



TRI Release and Waste Management Trends of Toxics In and Around Tribal Lands

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Conditions in Communities

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What is the Toxics Release Inventory?

- TRI is an EPA information resource that enables you to find out about the management practices of toxic chemicals by certain facilities
- TRI can tell you about:



Releases



Waste transfers



Recycling



Pollution prevention

And much more!



What Does TRI Say About Toxics and Tribes?

- This investigation looked at the TRI data to determine:
 - The magnitude of TRI releases on tribal land and within 10 miles of tribal boundaries
and
 - High level trends to see if changes on or near tribes mirror changes across the entire TRI universe or are on a different path.



In 2014, Within 10 Miles of All Tribal Lands

- 6+ % by weight of all TRI releases* occur on or near a tribe
- 4+ % by toxicity of all TRI releases* occur on or near a tribe
- 222 million pounds Total Releases*
 - 11 million to water
 - 39 million to air
 - 172 million to land
- Major industry – Metal mining (49%)
- Major chemicals – Lead** (19%), Copper** (16%), Zinc** (15%)

* Total On-Site Releases or Disposals

** Elemental and Compounds

TRI is Relevant to Tribes



What are some limitations of TRI data?

- Only covers facilities within certain (not all) industry sectors, and only when reporting thresholds are exceeded
- Does not cover all toxic chemicals
- Does not cover all sources of pollution
- For information see:
<http://www.epa.gov/tri/triprogram/FactorsToConPDF.pdf>



Additional Factors to Consider When Interpreting Results in this Presentation

- Due to the sheer volume of overburden from mining operations, which is considered a TRI release or disposal, data from the Metal Mining Industry sector can significantly influence some views of the data. This has been addressed in some but not all of the analyses.
- Statistical significance may vary between different charts due to differences in the number of available data points.
- Influence of changes in the TRI regulations have not been factored into any of the analyses.



Additional Factors to Consider When Interpreting Results in this Presentation

- Tribal locations and boundaries for this analysis:
 - US Census Bureau 2014 tribal boundary layer data for tribes in the lower 48 United States, and Bureau of Land Management Alaska State Office for tribes in Alaska.
 - Most charts and tables in this presentation have omitted TRI releases from Oklahoma when 'tribe' is a variable.
 - Believe to have minimal to zero influence when considering 'On tribal land'
 - May result in the values for 'within 10 miles of a tribe' to be slightly lower than actuals



Significance in Looking Beyond a Boundary

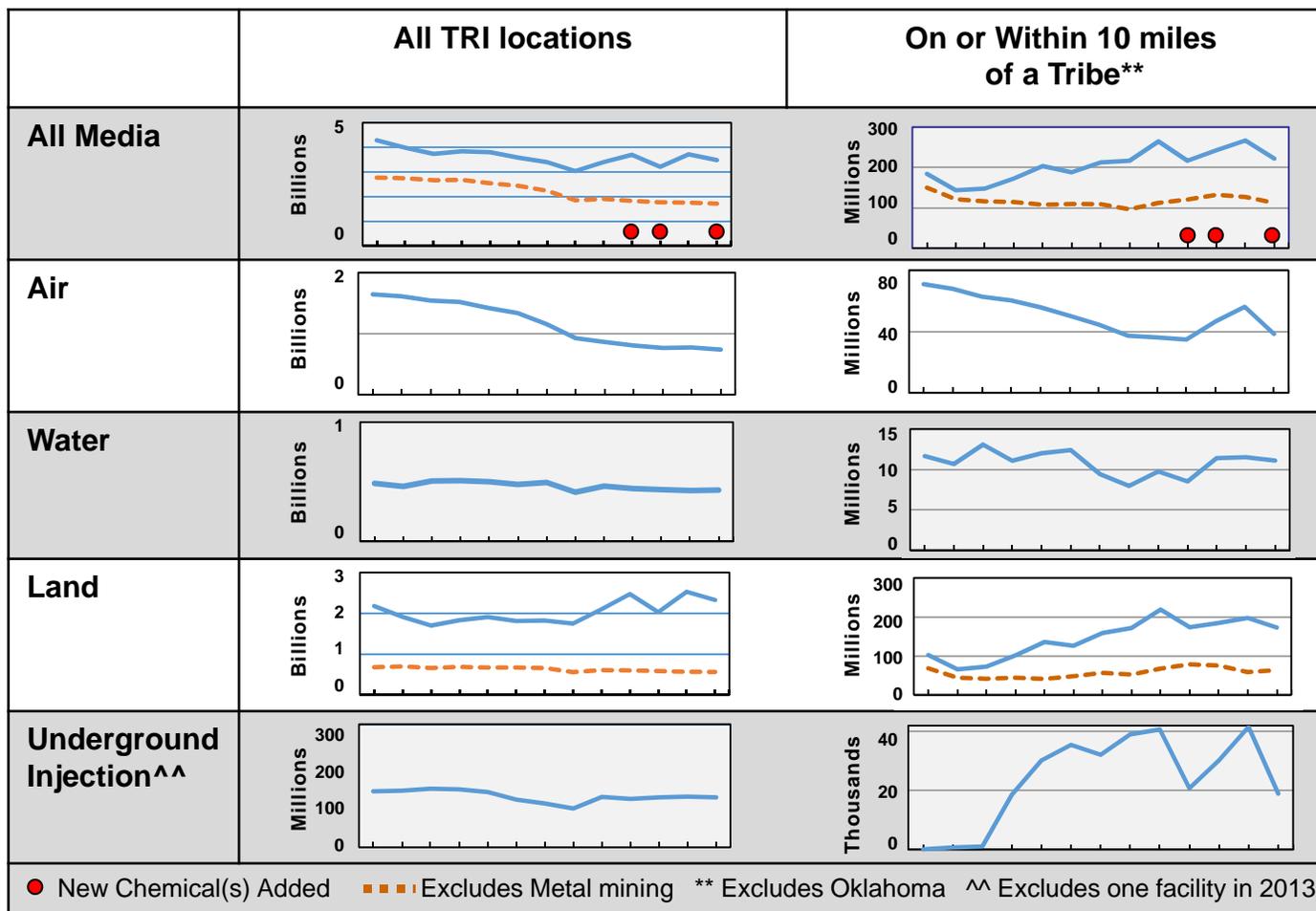
- Facilities within tribal boundaries
 - Comprise about 0.2 % of all TRI facilities and
 - Released or disposed on-site about 0.3% of all on-site TRI releases/ disposals in 2014.

- Facilities on or near a tribe
 - Comprise about 7 % of all TRI facilities and
 - Released or disposed on-site about 6 % of all TRI on-site releases/ disposals in 2014.

- If metal mining facilities are excluded, results are similar

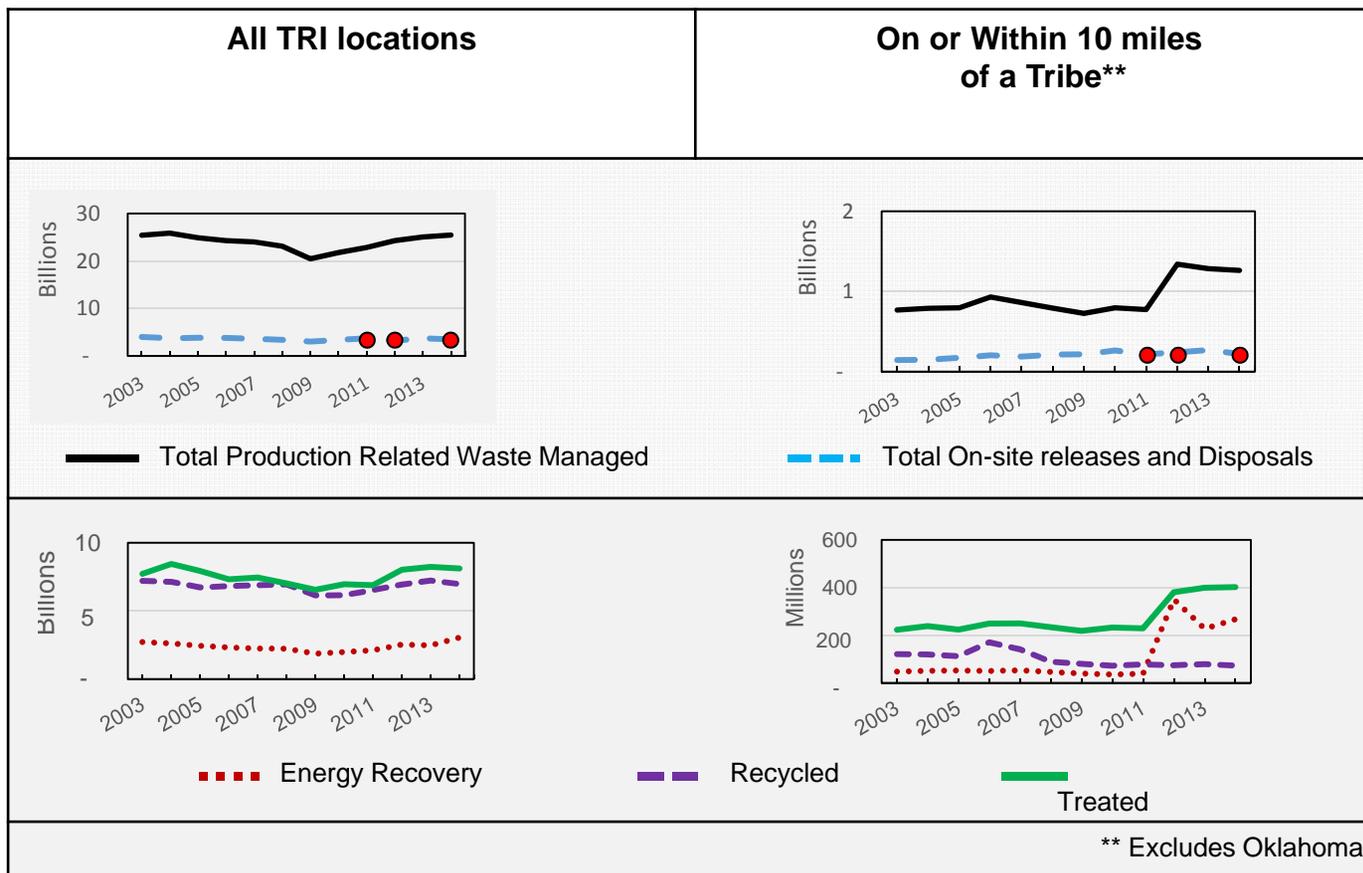


Trends in Releases and Disposals 2002 - 2014





Trends in Waste Managed 2003 - 2014





Top Chemicals in 2002 by Hazard Value

(Toxicity x Pounds of On-Site Releases and Disposals)

On or Within 10 miles of a Tribe**				All TRI Facilities	
2002	2014 Rank order	Percent Change 2002 - 2014		Percent Change 2002 - 2014	
ASBESTOS (FRIABLE)	-	100	Decrease	136	Increase
CHROMIUM COMPOUNDS(EXCEPT CHROMITE ORE MINED IN THE TRANSVAAL REGION) ^^	2	169	Increase	2	Decrease
ARSENIC COMPOUNDS ^^	1	640	Increase	65	Decrease
CHROMIUM ^^	3	133	Increase	94	Increase
COBALT COMPOUNDS ^^	4	69	Increase	27	Decrease
NICKEL COMPOUNDS ^^	6	75	Increase	40	Decrease
CADMIUM COMPOUNDS ^^	5	391	Increase	30	Decrease
NICKEL ^^	9	15	Decrease	16	Decrease

^^ A top 20 chemical released by the metal mining sector ** Excludes Oklahoma



Learning More About TRI

- TRI website: www.epa.gov/tri
- TRI National Analysis
 - Published annually
 - Contains an analysis of releases on Tribal lands & Alaska Native Villages
 - Your Feedback will help improve the tribal analysis
- TRI for Tribal Communities webpage at <https://www.epa.gov/toxics-release-inventory-tri-program/tri-tribal-communities>



For Additional Information

For information on the TRI Program in general
tri.help@epa.gov

For information contained in this presentation
Steve Witkin at witkin.steve@epa.gov

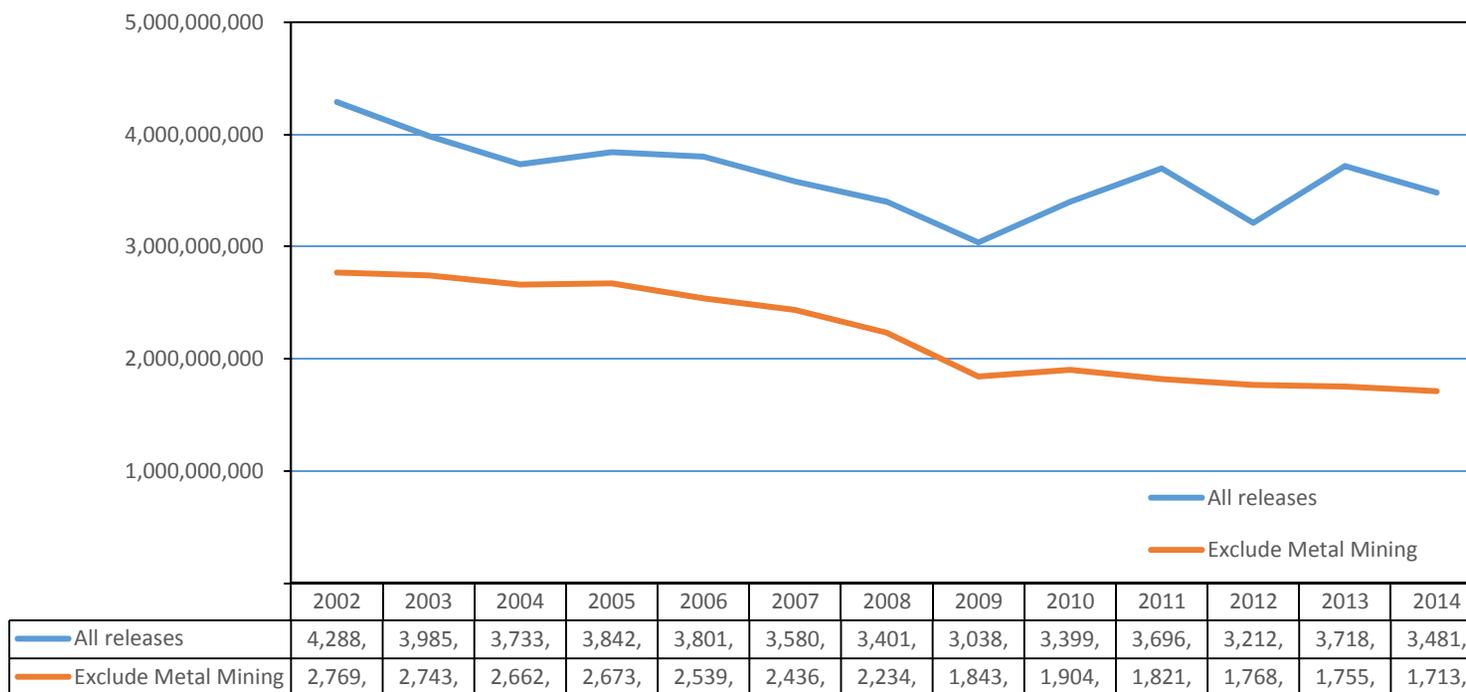


Following slides are larger and data laden versions of the previously presented graphs.

These slides are not part of the presentation, but included in packet for post conference use by participants.

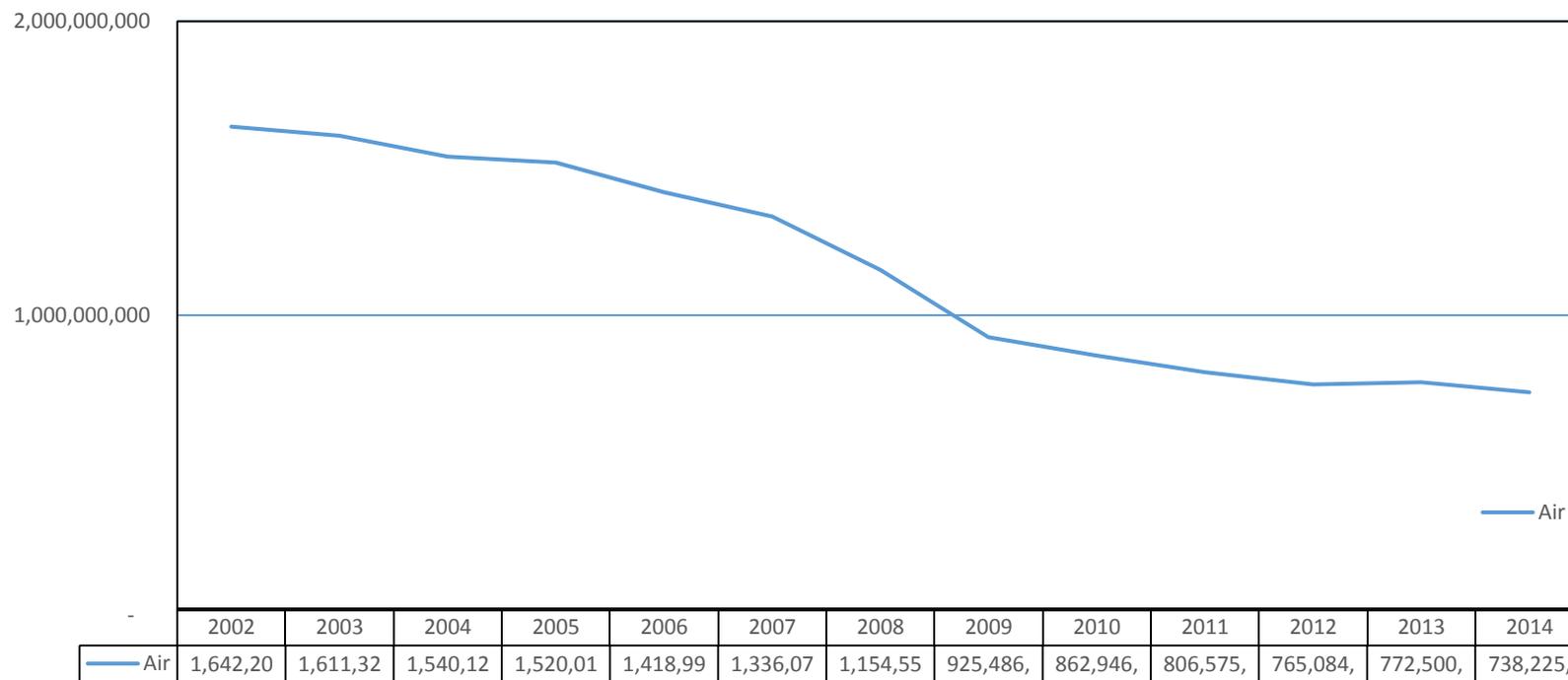


All TRI Location – All On-site Releases and Disposals (pounds)



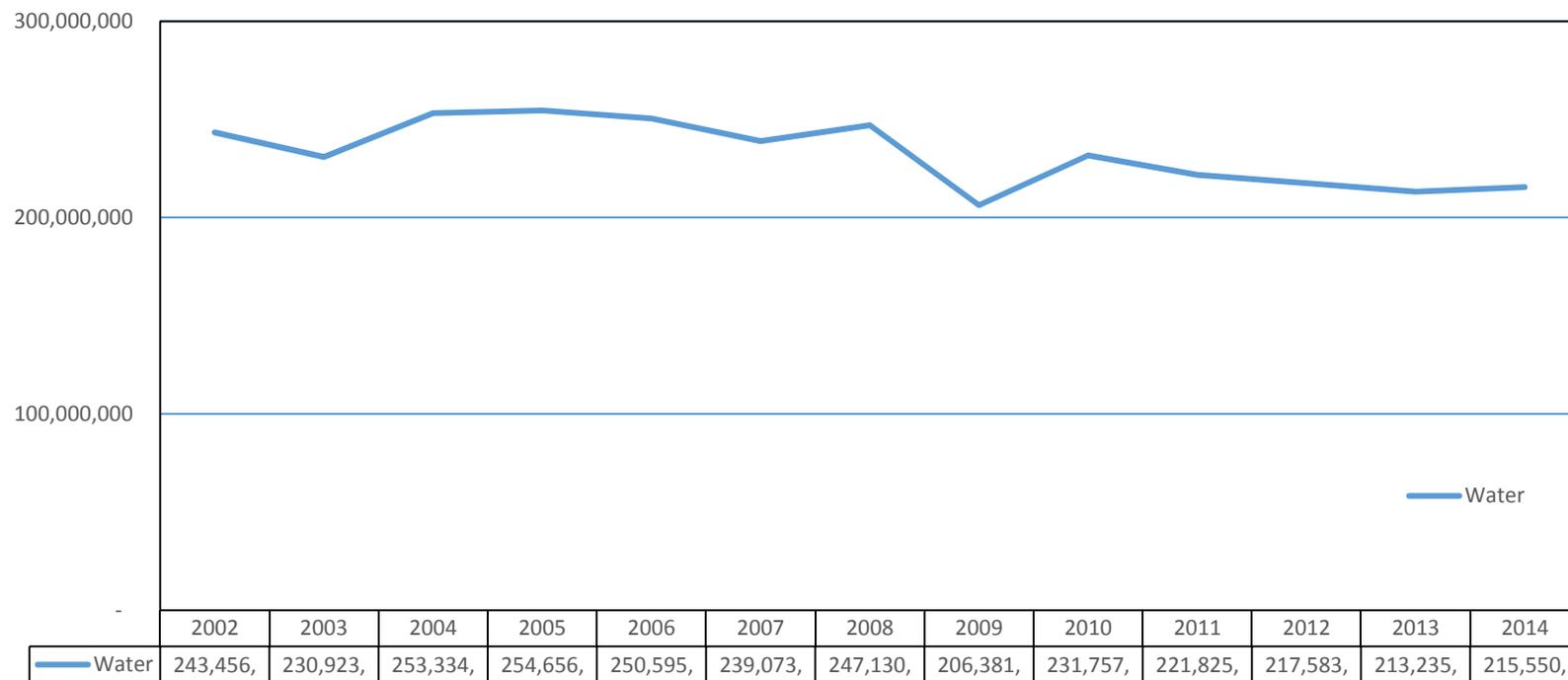


All TRI Location – All On-site Air Releases (pounds)



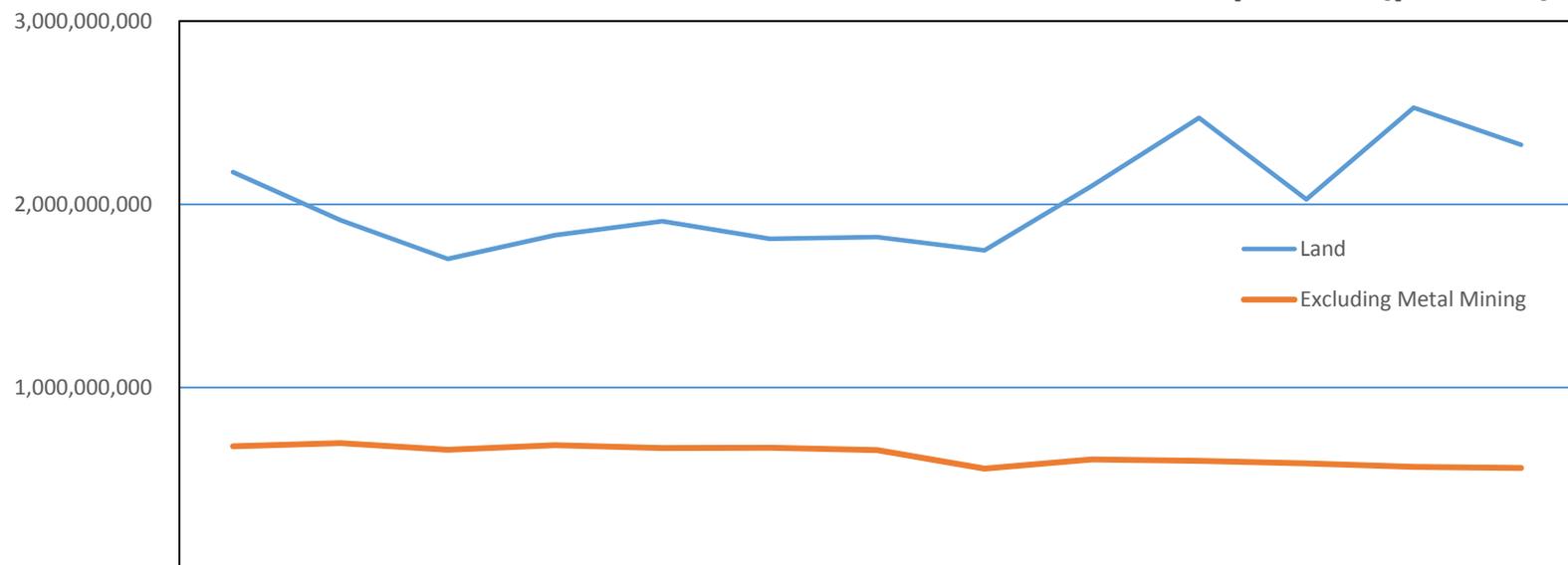


All TRI Location – All On-site Surface Water Releases (pounds)





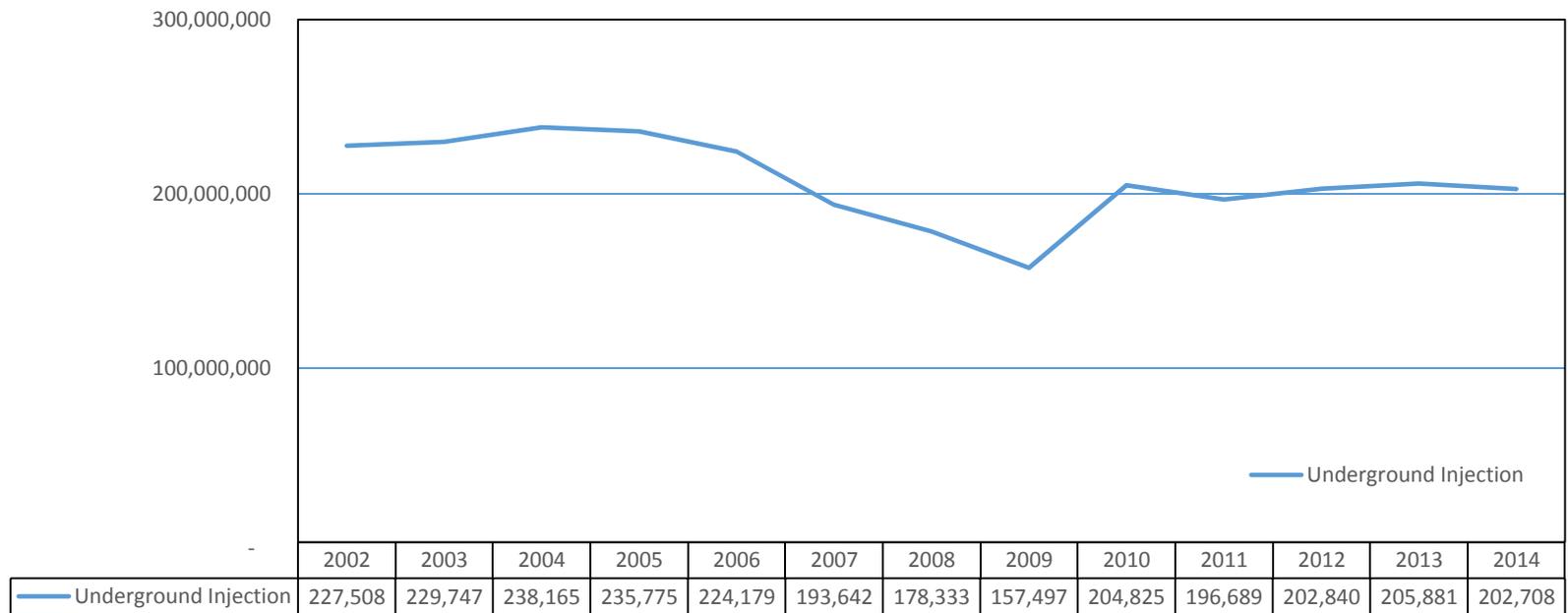
All TRI Locations – All On-site Land Releases and Disposals (pounds)



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Land	2,175,8	1,913,8	1,701,6	1,831,8	1,907,9	1,811,6	1,821,2	1,748,8	2,100,1	2,471,6	2,027,0	2,527,1	2,325,0
Excluding Metal Mining	680,067	697,048	660,503	686,100	670,432	671,846	658,706	558,073	608,272	600,043	586,543	567,722	561,432

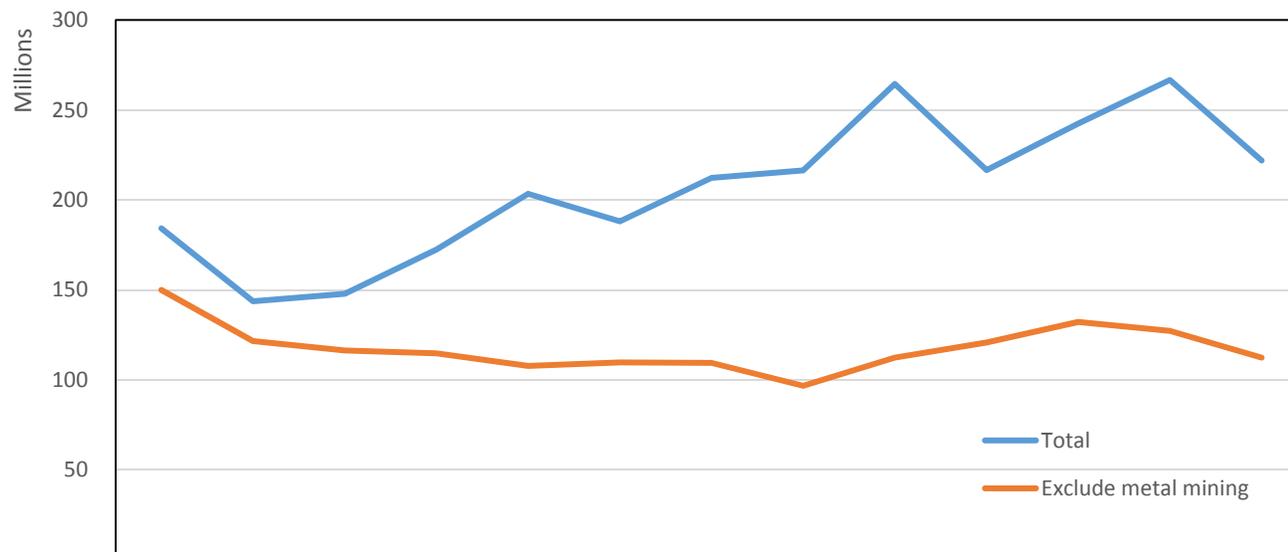


All TRI Location – All On-site Underground Injection Releases and Disposals (pounds)





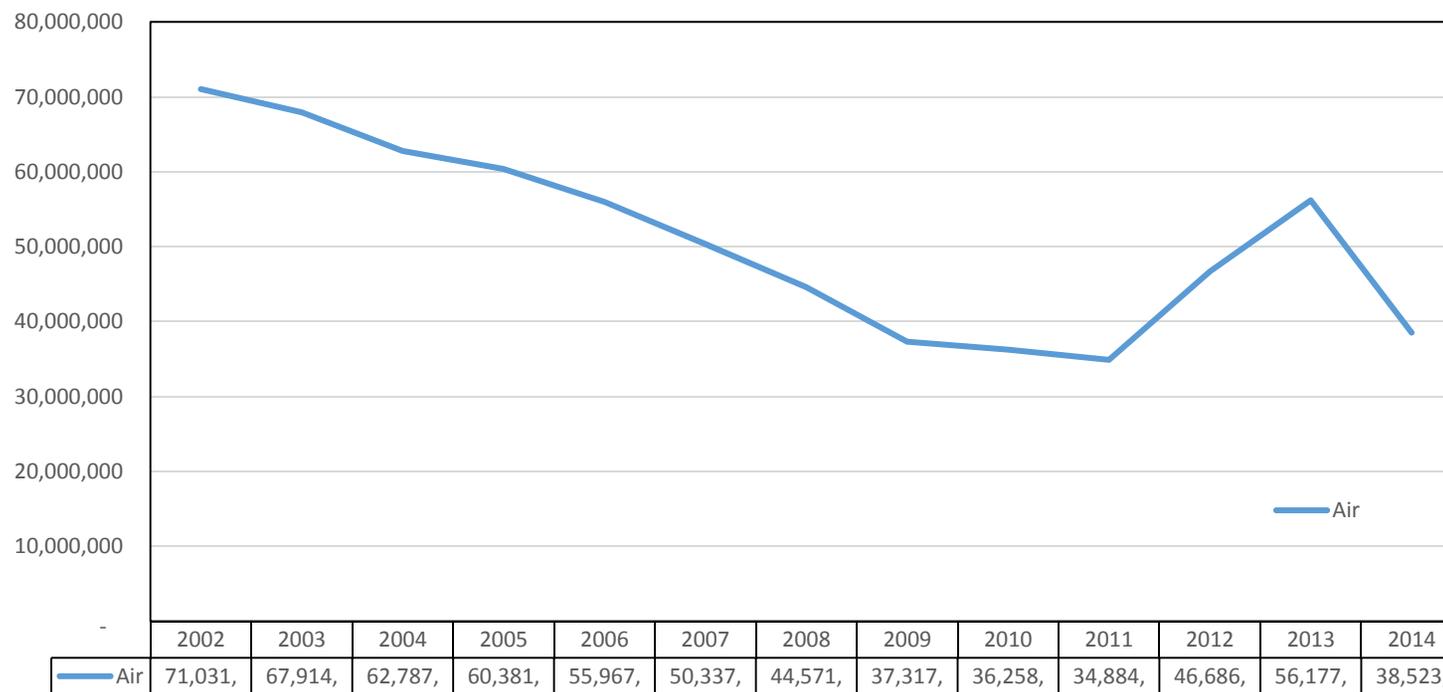
On or Within 10 miles of a Tribe – All On-site Releases and Disposals (pounds)



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
— Total	184,18	143,69	147,82	172,41	203,39	188,11	212,28	216,44	264,46	216,58	242,40	266,73	221,92
— Exclude metal mining	149,93	121,53	116,29	114,69	107,76	109,65	109,39	96,677	112,37	120,77	132,19	127,19	112,33

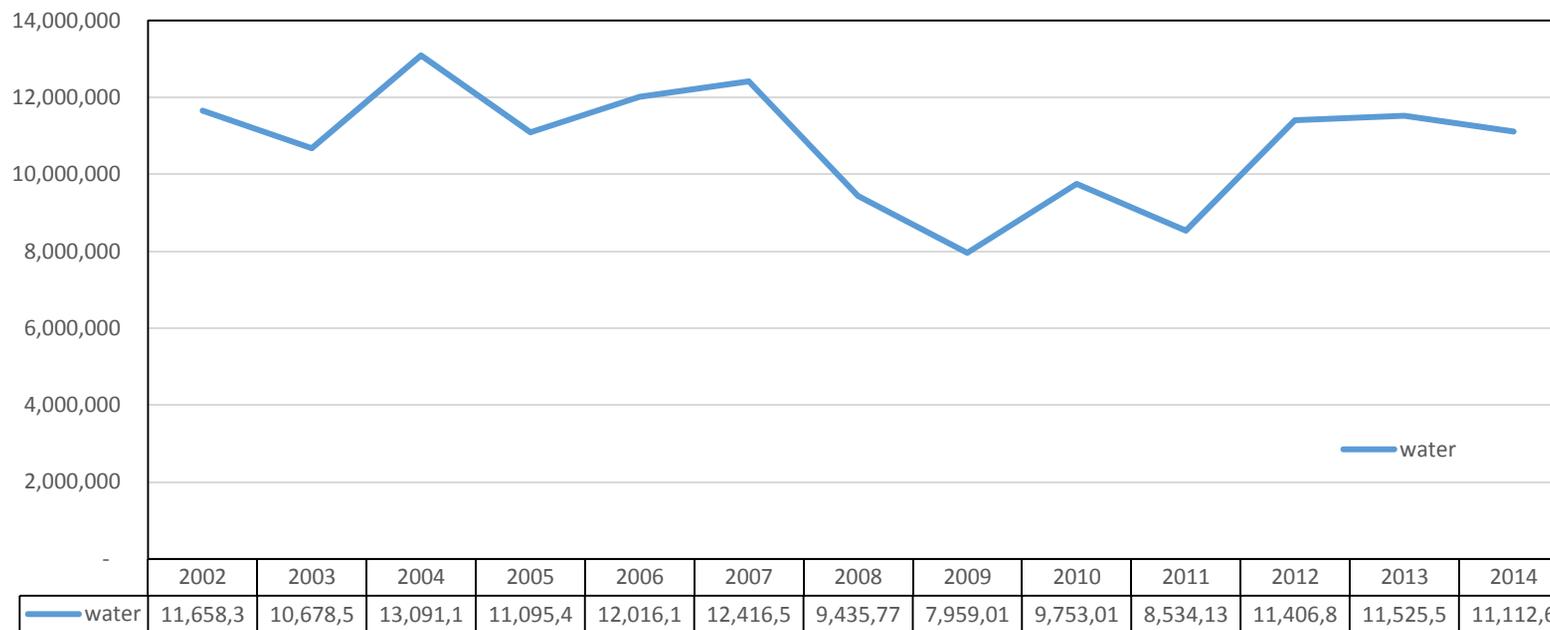


On or Within 10 miles of a Tribe- All On-site Air Releases (pounds)



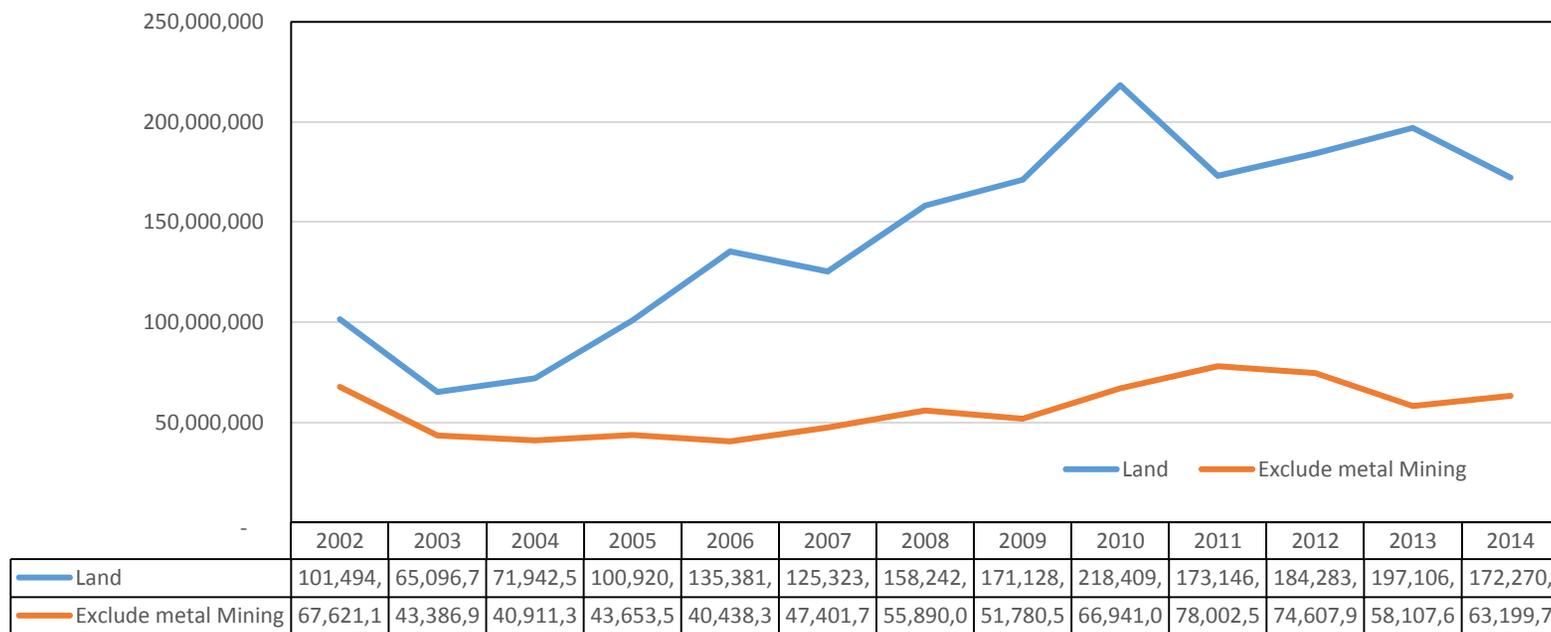


On or Within 10 miles of a Tribe- All On-site Surface Water Releases (pounds)



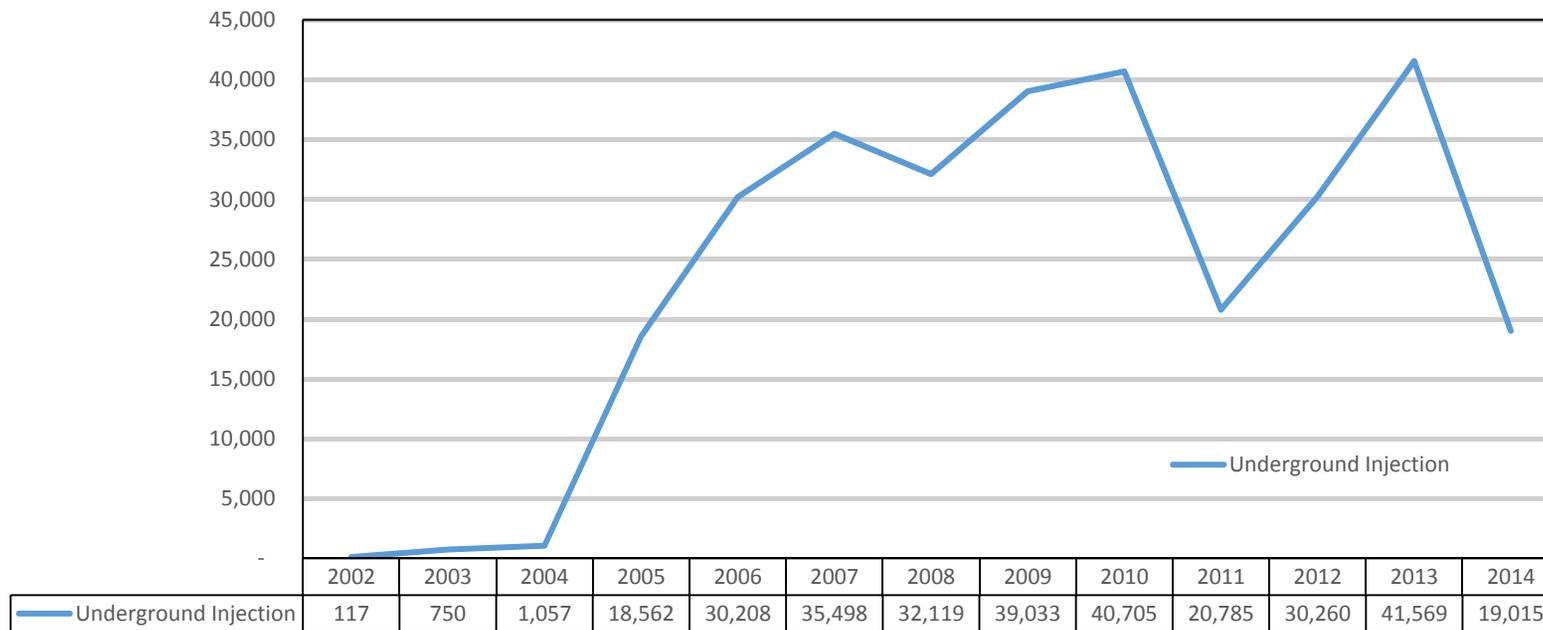


On or Within 10 miles of a Tribe- All On-site Land Releases and Disposals (pounds)



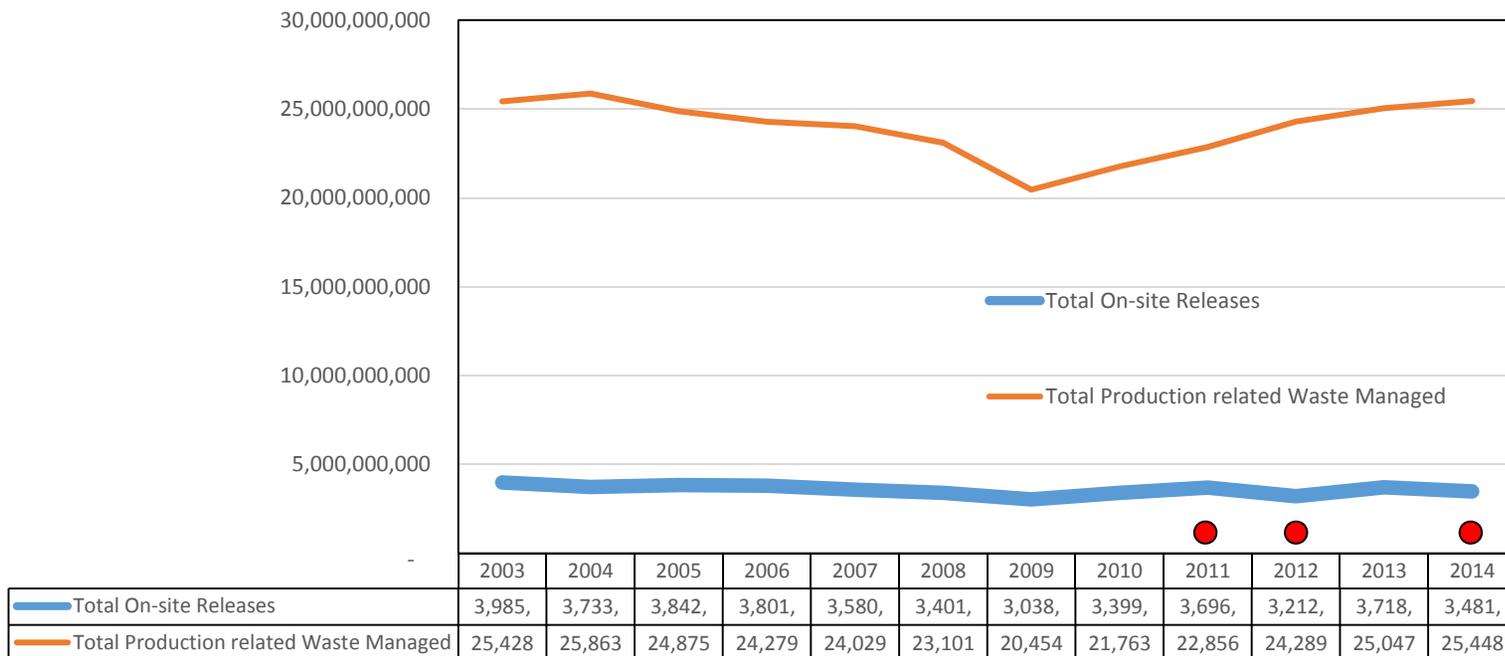


On or Within 10 miles of a Tribe- All On-site Underground Injection Releases and Disposals (pounds)



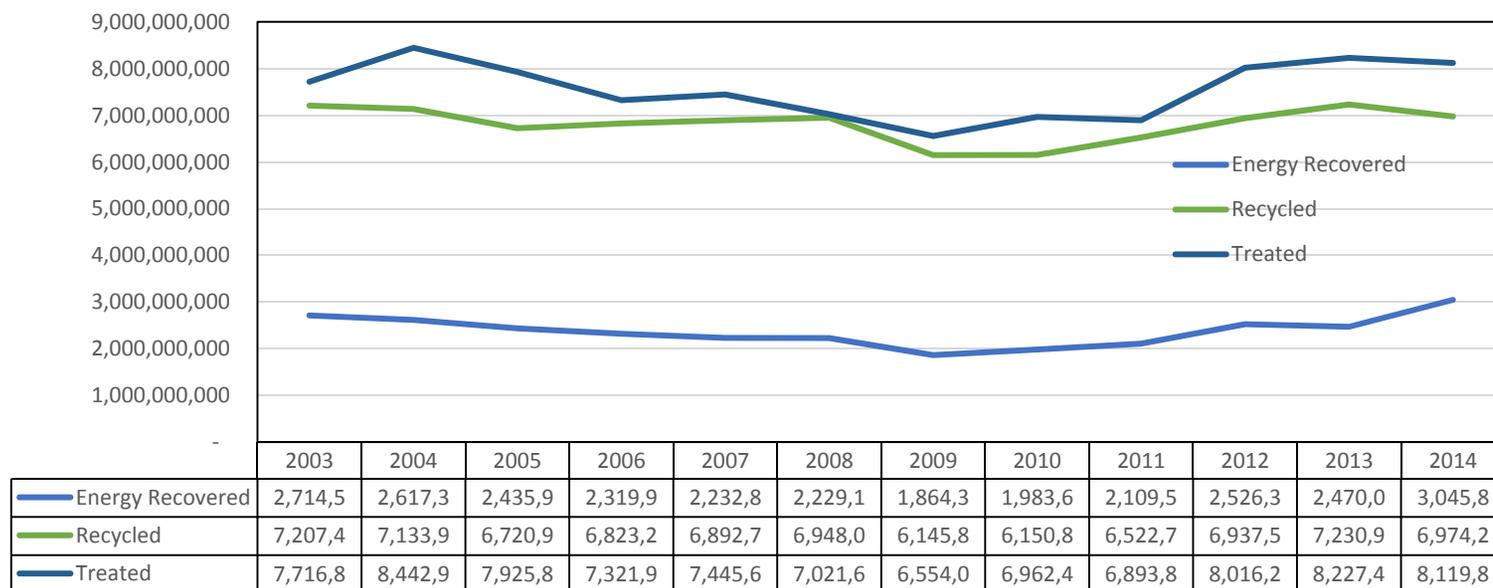


All TRI Location – Trends in Waste Managed 2003 – 2014 (1 of 2)



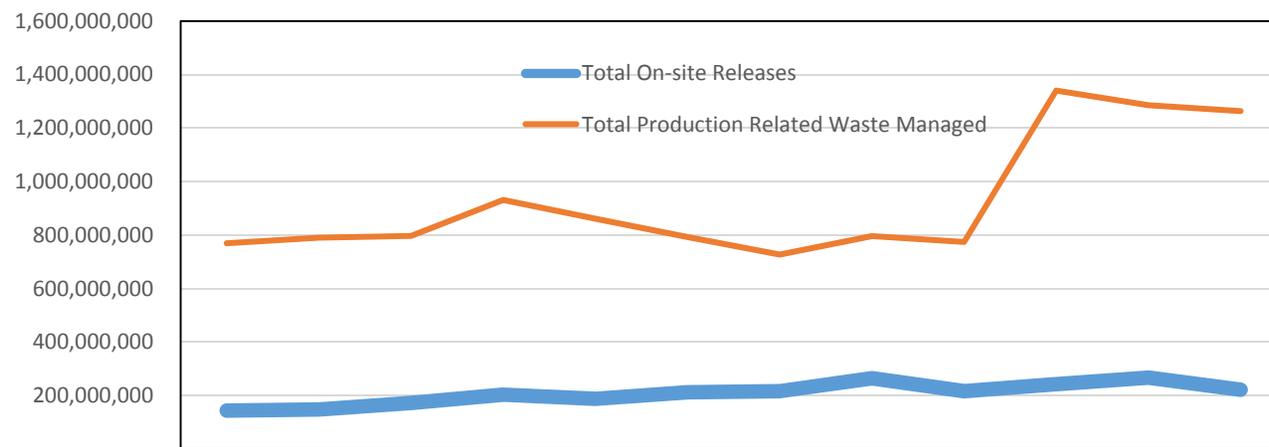


All TRI Location – Trends in Waste Managed 2003 – 2014 (2 of 2)





On or Within 10 miles of a Tribe- – Trends in Waste Managed 2003 – 2014 (1 of 2)



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total On-site Releases	143,690	147,822	172,415	203,394	188,113	212,282	216,444	264,461	216,586	242,407	266,736	221,925
Total Production Related Waste Managed	769,067	790,414	796,584	930,888	860,758	792,645	727,331	796,241	773,804	1,340,1	1,285,2	1,263,5



On or Within 10 miles of a Tribe- – Trends in Waste Managed 2003 – 2014 (2 of 2)

