste managed decreased by 12%. The greatest reductions were in recycling and energy recovery. The reductions in recycling were largely driven by one metal smelter, while the reduction in energy recovery was driven by a petroleum refinery.

From 2007 to 2018:

- Total production-related waste managed increased by 170 million pounds (21%), driven by increased disposal from the metal mining sector. Excluding the metal mining sector, production-related waste managed in Region 8 increased by 55 million pounds (9%). Nationally, quantities of production-related waste managed increased by 28% since 2007, driven by increased recycling.

The following graph shows the annual 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.

In 2018:

- Facilities reported 435 million pounds of releases.
- The chemicals released in the greatest quantities by medium were:
 - ammonia and chlorine to air;
 - nitrate compounds to water;
 - lead and lead compounds and copper and copper compounds to land; and
 - barium and barium compounds transferred off site for disposal.
- Since 2017, releases decreased by 7.5 million pounds (2%). Releases decreased to all media except land. Nationally, releases decreased by 3% since 2017.
- Contribution by state to the Region 8 releases in pounds were: Utah (67%), Montana (12%), North Dakota (9%), Colorado (6%), Wyoming (5%), and South Dakota (2%).
- To consider the potential health risk from chronic exposure to these releases, EPA uses a [risk-screening score from the RSEI model](#). Contributions by state to the RSEI score for

2018 Highlight

For 2018, 66% of total disposal or other releases reported in Region 8 were from the metal mining sector, and one copper mining facility in Utah reported more than half of the Region’s releases [[view facility details](#)].

Region 8 were: Colorado (55%), Utah (39%), Montana (3%), North Dakota (3%), South Dakota (1%), and Wyoming (<1%).

From 2007 to 2018:

- Releases in Region 8 increased by 138 million pounds (47%). This increase was driven by increased land disposal by the metal mining sector. Excluding metal mining, releases in Region 8 increased by 22 million pounds (17%) since 2007. Nationally, total disposal or other releases of TRI chemicals decreased by 9% since 2007.
- Quantities of chemicals released to every medium except land decreased.

Source Reduction

In 2018, 6% of facilities in Region 8 (46 facilities) reported implementing new source reduction activities. Source reduction reporting rates in the region were among the highest in the machinery sector, where 13% of facilities reported source reduction activities. For example, a turbine manufacturer changed its blade production process so that only one of the two blade types requires [diisocyanates](#) for production. [[Click to view facility details in the P2 tool](#)].

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.

**Region 9 serves 4 states,
Pacific Islands, and 148 tribes**



REGION 9'S
POPULATION IS
51.2 million
PEOPLE



U.S. Census Annual Estimates of the Resident Population: July 1, 2018

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

- Metal mining
- Primary metals

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

- Arsenic and arsenic compounds
- Manganese and manganese compounds

U.S. EPA TRI, Reporting Year 2018

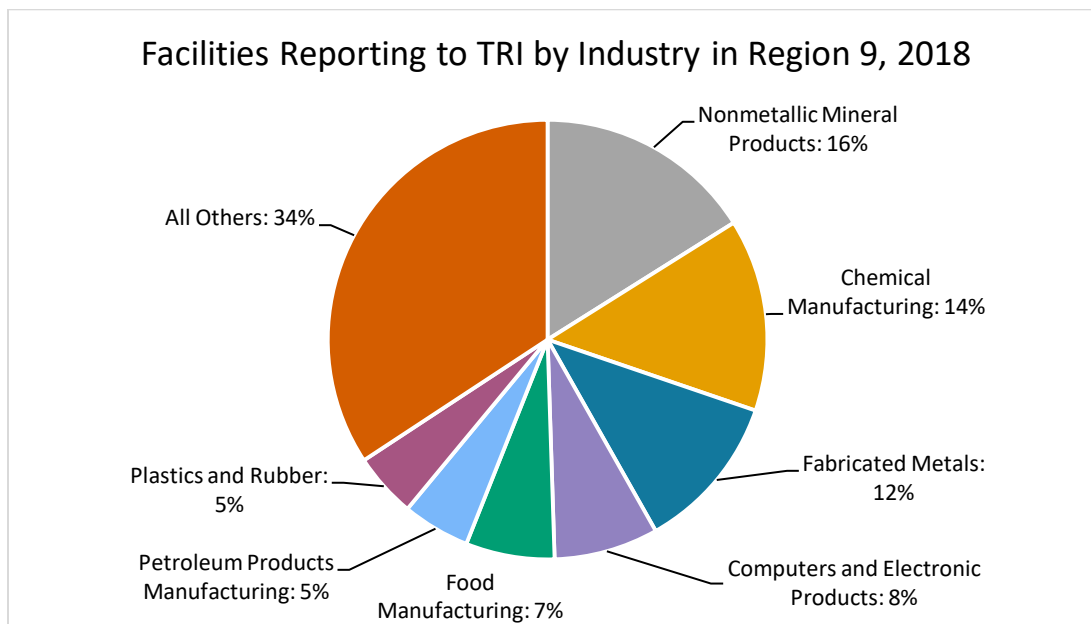
1,661 facilities in the region report to TRI

U.S. EPA TRI, Reporting Year 2018

Region 9 covers 15% of the US population and includes 8% of all facilities that report to TRI. 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 may not sum to 100% due to rounding.

In 2018:

- 1,661 facilities in Region 9 reported to TRI. These facilities were most commonly in the nonmetallic mineral products (including concrete and cement manufacturing) or chemical manufacturing sectors. The number of facilities and sectors reporting for 2018 were similar to 2017 reporting for the region.
- Most releases in Region 9 were from the metal mining sector, which accounted for 81% of the region's releases for 2018. After metal mining, the primary metals (including smelting), hazardous waste management, and petroleum products manufacturing sectors reported the highest 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 Others" in the pie chart above. Nationwide, the metal mining, chemical manufacturing, electric utilities, and primary metals sectors reported the highest releases.
 - Metal mining facilities typically handle large volumes of material. In this sector, even a small change in the chemical composition of the mineral deposit being

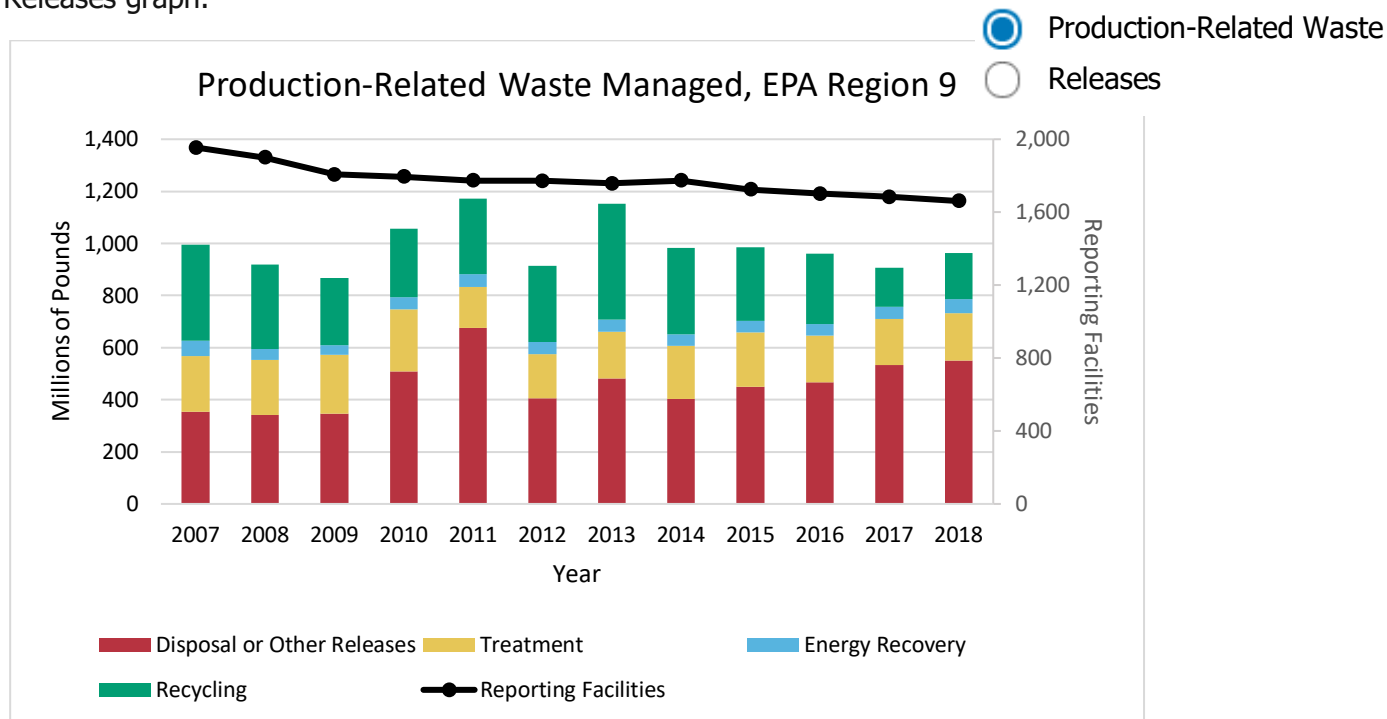


mined can lead to big changes in the amount of TRI-listed chemicals reported. Therefore releases in Region 9, where 41 metal mines reported to TRI for 2018, may not follow national trends. For more information on the metal mining sector, see the [metal mining sector profile](#).

For information on the facilities with the greatest releases in the region, see the [TRI Region 9 fact sheet](#).

TRI Waste Management Trend

The following graph shows the annual quantities of TRI chemicals in production-related waste managed by facilities located in Region 9. For more details on quantities released, toggle to the Releases graph.



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

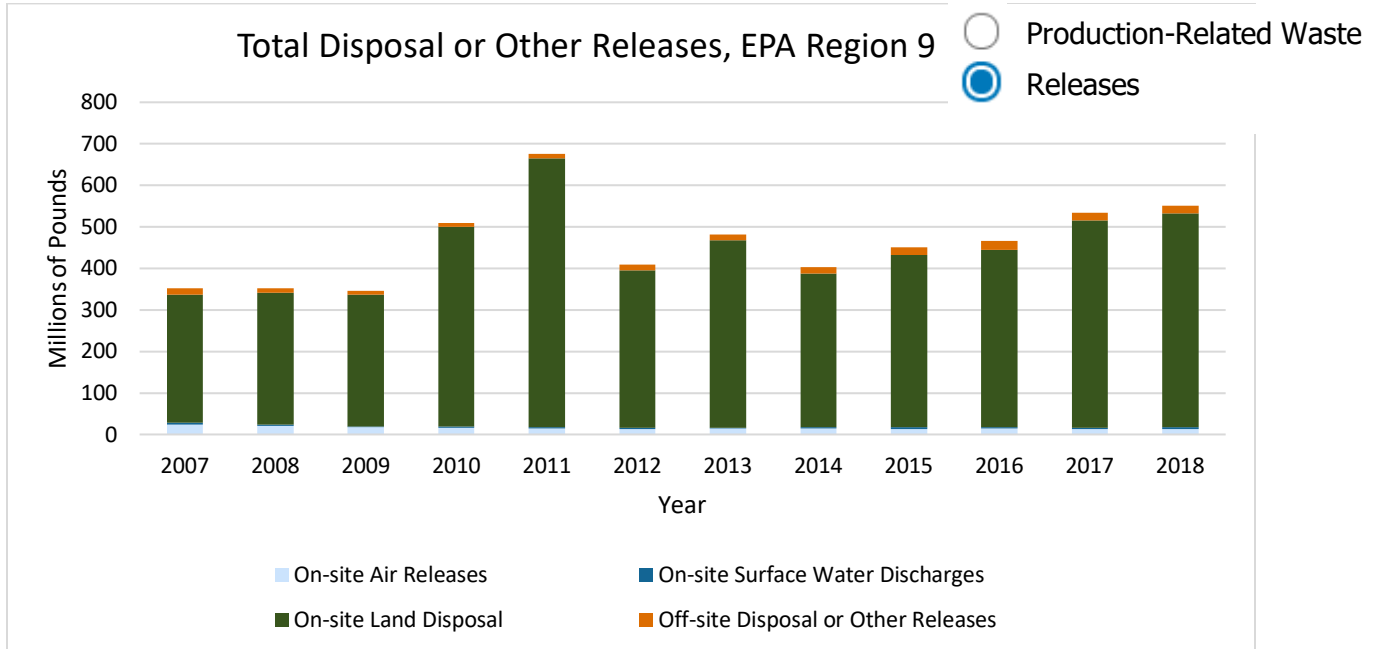
In 2018:

- Facilities reported managing 965 million pounds of production-related waste, 57% of which was disposed of or otherwise released. Nationally, 12% of production-related waste was disposed of or otherwise released. The high proportion of production-related waste that is released in Region 9 is driven by metal mines, which disposed of or otherwise released 93% of their production-related waste for 2018.
- Since 2017, quantities of production-related waste managed increased by 6%, driven by increased production-related waste managed in the primary metals and metal mining sectors.

From 2007 to 2018:

- Total production-related waste managed decreased by 32 million pounds (3%), driven by decreases in the primary metals sector. Nationally, quantities of production-related waste managed increased by 28% since 2007, driven by increased recycling.

The following graph shows the annual 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.

In 2018:

- Facilities reported 551 million pounds of releases.
- The chemicals released in the greatest quantities by medium were:
 - ammonia and sulfuric acid to air;
 - nitrate compounds to water;
 - arsenic and arsenic compounds and manganese and manganese compounds to land; and
 - nitrate compounds and manganese and manganese compounds transferred off site for disposal.
- Since 2017, releases increased by 16.3 million pounds (3%). Releases increased to all media, except off-site transfers for disposal. Nationally, releases decreased by 3% since 2017.
- Contribution by state to the Region 9 releases in pounds were: Nevada (62%), Arizona (31%), California (7%), and Hawaii (1%).
- To consider the potential health risk from chronic exposure to these releases, EPA uses a [risk-screening score from the RSEI model](#). Contributions by state to the RSEI score for Region 9 were: California (80%), Arizona (16%), Nevada (3%), and Hawaii (1%).

2018 Highlight

TRI releases in Region 9 are primarily from metal mines. Metal mines reported 81% of the region's releases for 2018.

From 2007 to 2018:

- Releases in Region 9 increased by 200 million pounds (57%), driven by increased releases reported by the metal mining sector, where releases often vary substantially from year to year. Excluding the metal mining sector, releases in Region 9 increased by 7 million pounds (7%). Nationally, total disposal or other releases of TRI chemicals decreased by 9% since 2007.
- Quantities of chemicals released to air and water decreased, while land disposal and off-site transfers for disposal increased.

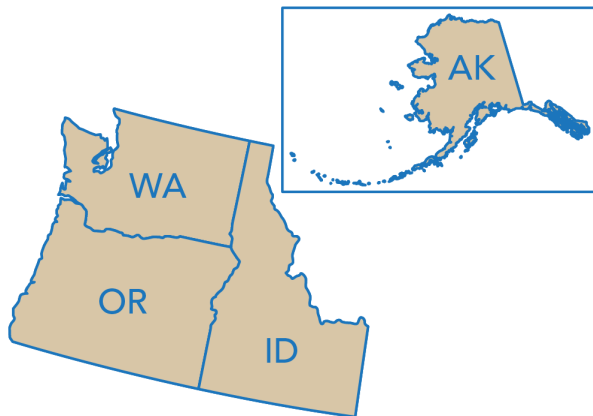
Source Reduction

In 2018, 6% of facilities in Region 9 (103 facilities) reported implementing new source reduction activities. Source reduction reporting rates in the region were among the highest in the electrical equipment sector, where 16% of facilities reported at least one source reduction activity. For example, a storage battery manufacturer improved its single shot method of delivering electrolyte in formation to reduce its use of raw materials containing [lead compounds](#). [[Click to view facility details in the P2 tool](#)].

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.

Region 10 serves 4 states and 271 tribes



REGION 10'S
POPULATION IS
14.2 million
PEOPLE



U.S. Census Annual Estimates of the Resident Population: July 1, 2018

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

- Metal mining
- Chemicals

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

- Lead and lead compounds
- Zinc and zinc compounds

U.S. EPA TRI, Reporting Year 2018

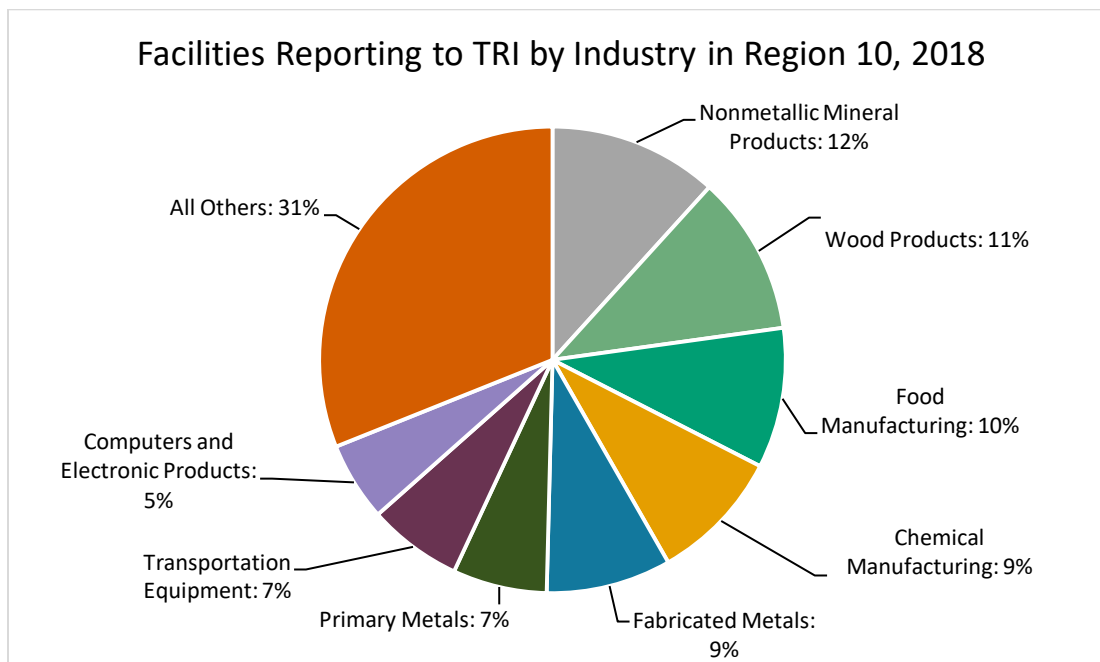
747 facilities in the region report to TRI

U.S. EPA TRI, Reporting Year 2018

Region 10 covers 4% of the US population and includes 3% of all facilities that report to TRI. 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 may not sum to 100% due to rounding.

In 2018:

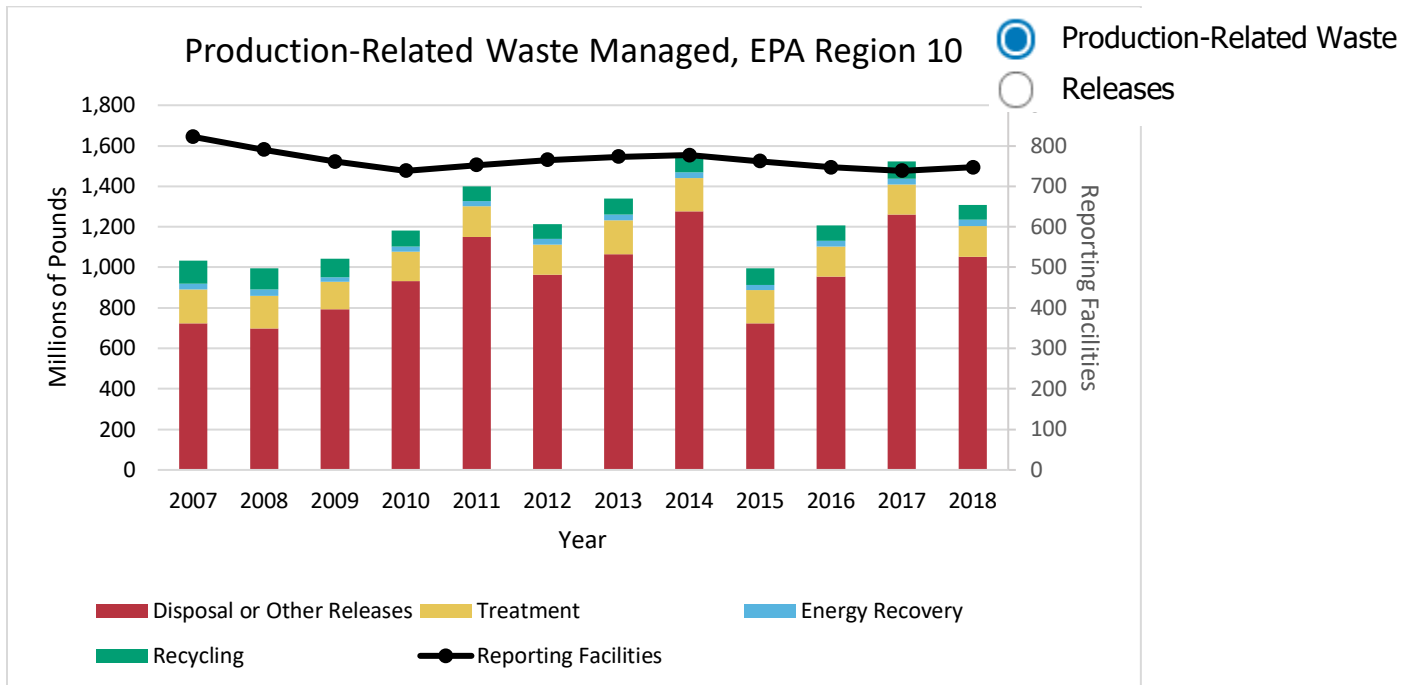
- 747 facilities in Region 10 reported to TRI. These facilities were most commonly in the nonmetallic mineral products (including concrete manufacturing) or wood product manufacturing sectors. The number of facilities and sectors reporting for 2018 were similar to 2017 reporting for the region.
- Most releases in Region 10 were from the metal mining sector, which accounted for 94% of the region's releases for 2018. After metal mining, the chemical manufacturing, food manufacturing, and paper manufacturing sectors reported the highest 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 Others" in the pie chart above. Nationwide, the metal mining, chemical manufacturing, electric utilities, and primary metals (including iron and steel manufacturing, and foundries) sectors reported the highest releases.

- Metal mining facilities typically handle large volumes of material. In this sector, even a small change in the chemical composition of the mineral deposit being mined can lead to big changes in the amount of TRI-listed chemicals reported. Therefore releases in Region 10, where 13 metal mines reported to TRI for 2018, may not follow national trends. For more information on the metal mining sector, see the [metal mining sector profile](#).

For information on the facilities with the greatest releases in the region, see the [Region 10 TRI Factsheet](#).

TRI Waste Management Trend

The following graph shows the annual quantities of TRI chemicals in production-related waste managed by facilities located in Region 10. For more details on quantities released, toggle to the Releases graph.



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

In 2018:

- Facilities reported managing 1.4 billion pounds of production-related waste, 77% of which was disposed of or otherwise released. Nationally, 12% of production-related waste was disposed of or otherwise released. The high proportion of production-related waste that is released in Region 10 is driven by metal mines, which disposed of or otherwise released 99.9% of their production-related waste for 2018.
- Since 2017, quantities of production-related waste managed decreased by 14%, driven by decreased releases by metal mines. Excluding metal mines, production-related waste in Region 10 decreased by 15.7 million pounds (4%).

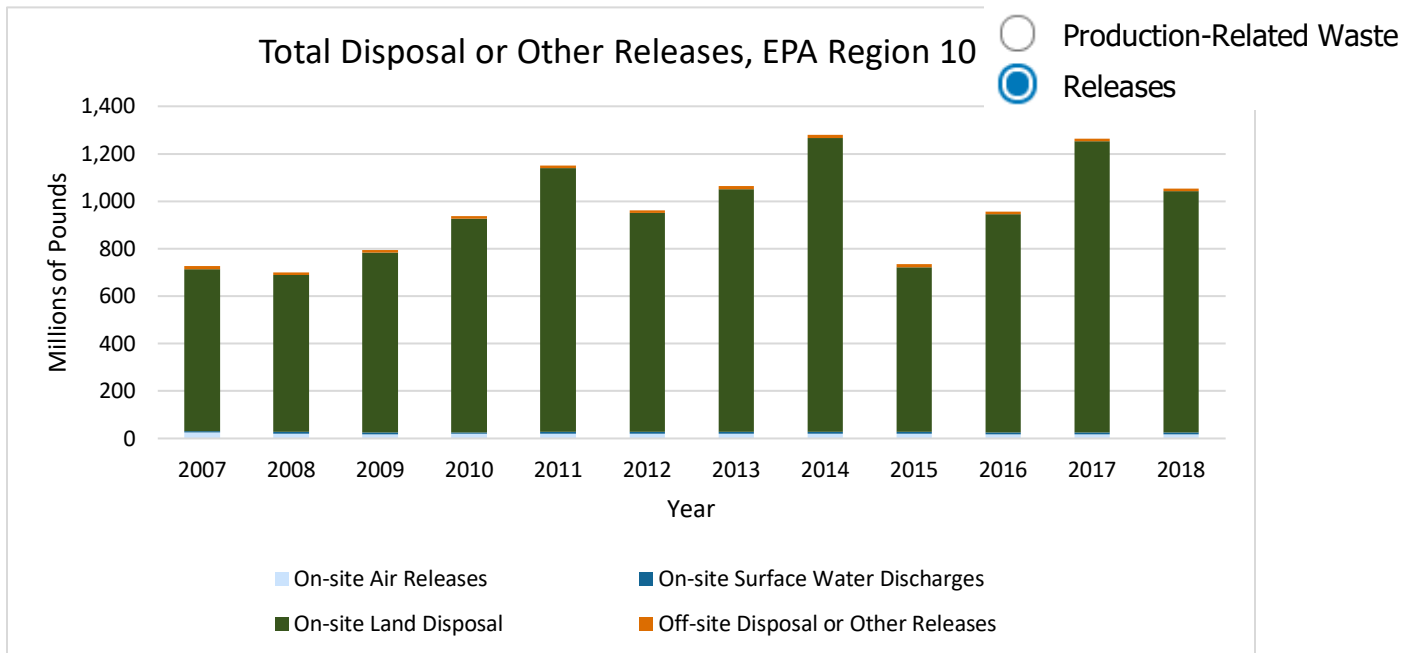
From 2007 to 2018:

- Total production-related waste managed increased by 275 million pounds (27%), driven by increased releases reported by metal mines. Excluding metal mines, production-



related waste managed in the region decreased by 91.4 million pounds (22%).
Nationally, quantities of production-related waste managed increased by 28% since 2007, driven by increased recycling.

The following graph shows the annual 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.

In 2018:

- Facilities reported 1.1 billion pounds of releases.
- The chemicals released in the greatest quantities by medium were:
 - methanol and ammonia to air;
 - nitrate compounds to water;
 - lead and lead compounds and zinc and zinc compounds to land; and
 - nitrate compounds and zinc and zinc compounds transferred off site for disposal.
- Since 2017, releases decreased by 211 million pounds (17%). This decrease was driven by the metal mining sector. Excluding metal mining, releases decreased by 8.1 million pounds (12%) since 2017. Nationally, releases decreased by 3% since 2017.
- Contribution by state to the Region 10 releases in pounds were: Alaska (92%), Idaho (3%), Washington (3%), and Oregon (2%).

2018 Highlight

TRI releases in Region 10 are dominated by one metal mine. For 2018, the Red Dog mine reported 84% of the region's releases [[View facility details](#)].

- To consider the potential health risk from chronic exposure to these releases, EPA uses a [risk-screening score from the RSEI model](#). Contributions by state to the RSEI score for Region 10 were: Oregon (79%), Washington (21%), Idaho (<1%), and Alaska (<1%).

From 2007 to 2018:

- Releases in Region 10 increased by 326 million pounds (45%). This was driven by the metal mining sector. Excluding the metal mining sector, releases in Region 10 decreased by 40 million pounds (40%). Nationally, total disposal or other releases of TRI chemicals decreased by 9% since 2007.
- Quantities of chemicals released to every medium except land decreased.

Source Reduction

In 2018, 6% of facilities in Region 10 (45 facilities) reported implementing new source reduction activities. As one example of source reduction in Region 10, a ship manufacturer reduced [styrene](#) waste by ensuring that resins were used before expiration and by implementing infusion processes during hull and other small parts manufacturing. [[Click to view facility details in the P2 tool](#)].