

NSC Technical Subcommittee Call Minutes – January 21, 2025

Participation [by region]:

- 1: Sara Johnson – **NH** and Tom Metzner - **CT**
- 2: Ed Bakos - **NJ**
- 3: Olivia Achuko – **DC** and Carrie Wintersteen, Luke Hershey & Samantha Harmon – **PA**
- 4: Sherry Waldron – **GA**; Crystal Warren & Donovan Grimwood – **TN** and Tony Pendola – **NC**
- 5: Jennifer Feyerherm – **WI**; Emery David, Emily Ohde, Jennifer Theodore & Samantha Connolly – **MN** and Chrystal Wagner, Hani Sharaya, Tammy Haug, Leigh Anne Harvey & Mark Stoddard – **IN**
- 6: Lucy Cross & Dalton Barnum - **AR**
- 7: Bob Randolph – **MO**; Jordan Burrows & Jennifer Wittenburg – **IA** and Abigail Crouse, Cris Brazil, Keely Hutchinson & Leena Divakar – **KS**
- 8: Kaitlin Urso, Jesse Walters & Jarrett Vigil – **CO** and Michael Gustafson – **MT**
- 9: Griffin Hadlock - **NV**

Presenters: Amelia Chucholowski, U.S. Tire Manufacturers Association; K. Stratton Kirton, Liberty Tire Recycling and Kirsten Clemens, Michigan Department of Environment, Great Lakes and Energy (EGLE)

Tech-Subcommittee: <https://nationalsbeap.org/committees/technical>

**** This presentation was recorded and will be posted on the National SBEAP YouTube channel at <https://www.youtube.com/channel/UC5PupYpZ1W6IG8CtzCINK8Q> ****

How States Are Managing Waste Tires From a national & state perspective As well as from a waste tire processor

Amelia Chucholowski, USTMA

A review of tire recycling focusing on solutions for managing end-of-life tires and enhancing sustainability in the recycling industry. I will discuss specific End-of-Life Tire (ELT) markets and collaboration with stakeholders in an effort to eliminate ELT stockpiles.

From the Perspective of a Waste Tire Processor

K. Stratton Kirton, Liberty Tire Recycling

Stratton will talk about the need to modernize state laws governing end-of-life tires. When most states passed their tire laws, often called scrap tire laws or waste tire laws, the tire recycling industry was in its infancy.

Today, tires are one of the most highly recycled products in the United States, but many states still rely on programs that were designed 30 years ago. Thankfully, we have 50 states and 30+ years of experience to be able to determine how laws and regulations can be crafted to crack down on illegal dumping, spur higher-and-better uses of recycled rubber, and keep up with the growing number of end-of-life tires.

From the Perspective of a State Program

Kirsten Clemens, EGLE

Kirsten will share how scrap tires are managed in the State of Michigan.

Bios



Amelia Chucholowski
Manager, Sustainability and Recycling Policy
U.S. Tire Manufacturers Association
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Amelia Chucholowski joined USTMA in 2024 and is responsible for sustainability and recycling issues relating to end-of-life tires.

Amelia contributes to the USTMA U.S. End-of-Life Tire Markets report and advocates for U.S. state and federal policies that promote and grow economically and environmentally sustainable tire recycling and reuse markets while collaborating with USTMA EHS&S and Public Affairs teams to manage risks and challenges associated with the sustainable management of tires at the end of their lives in use.



K. Stratton Kirton
Vice President, Government Relations
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Stratton is the vice president of government affairs at Liberty Tire Recycling, the largest tire recycling company in North America.

Previously, he was a partner at Penta Group (formerly Hamilton Place Strategies), where he advised clients on strategy and public policy with a focus on agriculture, energy, environmental issues, and trade.

He also worked for U.S. Representative Mike McIntyre, a senior member of the House Agriculture Committee, and for U.S. Senator Bill Nelson, a senior member of the Senate Commerce Committee.

He serves on the board of the non-profit Rural Investment to Protect Our Environment and is a graduate of Georgetown University and Stetson University. He lives in Maryland with his wife and two children.



Kirsten Clemens
Scrap Tire Coordinator
Michigan Department of Environment, Great Lakes and Energy (EGLE)
EGLE-ScrapTire@Michigan.gov
(517) 614-7431

Kirsten serves as statewide Scrap Tire Coordinator including implementation of Part 169, the Scrap Tire Statute, which includes regulation of scrap tire collection sites, end users, haulers and processors. She also is the chairperson for the Rubber Modified Asphalt Committee for the US Scrap Tire Workgroup.

Chat input

<https://productstewardship.us/people/tom-metzner/>

Tom Metzner: I work for Connecticut Department of Energy and Environmental Protection. I was forwarded an invitation to this meeting

Tom: The primary reason for illegal dumping in CT is clear - generators seeking to avoid tipping fees - not resale.

Kirsten Clemens, P.E.; Michigan Scrap Tire Coordinator; EGLE-ScrapTire@Michigan.gov

Tammy Haug, IN: Is Michigan planning to increase fees. How does Indiana use the tire fee?

Kirsten: At this time, it would take legislative support to increase fees in Michigan. it would be a Statutory change.

Miscellaneous Notations

Some acronyms used:

ELT – End of Life Tires

EPR – Extended Producer Responsibility

LCA – Life Cycle Assessment

MRP – Micronized Rubber Powder (*as an ingredient in tires, plastics, asphalt and construction materials*)

PTE – Passenger Tire Equivalent

RMA – Rubber Modified Asphalt

TDA – Tire Derived Aggregate

TDF – Tire Derived Fuel, e.g., use in a cement kiln

Goals:

1. Curb illegal dumping (*as tires are bulky & difficult to transport, it is tempting to take the waste to the nearest remote location or unused building and discard them*),
2. Develop higher & better uses for waste tires and
3. Keep up with the rate of waste tires being generated

Tire Size and Wear Rates:

1. Passenger tires have increased in size and
2. Electric vehicles (weight and acceleration) consume tires more quickly than the non-electric vehicle

Pyrolysis Reference: “Bridgestone Commences Pyrolysis Test of Use Tire Recycling” - <https://www.bridgestone.com/corporate/news/2023060801.html>

Reference:

Scrap Tire Research & Education Foundation (includes the Scrap Tire Workgroup) - <https://stref.org/>

Future topics:

- **February 18:** Printing topic, Gary Jones, Vice President, Environmental, Health & Safety Affairs, PRINTING United Alliance
- **March 18:** Perc Drycleaning NESHAP final rule (Subpart M), Reginald Reginald, Lead EPA Subpart M Rule Writer - Goodwin.Reginald@epa.gov
- **April 15:** EV charging and alternative fuels for fleets (many hurdles for small businesses to overcome), Belinda Breidenbach, ID
- **May 20:** Demonstrating the MiEnvrio Portal & Oregon’s Your DEQ Online platforms, Kaitlyn DeVries, EGLE and Hillarie Sales, OR DEQ
- **June 17:** Vape pen disposal - both from a nicotine and a Li battery perspective, Jacob Larson, KSU and Jarrett Vigil, CO DPHE(?)
- **Other 1:** AERR (*Air Emissions Reporting Requirements*) & MM2A (*Major MACT to Area*) Status and Final Steps
- **Other 2:** EPA Air Toxic Screen

Next Call: February 18

1 pm CDT (2 pm EDT) (3rd Tuesday of month)



End-of-Life Tire Management: A National Perspective

SBO/SBEAP NSC Technical Subcommittee Meeting 1/21/25

About the U.S. Tire Manufacturers Association

The U.S. Tire Manufacturers Association (USTMA) is the national trade association for tire manufacturers that produce tires in the U.S. U.S. tire manufacturing has an annual economic footprint of \$170.6 billion and is responsible for more than 291,000 U.S. jobs in manufacturing, distribution and retailing. The industry supports more than 510,000 additional U.S. jobs in supplier and induced activities, totaling more than 801,000 jobs nationwide. USTMA advances a sustainable tire manufacturing industry through thought leadership and a commitment to science-based public policy advocacy. Our member company tires make mobility possible. USTMA began its end-of-life tire program in 1990 under the auspices of the Scrap Tire Management Council. USTMA works with all stakeholders, including states, U.S. EPA and the industry to develop markets, reduce end-of-life tire (ELT) stockpiles and implement state regulations that foster sustainable ELT tire markets. USTMA supports sustainable and circular ELT markets.



USTMA Sustainability Vision

- **USTMA members have the goal that all ELT's enter sustainable and circular end use markets.**
- USTMA's 2023 end-of-life tire market summary report measures our progress towards meeting our sustainability vision

U.S. ELT Generation 2023

Tire Class	Millions of Tires	Market %	Average Weight (lbs)	Weight (thousands of tons)
Light Duty Tires	267	87.7%	25.0	3,334
Passenger tire replacements	219	72.1%		
Light truck tire replacements	34	11.3%		
Tires from scrapped vehicles	13	4.3%		
Commercial Tires	37	12.3%	120.0	2,238
Medium, wide base, heavy truck replacement tires	21	6.8%		
Tires from scrapped trucks and buses	17	5.4%		
Total tires hauled	304	100.0%	36.7	5,572
Used tires culled	40	13.2%	36.7	735
Net scrap tires	264			4,836

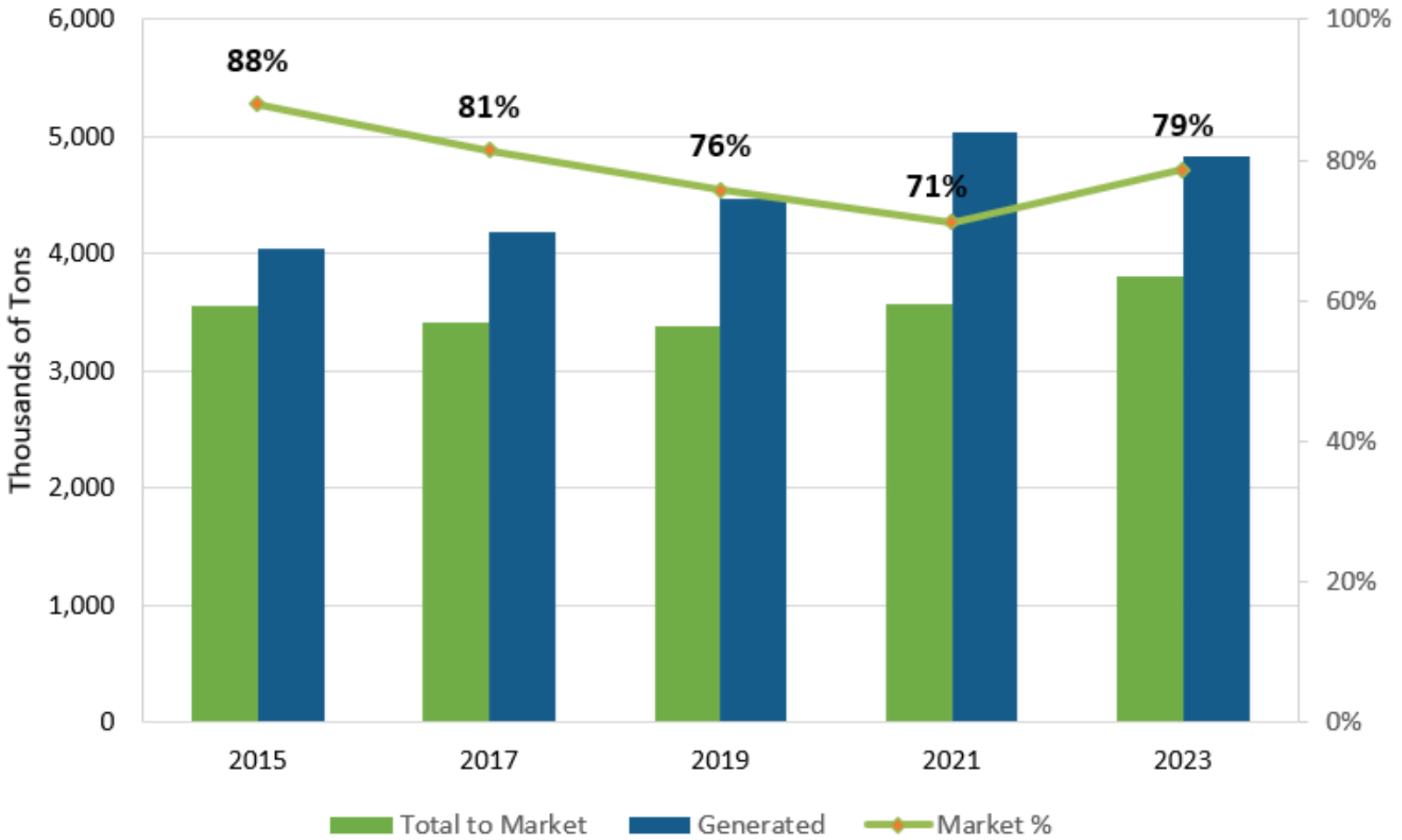
U.S. ELT Disposition 2023

Market or Disposition	Thousands of Tons	Millions of Tires	% change 2021 - 2023
Tire-Derived Fuel	1,546	84	10.9%
Cement Kilns	784	43	15.0%
Paper & Pulp	562	31	7.2%
Electric Utilities	200	11	6.5%
Ground Rubber	1,339	73	-4.8%
Civil Engineering	264	14	-4.5%
Exported	253	14	189.4%
Electric Arc Furnace	70	4	14.2%
Reclamation Projects	40	2	-15.8%
Agricultural	0	0	
Baled Tires/ Market	0	0	
Punched/ Stamped	0	0	
Other	289	16	-5.4%
Total to Market	3,801	207	6.2%
Generated	4,836	264	-3.9%
% to Market/ Utilized	79%	79%	10.5%
Land Disposed	874	48	19.3%

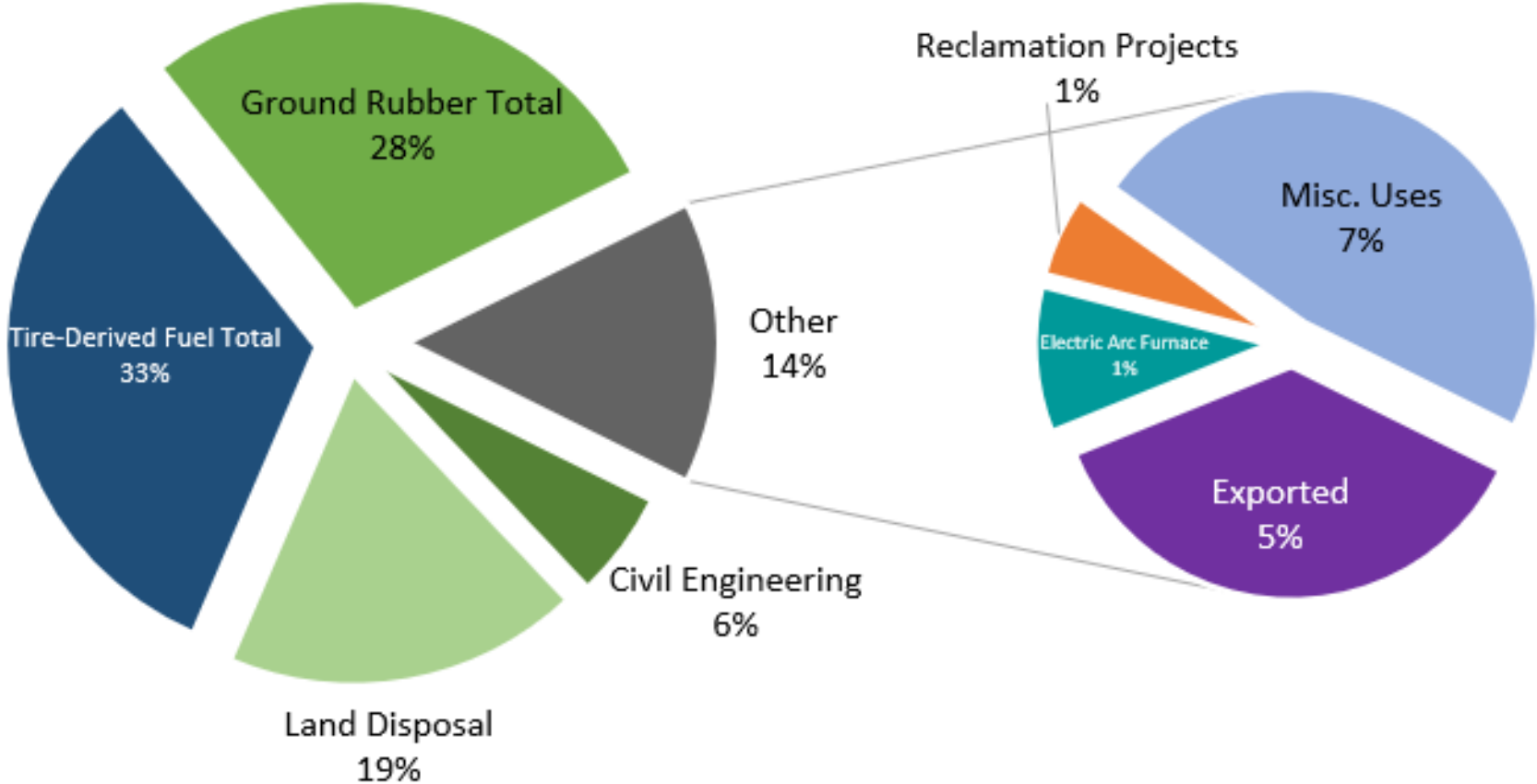
U.S. ELT Market Summary 2015 - 2023

Market or Disposition (thousands of tons)	2015	2017	2019	2021	2023
Tire Derived Fuel	1,923	1,736	1,647	1,394	1,546
Ground Rubber	1,021	1,013	1,089	1,407	1,339
Land Disposed	451	647	680	733	874
Civil Engineering	275	316	226	276	264
Exported	102	110	138	87	253
Reclamation Projects	53	44	40	48	40
Electric Arc Furnace	26	39	61	61	70
Baled Tires/ Market	9	15	10	0	0
Punched/ Stamped	41	23	10	0	0
Agricultural	7	7	20	0	0
Other	95	108	138	306	289
Total to Market	3,551	3,411	3,379	3,579	3,801
Generated	4,039	4,189	4,464	5,031	4,836
% to Market/ Utilized	88%	81%	76%	71%	79%
% Managed (incl. baled and landfilled tires)	99%	97%	91%	86%	97%

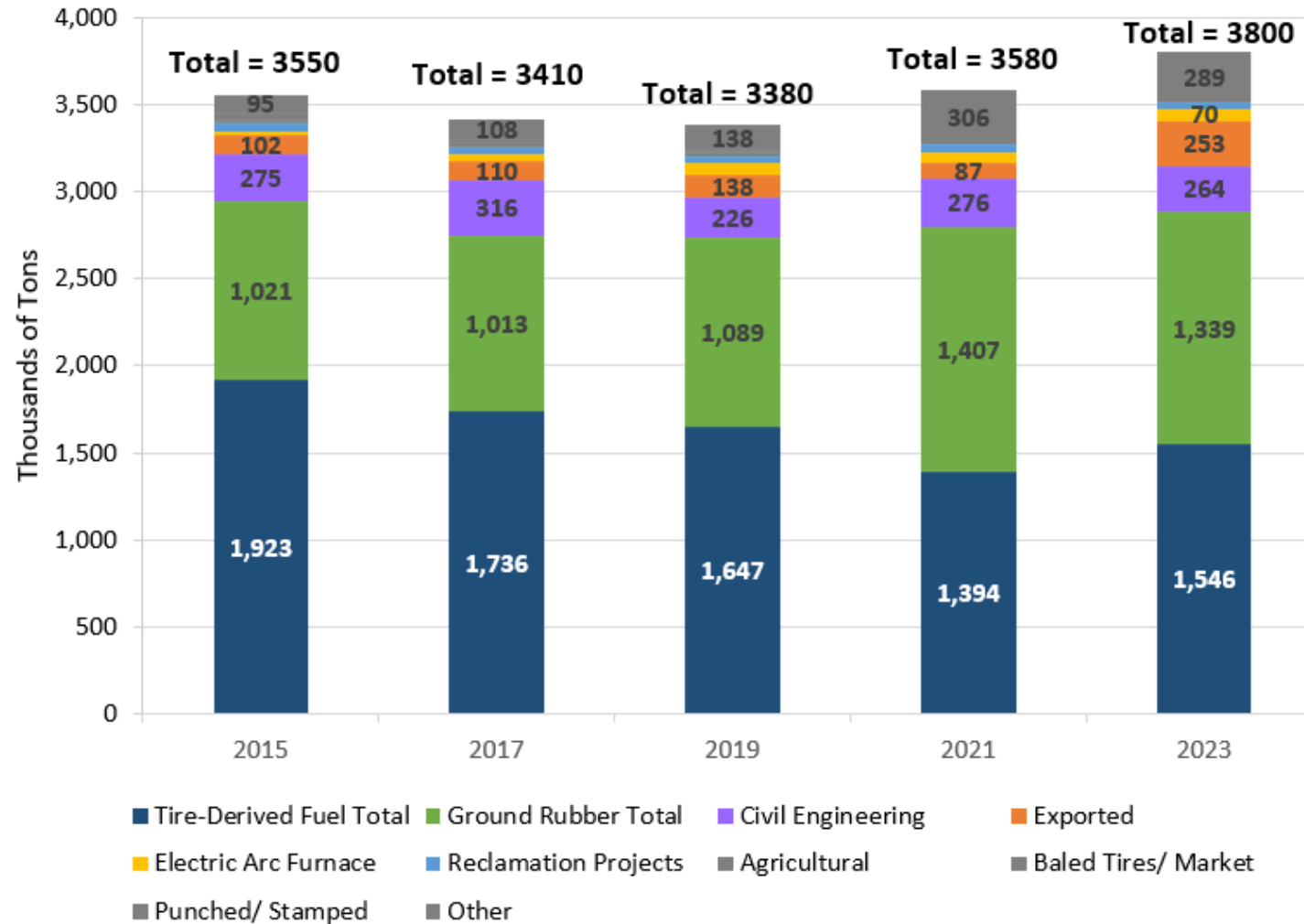
U.S. End-Of-Life Tire Market Trends 2015 - 2023



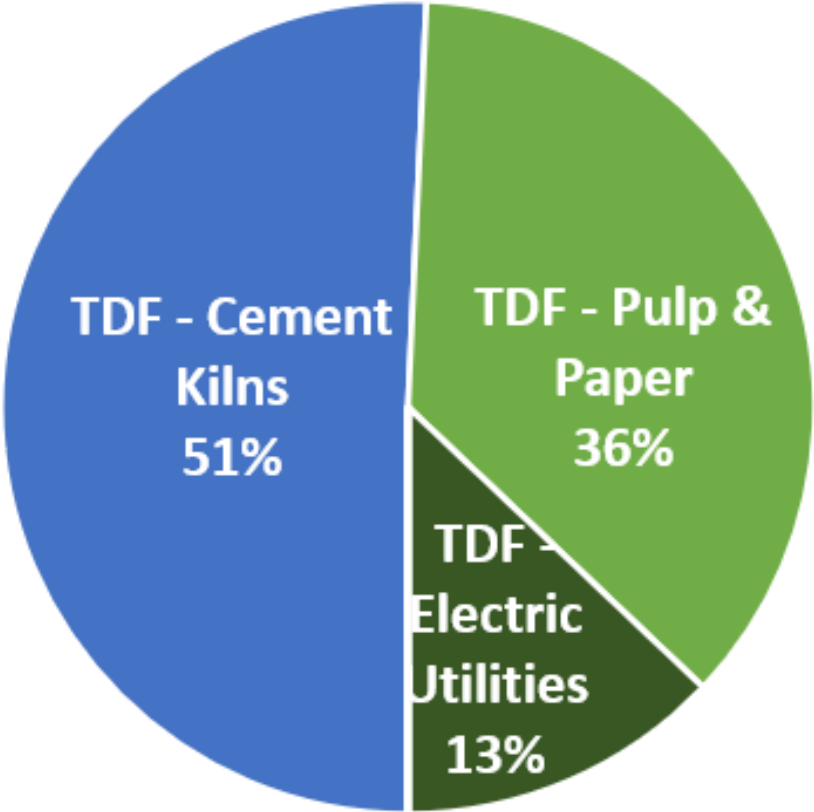
U.S. ELT Disposition 2023



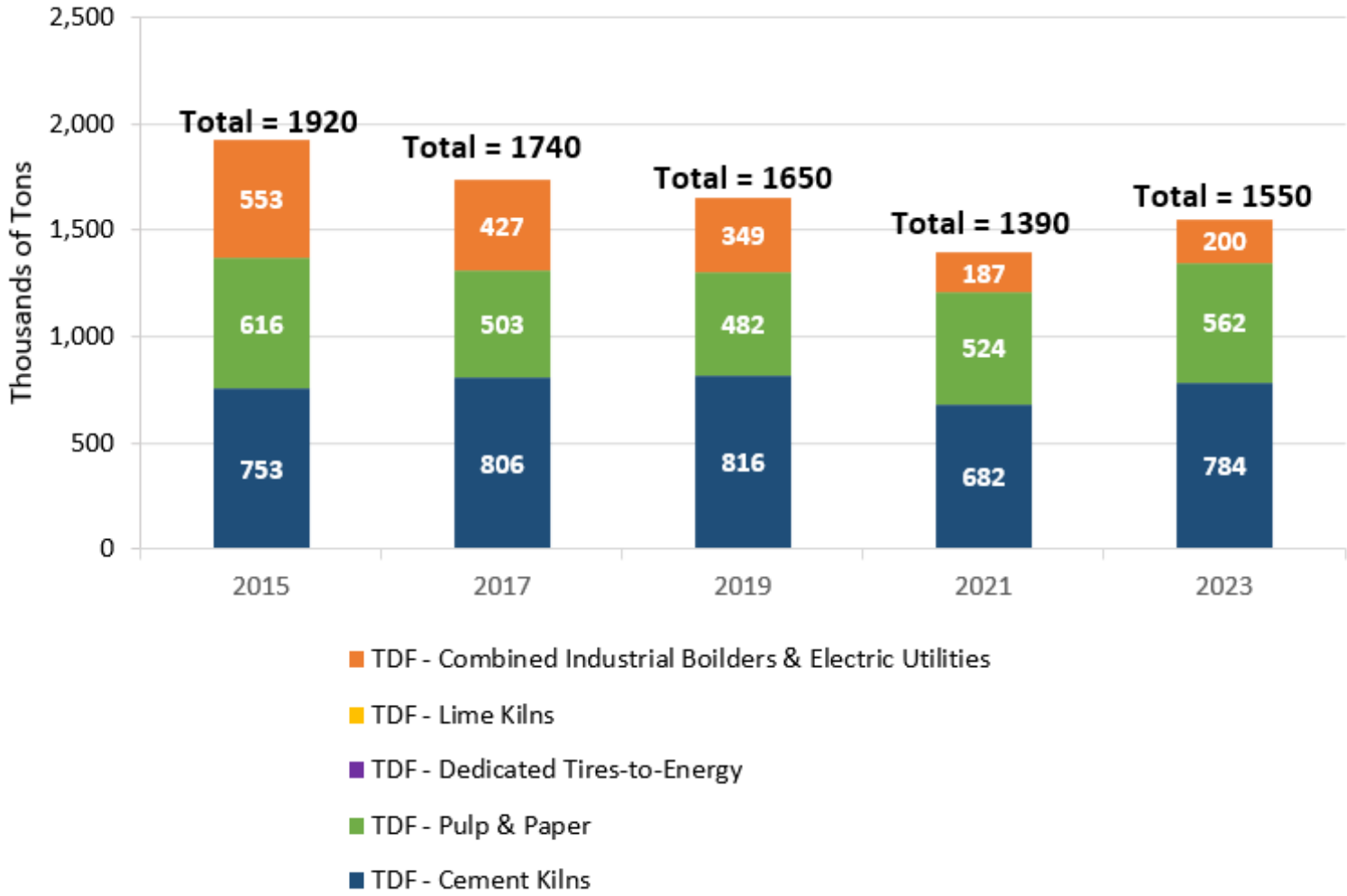
U.S. ELT Market Trends 2015 - 2023



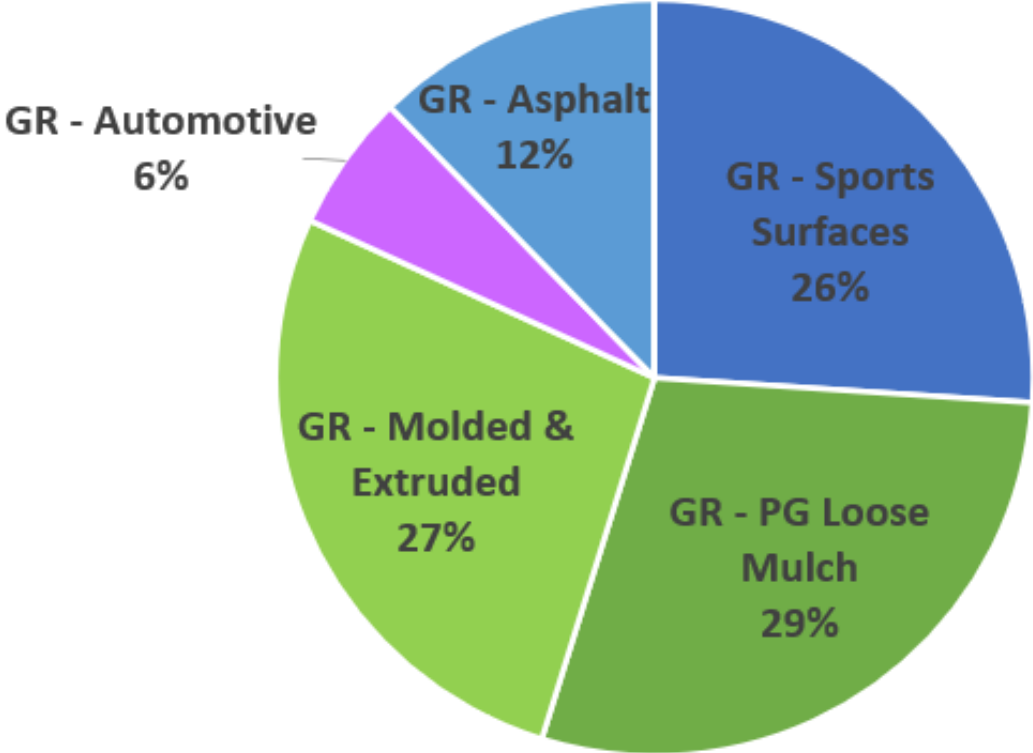
U.S. Tire Derived Fuel Markets 2023



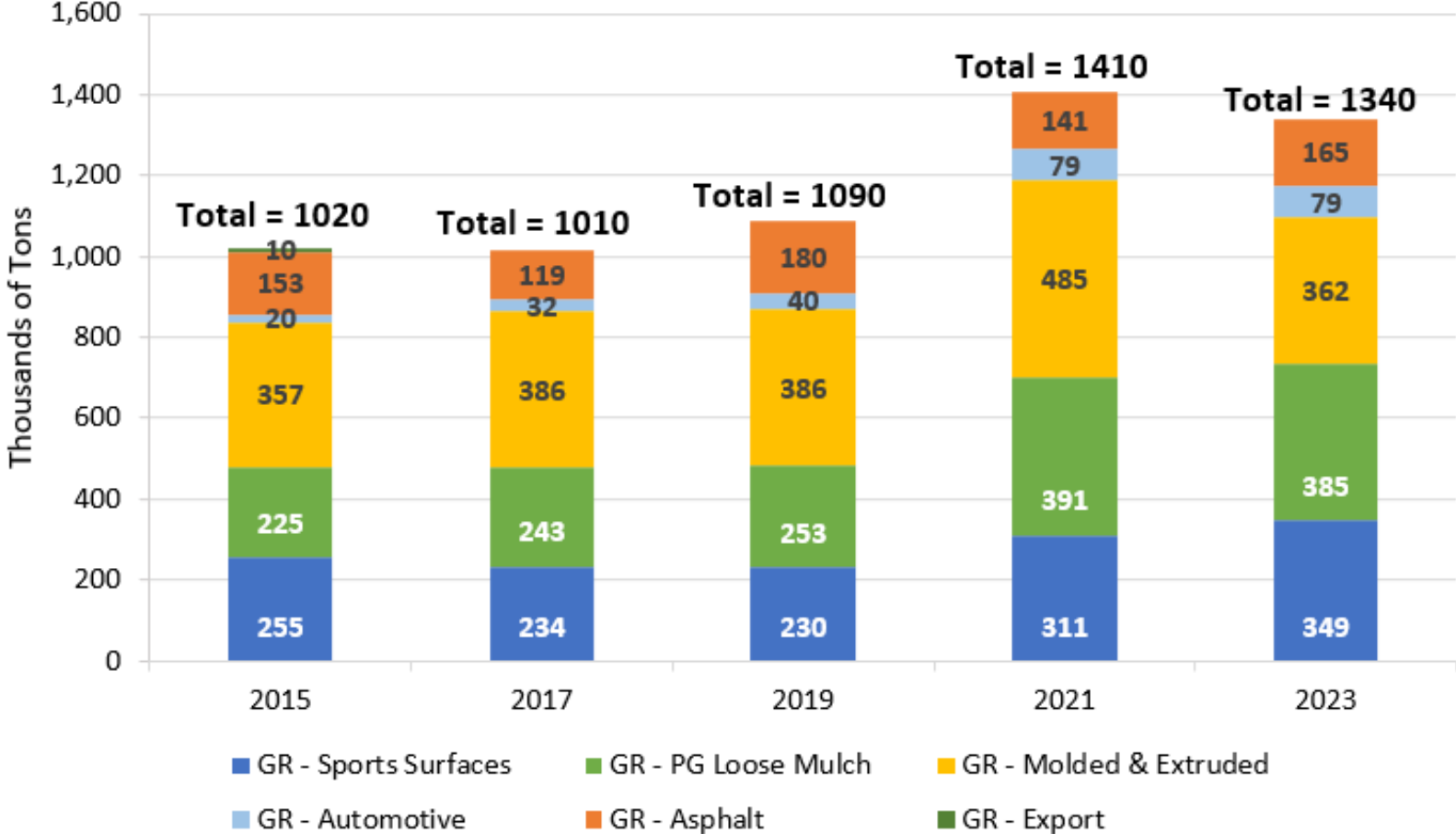
U.S. Tire Derived Fuel Market Trends 2015 - 2023



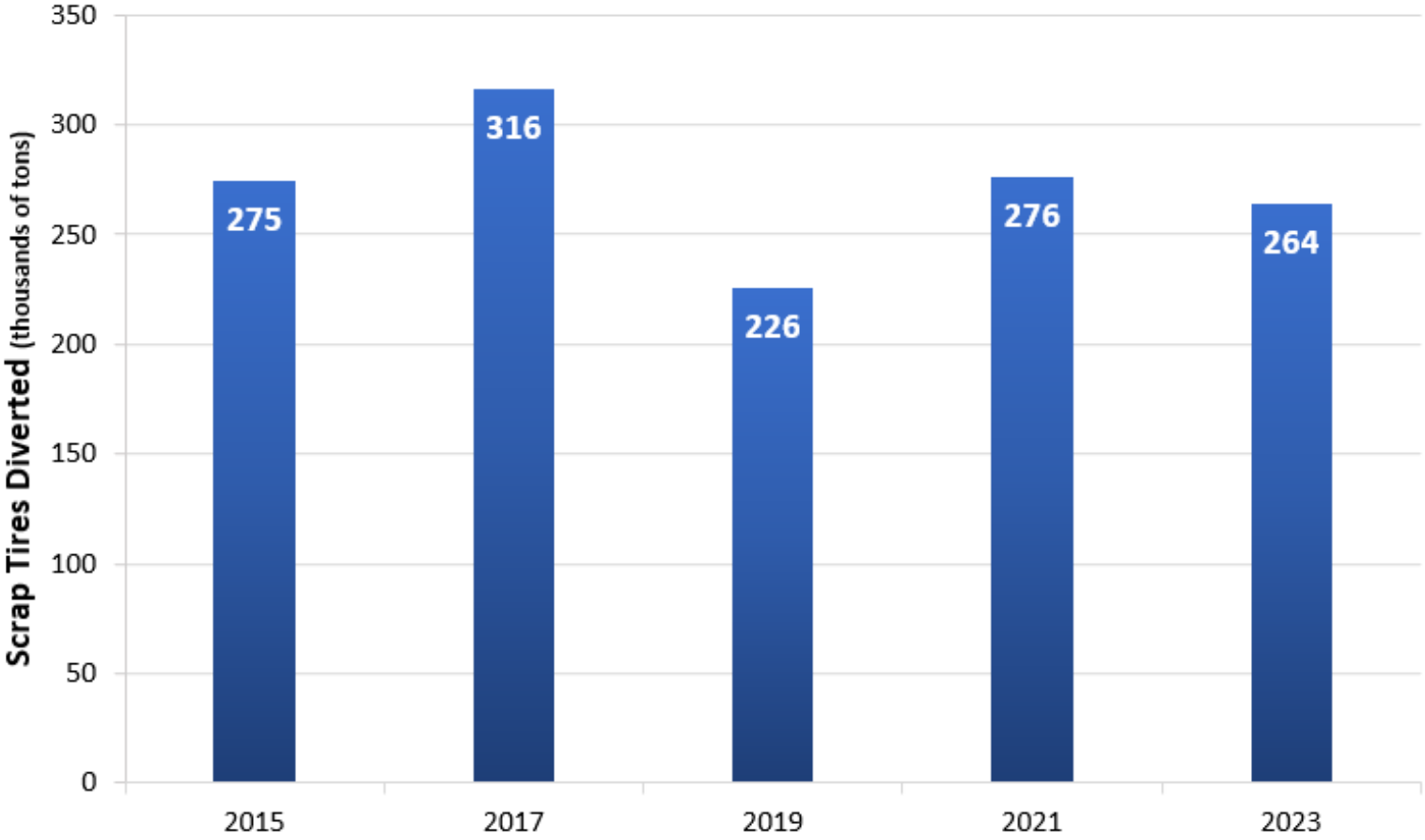
U.S. Ground Rubber Markets 2023



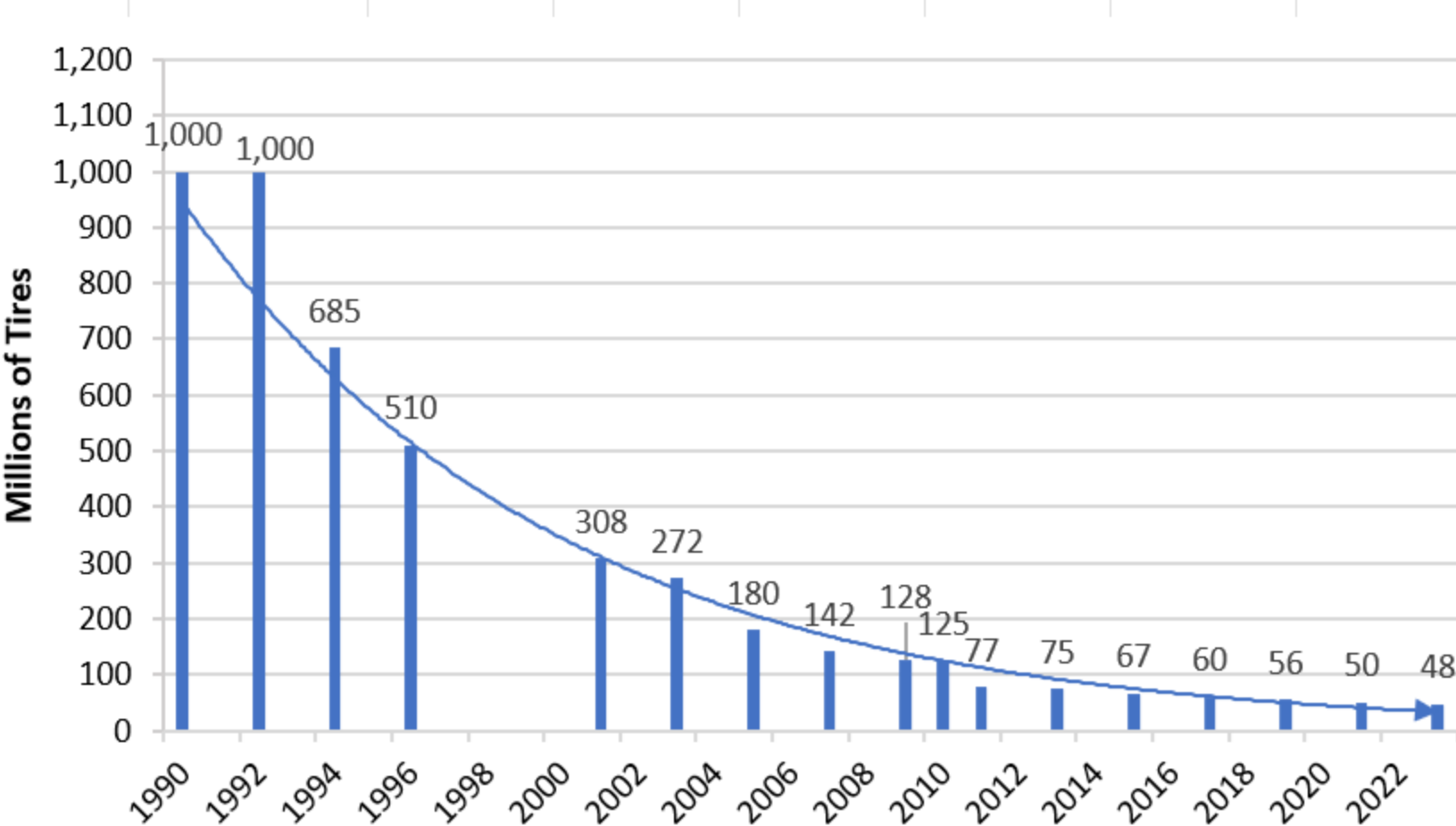
U.S. Ground Rubber Market Distribution 2015 - 2023



U.S. Civil Engineering Markets 2015 - 2023



U.S. Stockpiled ELT's 1990 - 2023



Waste Tire Disposal in Indiana

- **Proper Disposal of Waste Tires**

Indiana Code 13-20-14-4 requires proper disposal of waste tires through the following options:

- Wholesalers or their agents (IC 13-11-2-267)
- Tire manufacturers
- Tire retread facilities
- Permitted final disposal facilities regulated under environmental laws
- Registered waste tire transporters, storage, or processing sites

- **Exemptions to the Whole Waste Tire Disposal Ban**

Owners or operators of municipal solid waste landfills may dispose of:

- Small amounts of whole waste tires per 329 IAC 10-20-32 if removing the tire would endanger persons or equipment or cause delays.
- Solid rubber or foam-filled waste tires from industrial equipment (refer to IDEM guidance on disposal).

Indiana Department of Environmental Management

- Waste Tire Website: <https://www.in.gov/idem/waste/waste-industries/waste-tire-management/>
- State Regulator for ELT Programs:
 - Lori Freeman
 - Branch Chief
 - lfreeman@idem.in.gov
 - 317-232-8857

Key Takeaways

- **Tire Recycling as a Pillar of Sustainability**
- **Innovation Driving New Market Opportunities**
- **Infrastructure Solutions via RMA**
- **End-of-Life Tire Stockpile Elimination**
- **Collaboration with Federal and State Partners**

THANK YOU

QUESTIONS?