



BIENNIAL MARKET REPORT

2025 End-of-Life Tire Market Report

THE STATE OF ELT
RECOVERY AND CIRCULAR
END-USE MARKETS.

About USTMA



\$259.5B

Annual U.S. tire manufacturing economic footprint



329,527

Jobs in tire manufacturing, distribution & retailing



Since 1990

Running a dedicated national ELT program

U.S. Tire Manufacturers Association (USTMA) is the national trade association for tire manufacturers that produce tires in the U.S. USTMA works with states, U.S. EPA, industry, and others to build end-of-life tire markets, reduce stockpiles, and shape sustainable state regulations.



Sustainability Vision: USTMA members share the goal that all end-of-life tires (ELTs) enter sustainable, circular end-use markets. This report measures progress toward that vision.

USTMA MEMBER COMPANIES · 11 FULL MEMBERS



How We Compile the ELT Market Data

DATA COLLECTION & SOURCES

DIRECT FROM THE INDUSTRY

-  Information from processors and states
-  End-user and processor discussions

PUBLISHED SOURCES

-  Association summaries
-  Trade and general press information
-  Website and ESG reporting

EXPERTISE & RESEARCH

-  Expert ELT market analysts
-  Internet research using AI tools



VALIDATION & ANALYSIS

- 1 Compare Reports**
State and industry association reports are compared against processor data to validate market volumes.
- 2 Cross-Check Data**
Figures are checked across multiple sources to catch discrepancies and double-check consistency.
- 3 Analyze & Review**
Findings are analyzed and reviewed before final figures are incorporated into the report.

What Is an End-of-Life Tire?



What is an ELT? An end-of-life tire (ELT) is a tire that can no longer serve its original purpose on a vehicle, typically because its tread has worn down, the tire was damaged by a road hazard, or because it was scrapped along with an end-of-life vehicle. ELTs are a normal, predictable byproduct of tire use. This report tracks what happens to them in the U.S. once they are generated.

1



Generation

A tire reaches the end of its useful life: worn down through normal use, or scrapped along with an end-of-life vehicle.



2



Collection

Retailers, dealers, and scrap yards route ELTs to registered haulers and processors for pickup.



3



Processing

Whole tires are shredded, chipped, or ground into usable feedstocks, sized for whichever market they are headed to.



4



End-Use Markets

Processed material is sold into fuel, rubber, civil engineering, export, or other markets, the focus of this report.



Why this report focuses on markets. ELT end-use markets are demand-pull, not supply-push: tires do not move to their next use until a market recognizes that material as valuable. That makes market health, not generation volume, the real gauge of how well the system is working, which is why this report tracks markets so closely.

2025 at a Glance



273M

tires generated
5,154K tons



79%

to end-use markets
steady vs. 2023



94%

reported to us as managed
overall
down 3 pts vs. 2023



42M

tires still stockpiled
down from 48M (2023)



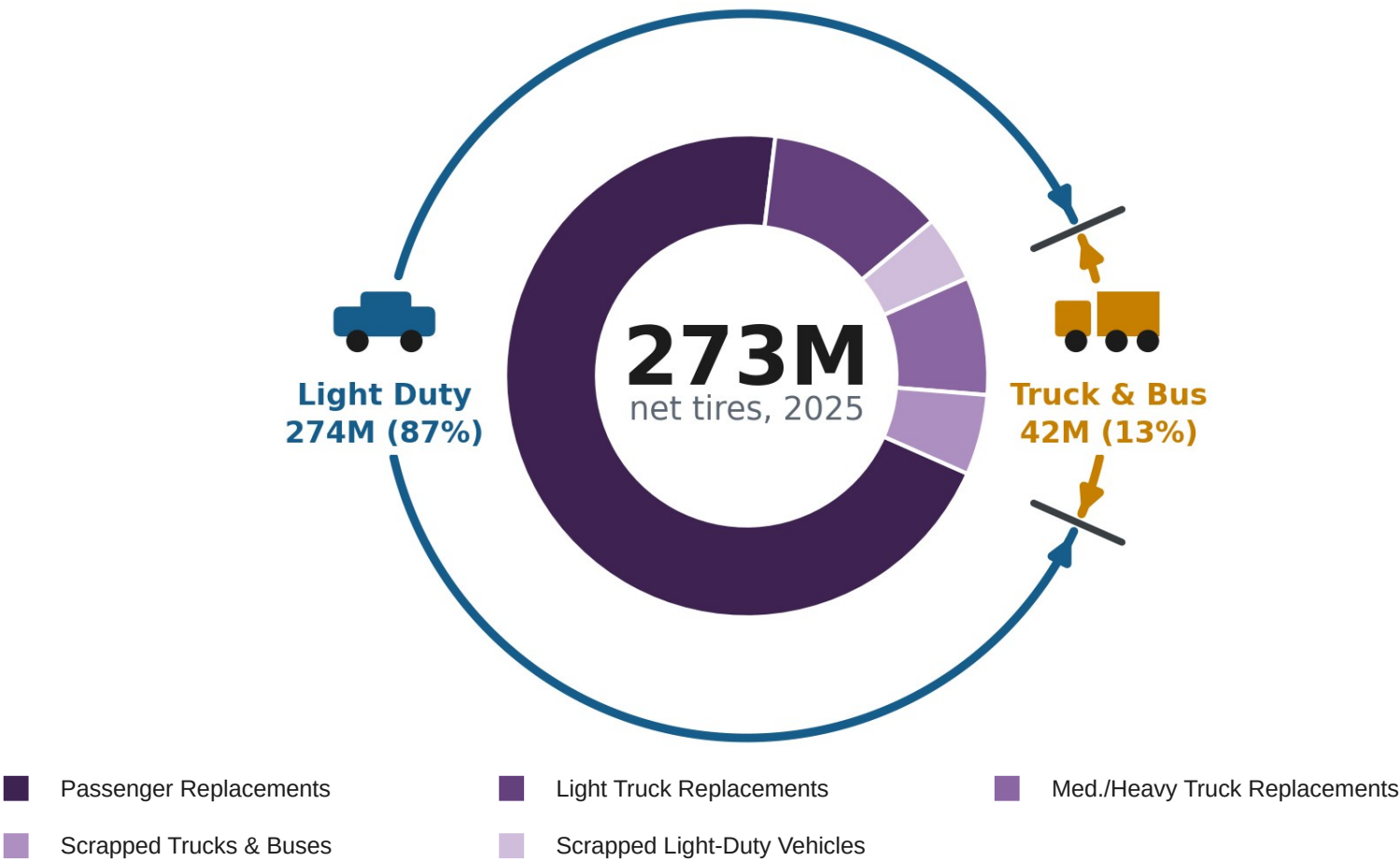
+270%

growth in exports
vs. 2023 (936K tons)

Reading the year

This was a dynamic year: stockpile cleanup kept delivering, markets moved in both directions, and exports rose sharply. What this year's figures do not yet reflect is the market-development work already underway that is expected to grow domestic markets over the next 12 to 24 months.

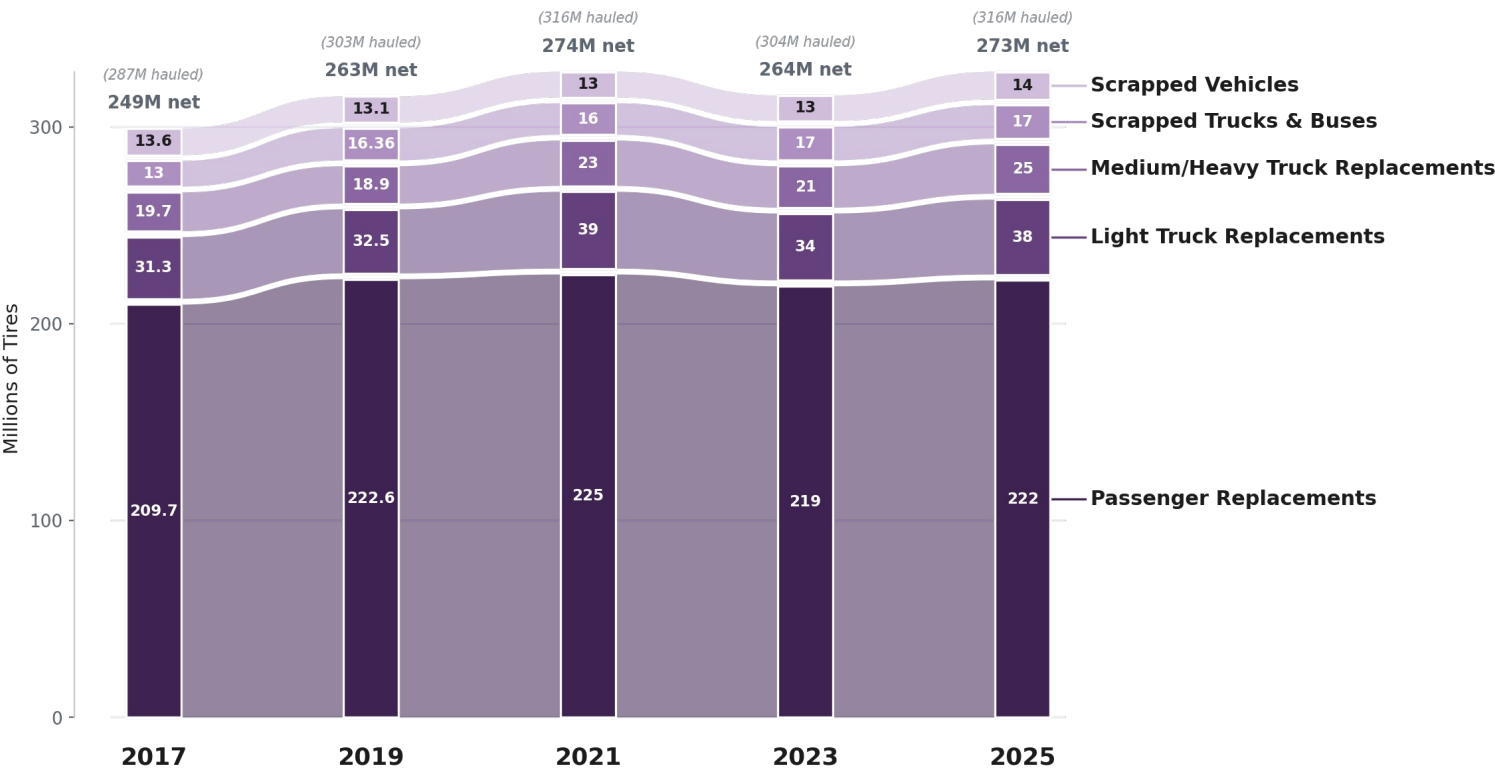
ELT Generation by Source, 2025



Source	2025	2023 → 2025
■ Passenger Replacements	222M	+1.4% ▲
■ Light Truck Replacements	38M	+11.8% ▲
■ Med./Heavy Truck Replacements	25M	+19.0% ▲
■ Scrapped Trucks & Buses	17M	flat
■ Scrapped Light-Duty Vehicles	14M	+7.7% ▲
<i>Total tires hauled</i>	316M	+3.9% ▲
<i>Used tires culled</i>	43M	+7.5% ▲
Net ELTs	273M	+3.4% ▲

Light duty dominates. Light-duty tires make up 87% of gross tires hauled (274M of 316M), which nets to 273M once used-tire culls are subtracted. Commercial tires are far heavier per unit, though: 120 lbs vs. 25 lbs for light-duty.

U.S. ELT Generation, 2017–2025



273M tires generated

5,154K tons, up 9.5% from 249.4M tires in 2017 (~3%/year), tracking more miles driven.



86.6% light duty

Passenger + light truck + scrapped-vehicle tires; steady since 2017 (88.6%).

Covid dip fully reversed. Generation fell sharply in 2020-21 as pandemic-era driving dropped; by 2025 it has run 9.5% past 2017 levels. From 2023 to 2025, vehicle miles traveled rose about 1.8% (3,264 to 3,324 billion) while regular gasoline fell from \$3.52 to \$3.10 per gallon.

Bold total above each column is net of used-tire culls: each report's own reconciled generation figure; gross hauled shown parenthetically.

What the Five Markets Mean



Tire-Derived Fuel 1,317K tons

Shredded or whole tires burned as fuel in cement kilns, pulp & paper mills, and utility/industrial boilers.



Ground Rubber 1,201K tons

Tires ground into crumb rubber or powder for mats, mulch, playground surfaces, molded products, and asphalt.



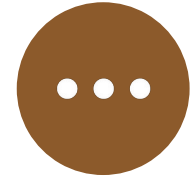
Tire-Derived Aggregate 207K tons

Shredded tires used as lightweight fill, drainage, or embankment material in civil engineering projects.



Exported 936K tons

Whole or processed tires shipped overseas, largely into fuel and pyrolysis markets abroad.

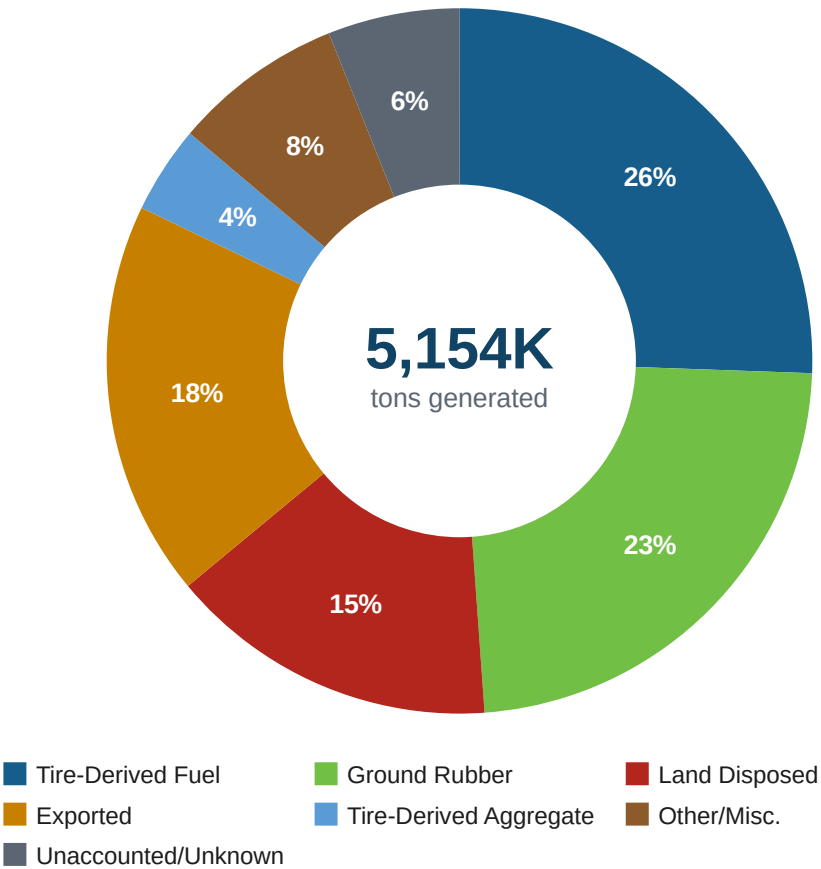


Other/Misc. 402K tons

Mainly agricultural uses, punched/cut/stamped rubber products, and many other smaller end uses too small to break out individually.

Market Scorecard: Mix, Utilization & Trend, 2023–2025

Thousand tons of ELTs diverted, by market. Direction reflects the raw change in volume; for Land Disposed, an increase is unfavorable.



Market	2023	2025	Change	Trend
Tire-Derived Fuel	1,546	1,317	-14.8%	▼
Ground Rubber	1,339	1,201	-10.3%	▼
Tire-Derived Aggregate	264	207	-21.5%	▼
Exported	253	936	+270.0%	▲
Other/Misc.	399	402	+0.8%	▲
Electric Arc Furnace	70	70	0.0%	—
Reclamation Projects	40	44	+10.5%	▲
Pyrolysis	—	56	New	★
Misc. (residual)*	289	231	-19.9%	▼
Land Disposed	874	779	-10.9%	▼
Unaccounted/Unknown	161	311	+93.2%	▲
Total to Market	3,801	4,063	+6.9%	▲
Total ELTs Generated	4,836	5,154	+6.6%	▲
% Reported as Managed (overall)	97%	94%	-2.7 pts	▼

The remaining 6% beyond the 94% reported as managed likely sits in processor inventory, in transit, or is landfilled, exported, or recycled without being reported.

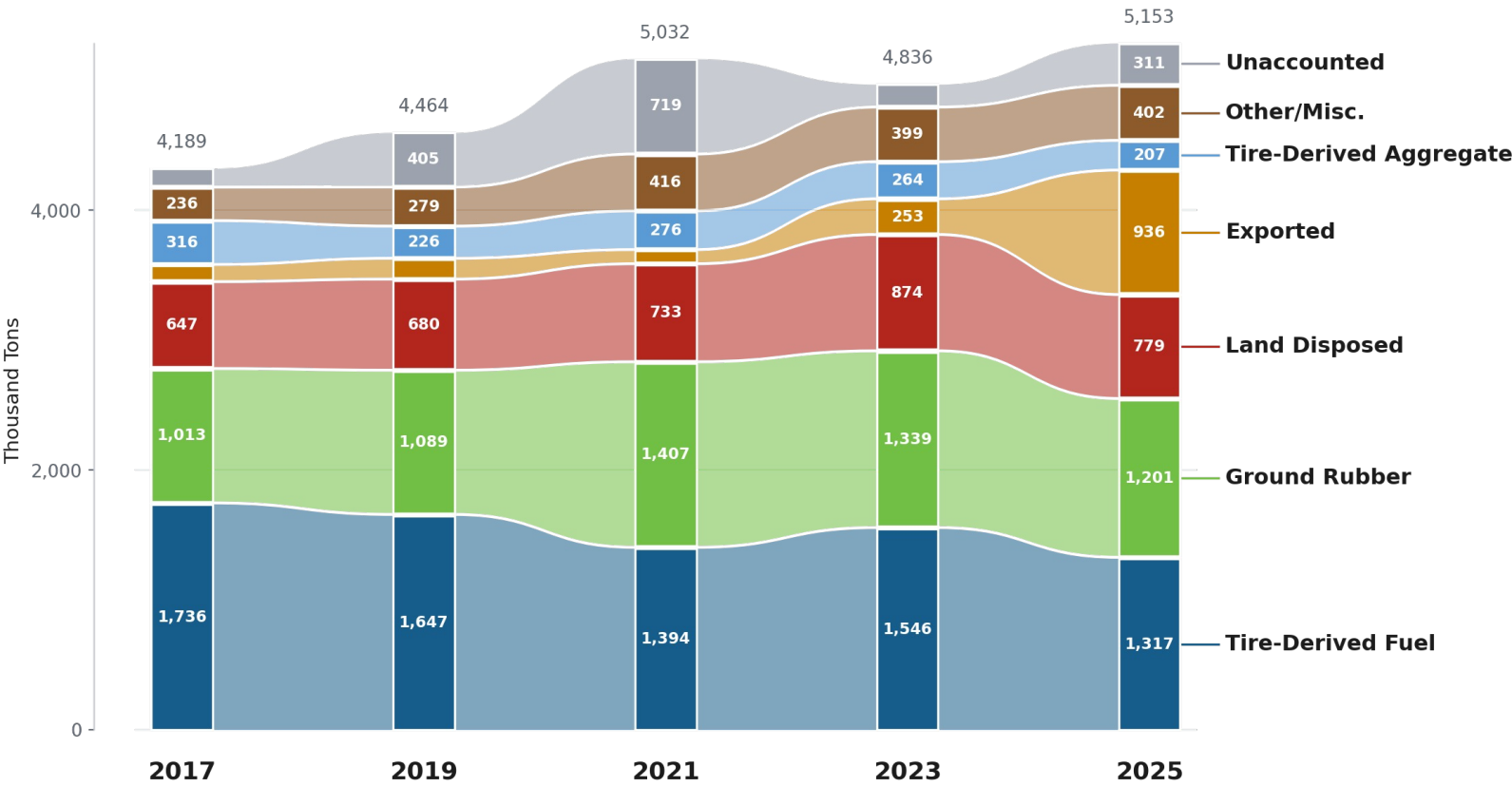


Land Disposed is not a market. 779K tons in 2025 (-10.9% since 2023, still ~16% of total disposition) did not reach a market and were reported to us as legally landfilled.



Pyrolysis: a small, distinct domestic market. Domestic pyrolysis processed 56K tons in 2025 (~1% of generation, cleared for the first time), now broken out above under Other/Misc., separate from Exported tonnage, not a subset of it. *Misc.'s apparent -19.9% reflects Pyrolysis being carved out for the first time, not a real decline in that catch-all.

Market Mix & Utilization Trends, 2017–2025



 **+270% exports**

The biggest swing since 2023.

 **-21.5% TDA**

TDA vs. 2023: 264K down to 207K tons.

 **79% utilization**

Essentially flat vs. 2023.

Exports and domestic markets. Overseas demand grew sharply this cycle, which shows the material has real value. USTMA's priority is to keep more of that value at home. Domestic markets used less material than in 2023, and growing them is a focus of USTMA's market-development work.

Size Matters



Tire-Derived Aggregate

Shredded to a coarser, uniform range for lightweight, free-draining civil engineering fill.

2 - 12" shred

Lightweight fill, landfill drainage layers, septic leach fields and roadway embankments.

1 cubic yard ≈ 75 tires (≈0.94 tons)

TDA weighs about one-third to one-half as much as the soil it replaces.

10x drainage, 8x insulation

Drains 10x better than well-graded soil and insulates 8x better than gravel, vs. traditional fill.



Tire-Derived Fuel

Whole tires need no processing; boilers need small, low-wire chips.

Whole tire

Cement kilns: once burned mostly whole, but growing kiln sizes and the closure of older kilns have shifted more cement-kiln TDF to 2" wire-free chips.

~2" x 2" chips, wire reduced

Utility/industrial boilers & pulp and paper mills: once accepted 2-3" chips, the industry has shifted to smaller, lower-steel fuel chips.

3/8 - 1" fines (a chipping byproduct)

Screened out during fuel-chip processing as "coarse" rubber -- this is where the Ground Rubber supply chain picks up.



Ground Rubber

Ambient or cryogenic grinding sorts tire rubber into size classes -- each with its own market.

Coarse: 1" - 4 mesh

Playground loose-fill (1/2-1/4"), molded & extruded products (4-100 mesh).

Ground: 10 - 80 mesh

Rubber-modified asphalt (16-40 mesh) and athletic & turf infill (1/4" to 20 mesh).

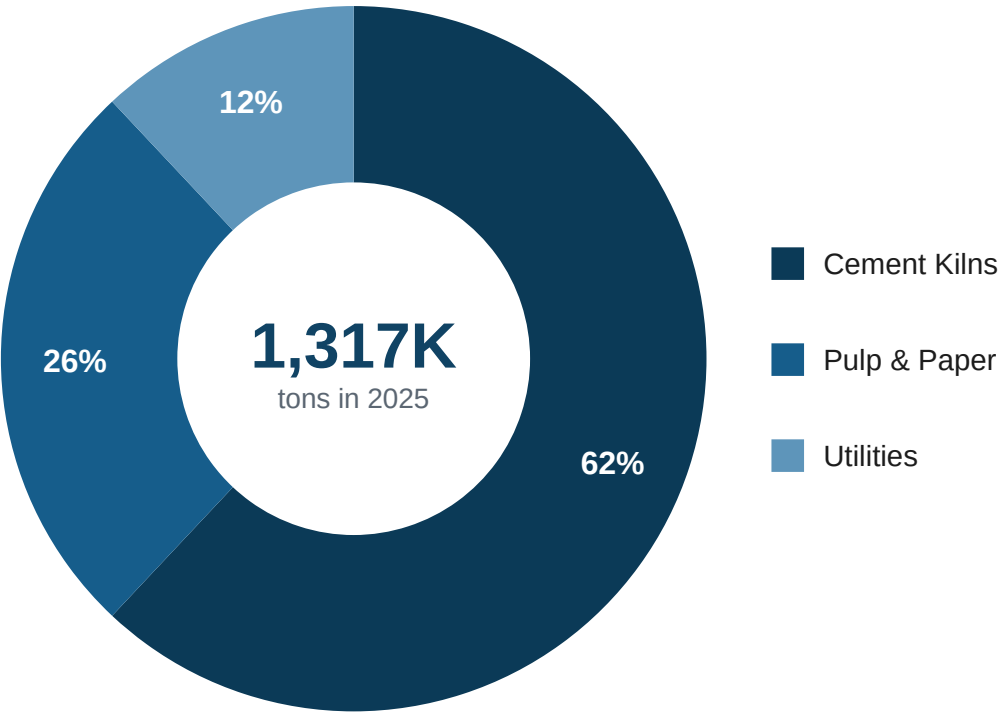
Fine Grind: 80 - 400 mesh

Tire manufacturing and other high-spec molded goods needing a smooth finish.



One tire, three sizes, three markets. How small it is cut -- and how much wire and fabric is removed -- determine whether it becomes fuel, playground surfacing, or roadbed.

Tire-Derived Fuel Markets, 2025



-14.8% overall. The TDF market declined since 2023 as losses at paper mills and utility boilers outpaced cement kilns' gains.



The #1 market

Tire-derived fuel remains the single largest end-of-life tire market: 1,317K tons in 2025, ahead of ground rubber (1,201K) and every other outlet.



Cement kilns are growing

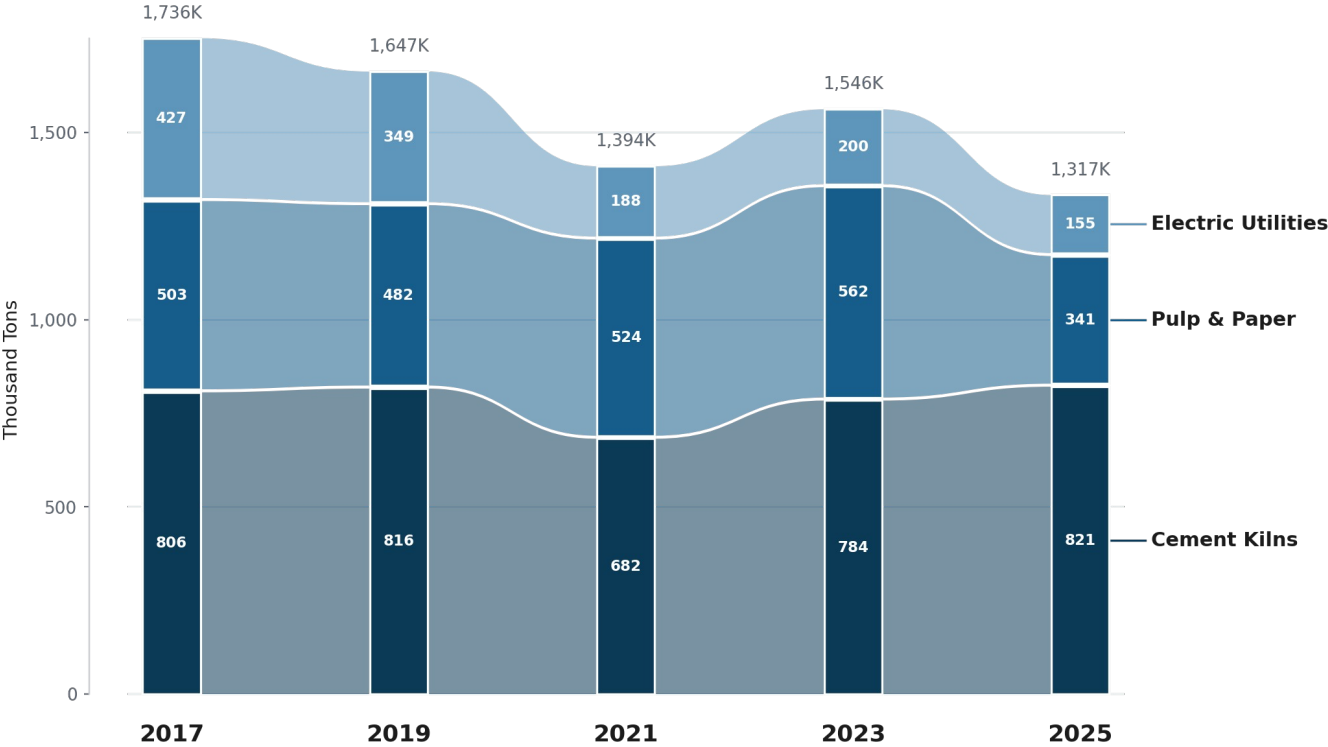
Cement kilns hold 62% of the TDF market mix and grew about 5% since 2023, as CO₂-reduction pressure and TDF's biogenic content (about 24%) make it an attractive alternative fuel.



Paper & utilities losing ground

Pulp & paper mill TDF volume contracted by 39% since 2023 due to plant closures. Electric/utility boilers lost about 22% of TDF volume, largely from unfavorable regulatory changes in Michigan.

Tire-Derived Fuel Market Trends, 2017–2025



1,317K tons in 2025

Overall TDF market is down 14.8% from 1,546K tons in 2023.



Cement kilns: 784K → 821K tons

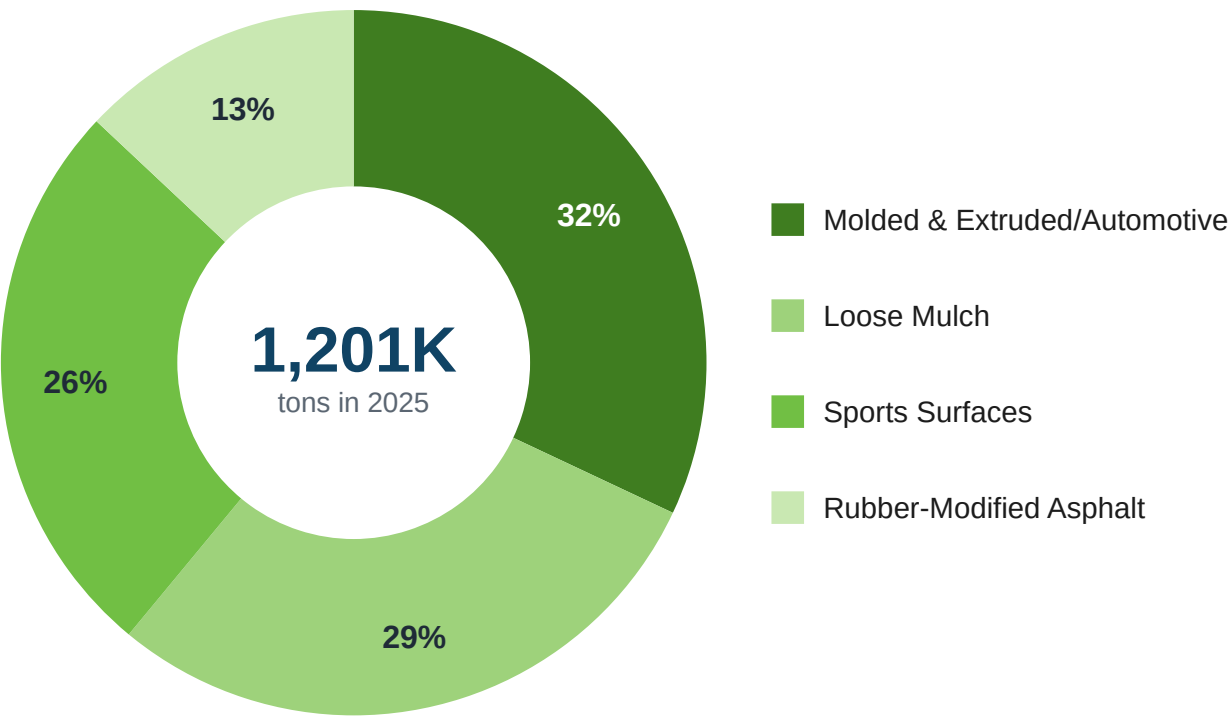
The only TDF sub-market to grow since 2023 (+4.7%).



-39% Pulp & Paper

Steepest decline of the three since 2023: fell from 562K to 341K tons.

Ground Rubber Markets, 2025



A high-value outlet. Ground rubber remains a critical, high-value use for ELTs, even as reported volume fell about 10%.



Molded & extruded/automotive still leads

Still the largest single sub-market at 32% of the mix in 2025 (33% in 2023), on strong demand for durable, long-life rubber.



Turf and mulch both declined

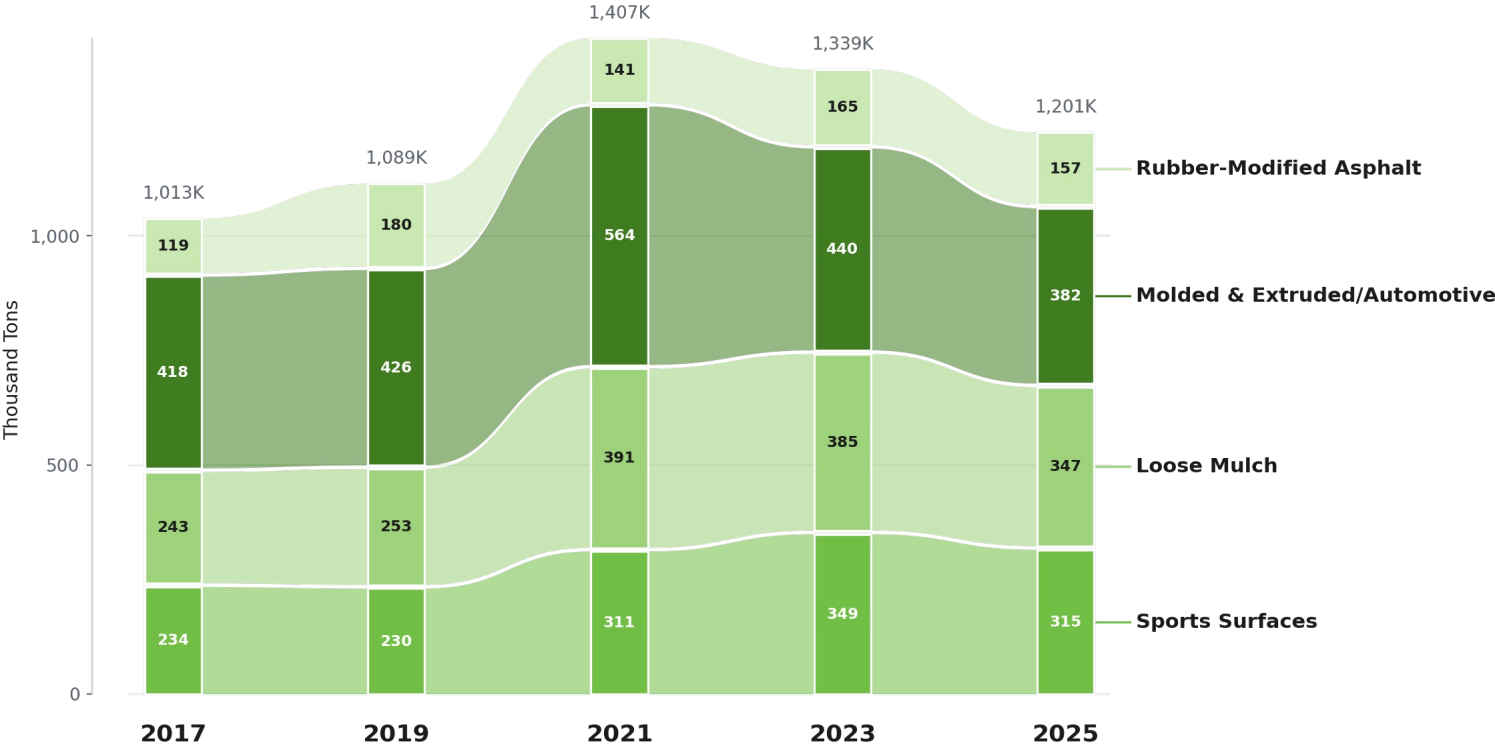
Synthetic turf (-9.8%) is losing share to alternative infill like cork, coconut husk, and olive pits. Mulch dipped similarly (-10.0%) but is likely under-captured in state data.



Small share, real promise

Smallest slice at 13%, down modestly (<5%) since 2023. Kentucky, Michigan, and California are funding rubberized asphalt projects, and the dry process keeps advancing.

Ground Rubber Market Trends, 2017–2025



-10.3% Ground Rubber Overall

1,201K tons in 2025, down from 1,339K tons in 2023.



-13.1% Molded & Extruded/Automotive

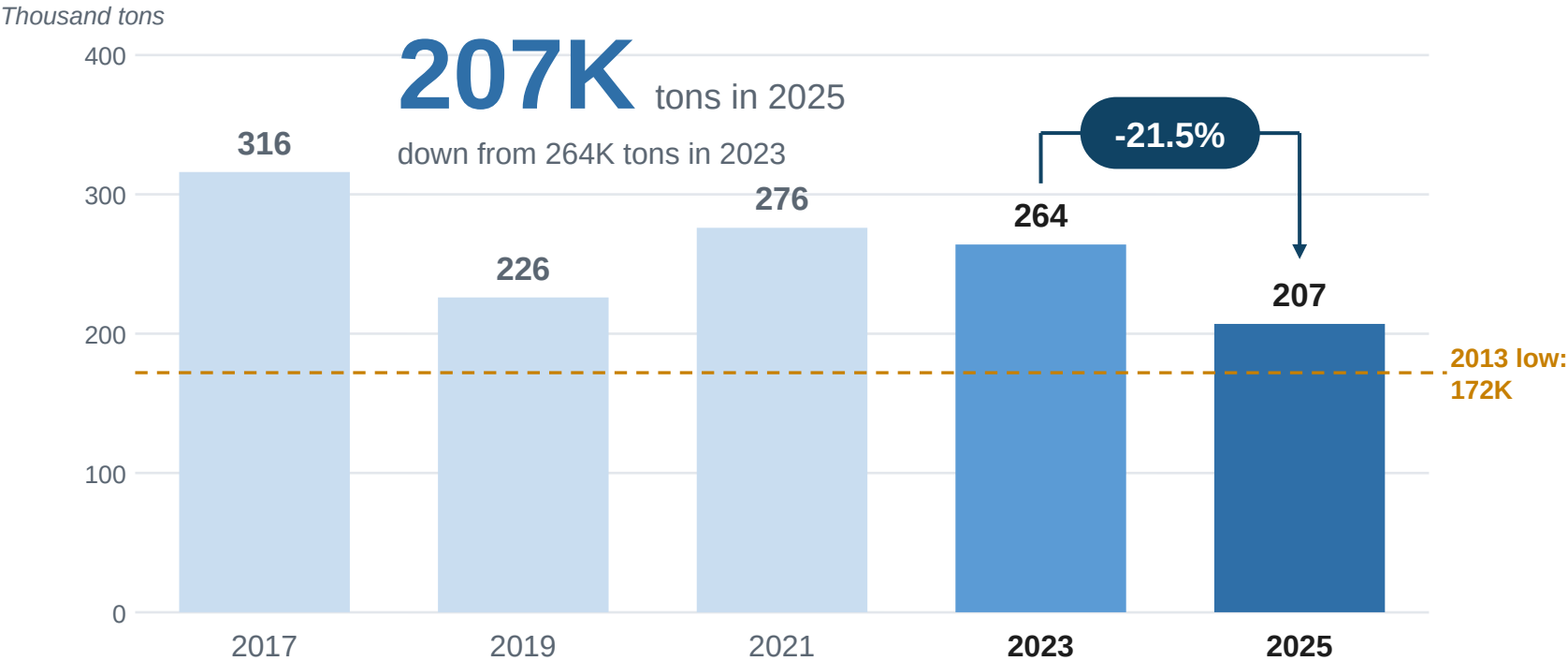
440K → 382K tons since 2023, a slide since a 2021 peak of 564K tons.



-9.8% Sports Surfaces

Losing share to alternative infill like cork, coconut husk, and olive pits since 2023.

Tire-Derived Aggregate Use, 2017–2025



Lowest since 2017, but not unprecedented. 207K tons in 2025 is down 21.5% from 2023’s 264K, yet still sits within the broader range this market has held over the past 15-20 years (it dipped as low as 172K in 2013).

What TDA is used for

- Lightweight fill
- Drainage
- Embankments
- Landfill daily cover

1 cubic yard of TDA is about 75 tires



-21.5% since 2023

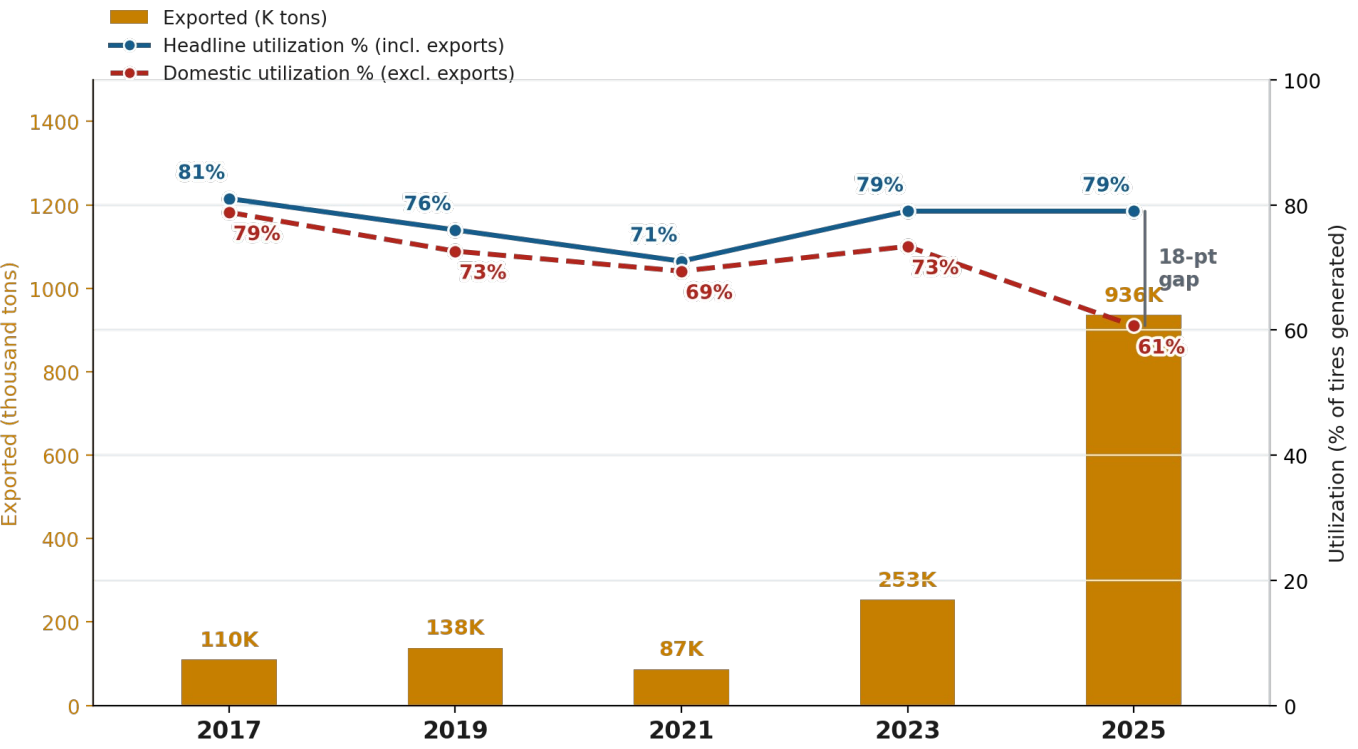
TDA fell from 264K to 207K tons between 2023 and 2025, the lowest level since 2017.



10x better drainage

Drains ten times better than well-graded soil and insulates eight times better than gravel.

U.S. ELT Exports, 2017–2025



Exports' share of utilization. Exports made up 18 percentage points of the 79% utilization rate in 2025 (936K of 5,154K tons generated). From 2017 to 2023, exports made up 2 to 6 points. Excluding exports, 61% of 2025 generation went to U.S. end-use markets, down from 73% in 2023.



+270% since 2023

253K to 936K tons in two years, led by India's fast-growing market and steady TDF exports to regulated markets like Japan and South Korea.



61% domestic utilization

Excluding exports, 61% of 2025 generation went to U.S. end-use markets, down from 73% in 2023.

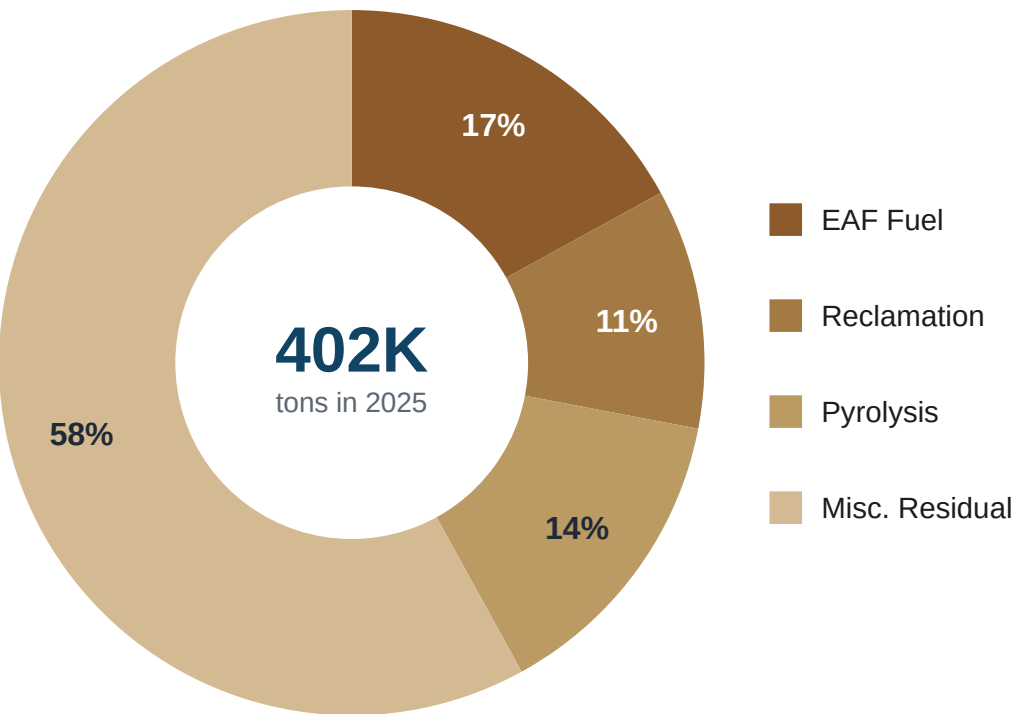


18 points from exports

Exports made up 18 points of 2025's 79% utilization, versus 2 to 6 points from 2017 to 2023.

"Excluding exports" = (Total to Market – Exported) / Generated, using this deck's reconciled total-to-market and generated figures. Source: USTMA/Rubber Manufacturers Association ELT market reports, 2017-2025.

Other/Misc. Markets, 2025



Pyrolysis, broken out for the first time. The process heats shredded tires in a low-oxygen chamber to recover oil, gas, and a carbon-black substitute -- distinct from exported tonnage, and the process targeted by India's 2022 import rule.

 **402K tons in 2025**

Up just 0.8% from 2023 -- the smallest change of any market this cycle.

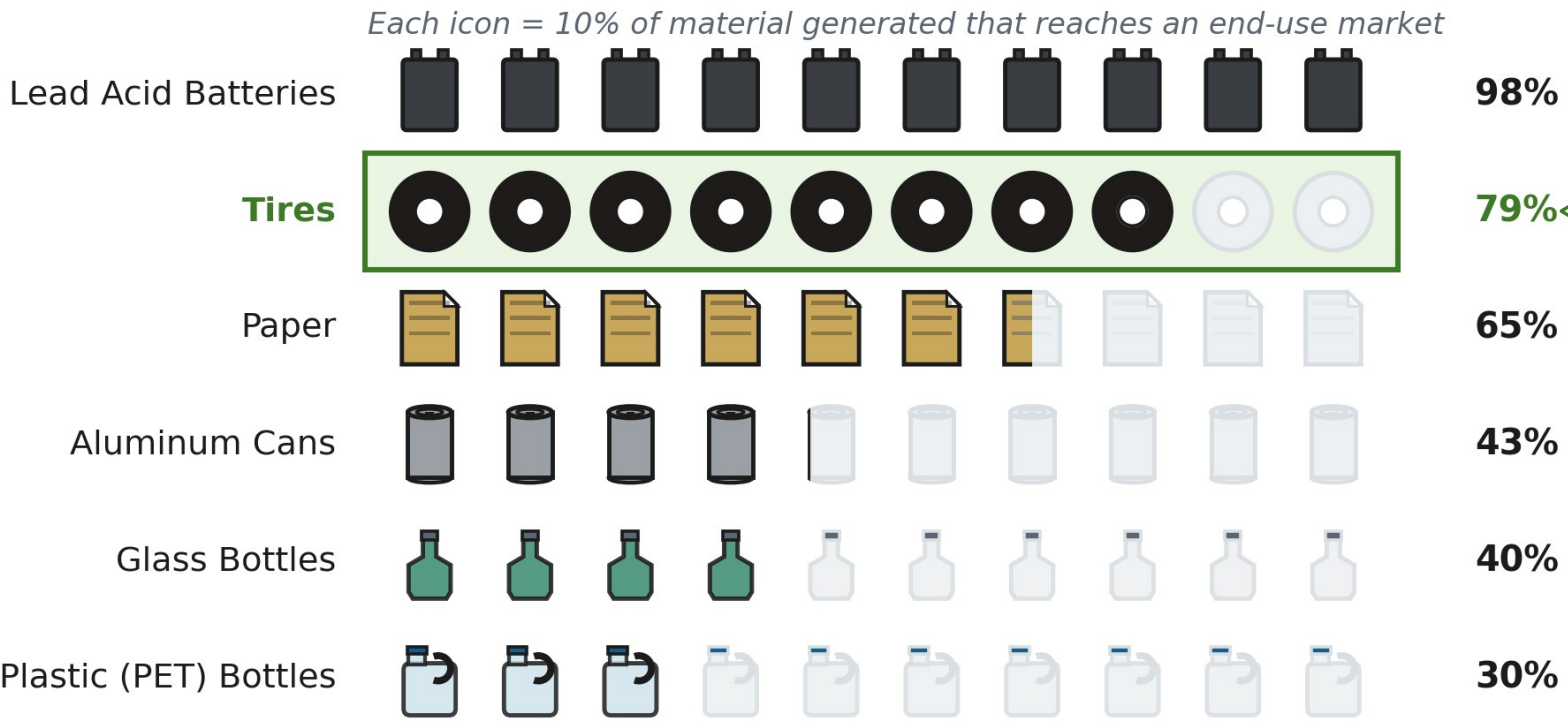
 **Four components, one bucket**

Electric arc furnace fuel (70K), reclamation projects (44K), pyrolysis (56K), and a Misc. residual (231K) of smaller uses.

 **The catch-all category**

The 231K-ton "Misc. residual" slice covers agricultural applications, punched/cut/stamped rubber products, arts-and-crafts uses, and devulcanization -- each too small or too varied to break out as its own market.

Tire Beneficial Use vs. Other Materials

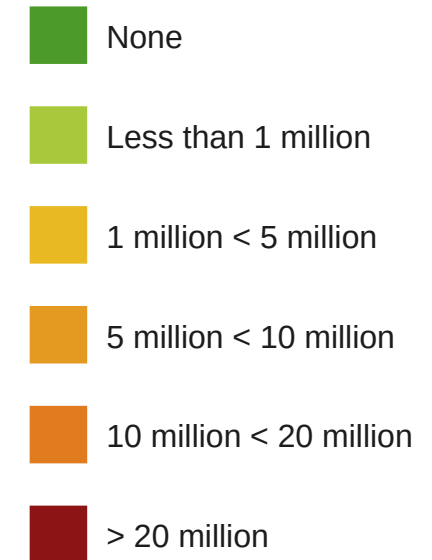


Tires are recycled and reclaimed better than most peer materials. Their 79% rate is behind only lead-acid batteries (98%), and well ahead of paper, aluminum, glass, and plastic.

 **PET is a high estimate**

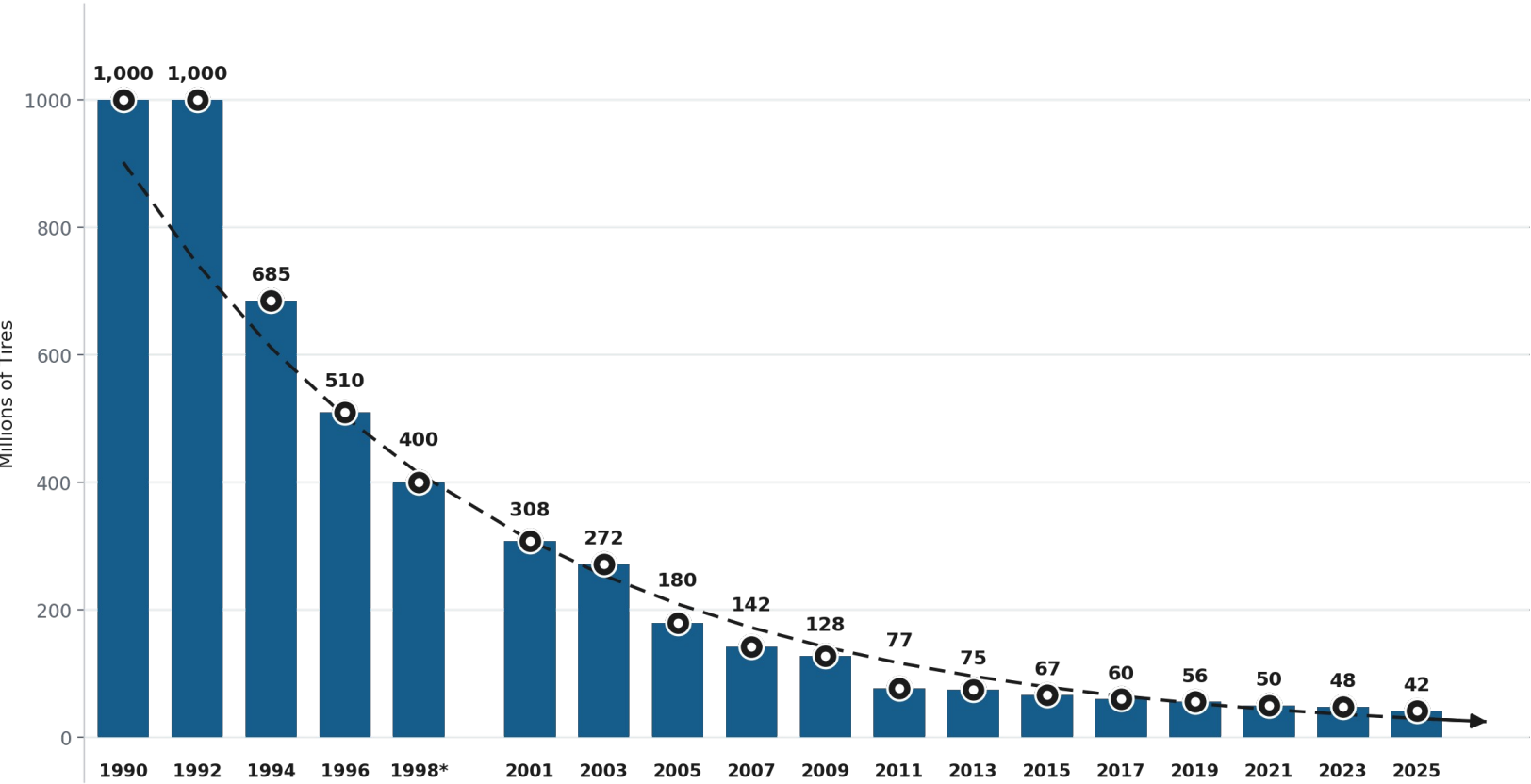
30% is the high end for plastics, not the norm. Others recycle far lower: HDPE 28.9%, LDPE 10%, PP ~8%, PS 3.6%.

A map of the United States where each state is colored either orange or green. The orange states are WA, OR, ID, UT, CO, NM, TX, and ND. The green states are MT, WY, NE, KS, OK, MN, IA, MO, AR, LA, WI, MI, IL, IN, OH, PA, NY, VT, NH, ME, MA, CT, RI, NJ, DE, MD, WV, VA, NC, SC, GA, AL, MS, FL, AZ, NV, CA, AK, and HI.



USTMA 2025 End-of-Life Tire Market Report 20

U.S. Stockpiled Tires, 1990–2025



*1998 is a Rubber Manufacturers Association estimate, not measured data. Dashed line is an exponential-fit trendline, not a reported figure.



Colorado's program

Its cleanup program drove the entire net decline



-12% in just two years

48M → 42M, even as state reporting continues to improve.



96% cumulative reduction

From the 1-billion-tire peak in 1990: a genuine success story.



State Stockpile Movers, 2023 → 2025

Colorado is the whole story: its cleanup program alone drove the entire national decline. The other 49 states combined added 6.2M tires, led by Idaho (+2.0M), Washington (+1.4M), North Dakota (+1.0M), and Utah (+1.0M).

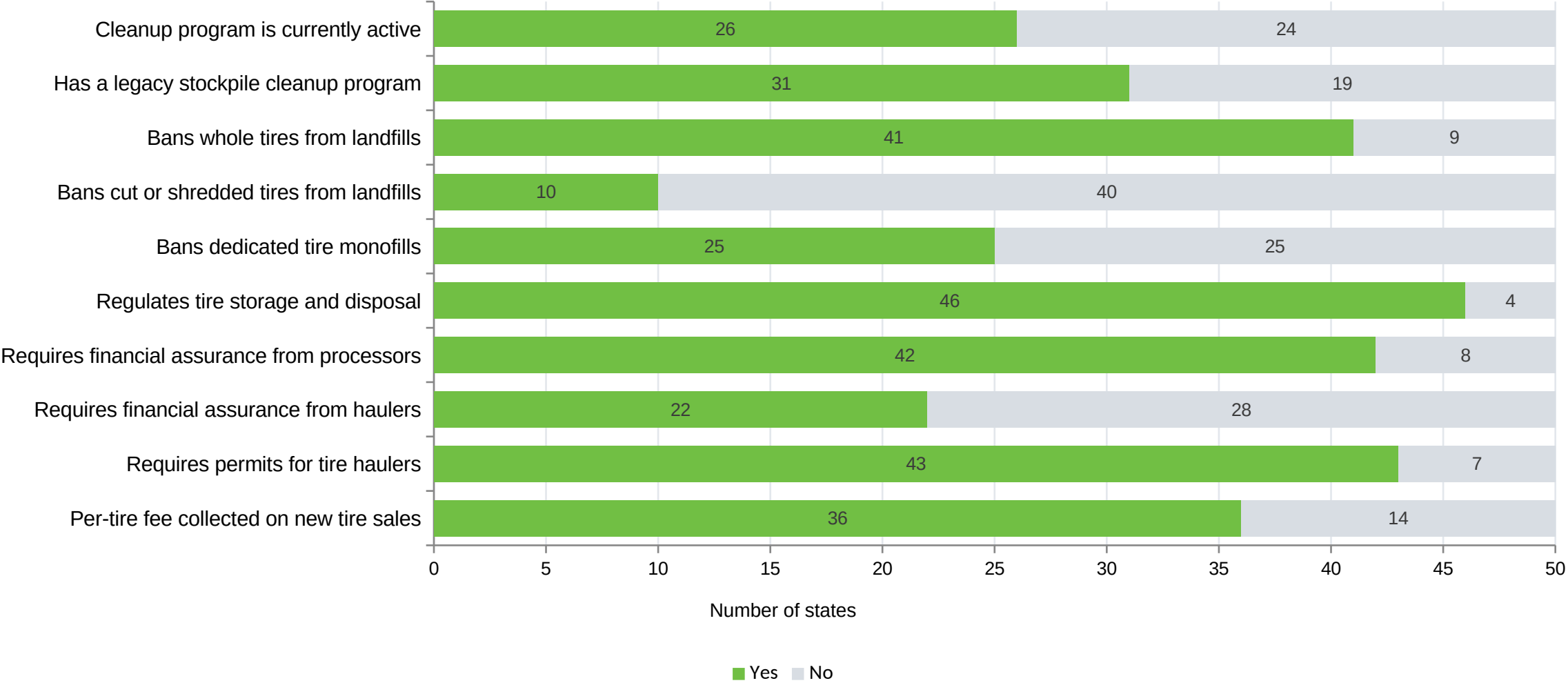
State	2023	2025	Change	Trend
Colorado	26,231,196	14,050,000	-46%	▼
Idaho	0	2,000,000	New	▲
Washington	600,000	2,000,000	+233%	▲
North Dakota	0	1,000,000	New	▲
Utah	0	1,000,000	New	▲
New Jersey	1,000,000	400,000	-60%	▼
Missouri	0	500,000	New	▲
Pennsylvania	866,600	500,000	-42%	▼
Maine	0	300,000	New	▲
Michigan	250,000	500,000	+100%	▲
Texas	12,185,301	12,428,731	+2%	▲
Mississippi	250,000	450,000	+80%	▲

State	2023	2025	Change	Trend
North Carolina	176,880	0	Resolved	▼
Alabama	16,057	159,988	+896%	▲
Florida	454,600	568,250	+25%	▲
Ohio	0	100,000	New	▲
Oregon	0	56,500	New	▲
Wisconsin	500,000	550,000	+10%	▲
South Carolina	43,100	91,720	+113%	▲
Virginia	967,330	919,000	-5%	▼
Vermont	458,000	500,000	+9%	▲
Georgia	123,300	161,703	+31%	▲
Tennessee	30,000	0	Resolved	▼
Delaware	20,000	0	Resolved	▼

All 24 states with a change in reported stockpile, 2023 → 2025 (of 50 total), sorted by size of change. 26 states reported no change. “New” means newly reported in 2025 from prior regular reporting of zero. Source: USTMA state-by-state tracker, dated October 2026.



State End-of-Life Tire Program Snapshot



Note: "Yes" is the more protective / stronger-program answer for every question above.

Elements of an Effective State ELT Program

PILLAR 1 · FUNDING



36 of 50 states collect a fee

A per-tire fee on new sales funds most state programs. USTMA's view of how fees should work: a dedicated fund (not the general fund), fees that step down once markets mature, and no direct subsidies for collection or processing.

PILLAR 2 · MARKET DEVELOPMENT



41 states ban landfilling whole tires

But just 10 extend that ban to cut or shredded tires, and states split evenly on banning dedicated tire monofills (landfills used only for tires). Key levers: grants and loans, end-user reimbursement, state purchasing preferences, and demonstration projects that open new end-use markets.

PILLAR 3 · MANAGEMENT & ENFORCEMENT



43 states require hauler permits

Most states require permits (43), processor financial assurance (42), and storage rules (46). Hauler financial assurance (22 states) and active legacy cleanup programs (26 of 31) have the most room to grow. Key levers: enforcement, criminal liability for illegal dumping, and periodic amnesty clean-ups.

No state's program checks every box above. But the strongest ones treat funding, market development, and management as a package, not a menu -- and that combination, more than any single element, is what separates states with shrinking stockpiles and active end-use markets from those still working through a legacy backlog.

2025 in Review: Key Takeaways



Markets roughly kept pace with generation

In total, markets consumed 79% of end-of-life tires in 2025, essentially flat vs. 2023, as export growth helped offset softening in traditional domestic markets.



Exports are offsetting the decline

Growth in exports kept pace with declines in traditional ELT markets, while pyrolysis is making a growing impact on ELT management.



TDF: expect continued fluctuation

Tire-derived fuel markets are expected to continue fluctuating with energy pricing and climate and environmental policy.



Ground rubber: broad-based softening

Every ground-rubber sub-market pulled back since 2023 -- Molded & Extruded/Automotive most of all (-13.1%) -- reflecting softening across ground-rubber markets.



Asphalt and aggregate: market opportunities

Rubber-modified asphalt (RMA) declined from 165K tons in 2023 to 157K in 2025, and tire-derived aggregate (TDA) from 264K to 207K. New infrastructure funding and state road specifications could help both grow, but 2025 does not show that yet.

Looking Ahead to 2027: Market Priorities

- **Effective state programs**

USTMA promotes state ELT programs that combine dedicated funding, market development, and provisions to manage, abate, and deter illegal dumping.
- **Infrastructure markets**

New infrastructure funding and state road specifications that call for tire-derived materials could grow RMA and TDA, including through expanded chip seal and the RMA dry process.
- **Environmental performance**

The Tire Recycling Foundation (TRF), a nonprofit focused on achieving 100% circularity for ELTs, is funding environmental product declarations (EPDs) that give specifiers verified lifecycle documentation, and developing lifecycle assessments.
- **Research**

State of Knowledge reports for rubber-modified asphalt and tire-derived aggregate close data gaps and support new specifications. USTMA released the TDA report in 2025 and expects an updated RMA report by the end of 2026.
- **New markets**

Pyrolysis, which heats shredded tires in a low-oxygen chamber to recover oil, gas, and a carbon-black substitute, was broken out as its own market in 2025 (56K tons, about 1% of generation).
- **Keeping value at home**

Overseas demand shows the material has real value. A tire processed in the United States supports a U.S. recycler, U.S. jobs, and U.S. infrastructure.

These investments are not yet reflected in the 2025 figures. USTMA expects their impact within 12 to 24 months; this report is the baseline against which that work will be measured.

USTMA's ELT Team



John Sheerin

Senior Director, End-of-Life Tire Programs

John joined USTMA in 2014 and leads the Association's environmental, regulatory, and legislative work on end-of-life tires, representing the industry before state legislatures and agencies. He authors this biennial report and serves on the Board of Directors of the Colorado Waste Tire Management Enterprise. He holds civil and environmental engineering degrees from the Illinois Institute of Technology and a J.D. from Chicago-Kent College of Law.



Amelia Chucholowski

Associate Director, Sustainability & Recycling Policy

Amelia joined USTMA in 2024 and leads sustainability and recycling policy for end-of-life tires, contributing to this report and advocating for U.S. state and federal policies that grow sustainable tire recycling and reuse markets. She holds a Master's in Sustainability from Harvard University Extension School and a bachelor's degree from California Polytechnic State University, San Luis Obispo.



Sean Moore

Senior Director, Government Relations

Sean joined USTMA in 2018 and serves as the industry's chief lobbyist before Congress and in all 50 states, leading government relations strategy for end-of-life tire policy nationwide. He holds a B.A. in Political Science from Dickinson College and a Master's in Public Policy and Administration from Northwestern University.

Contact Us

USTMA Tire Recycling and Sustainability



1400 K Street, NW, Suite 900, Washington, DC 20005



(202) 682-4800



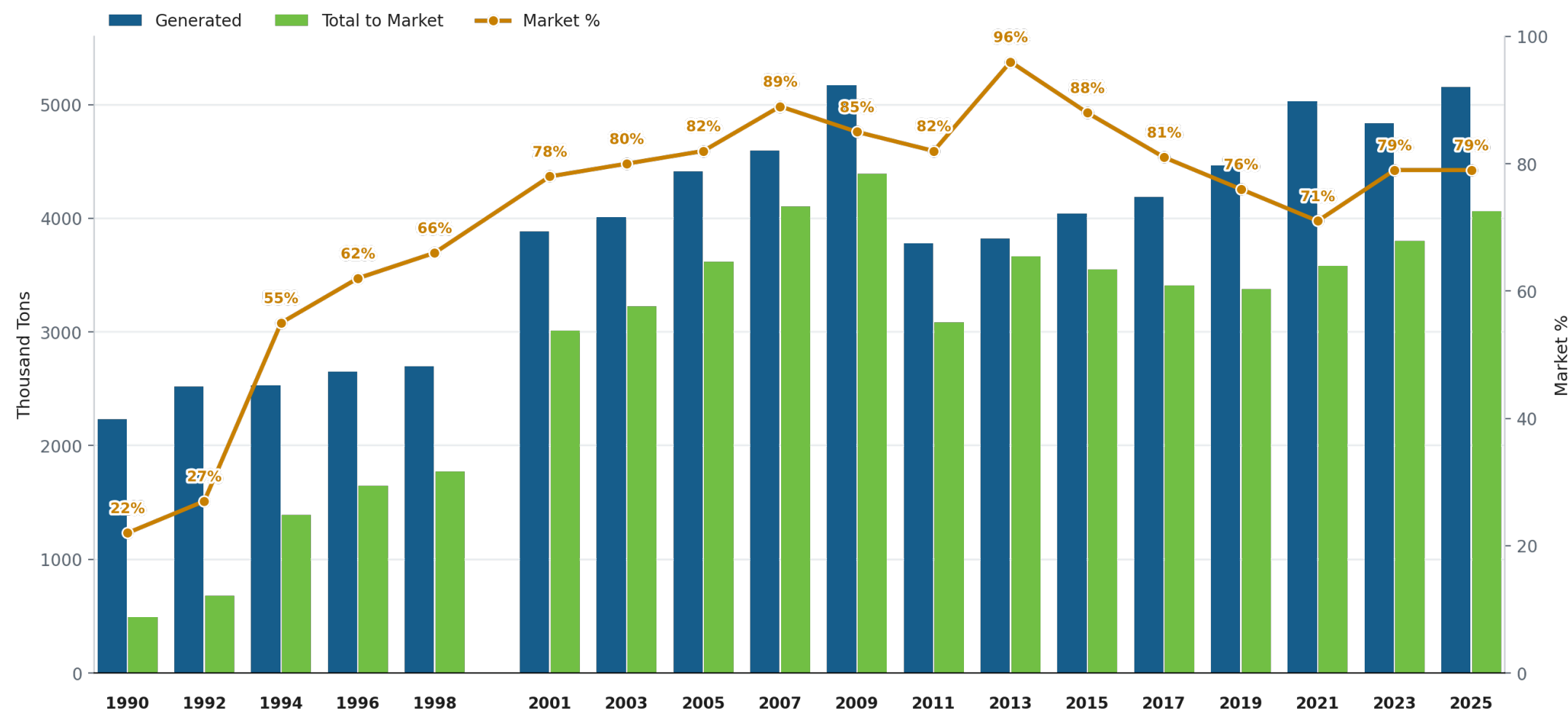
www.ustires.org

APPENDIX

The Long View, 1990–2025

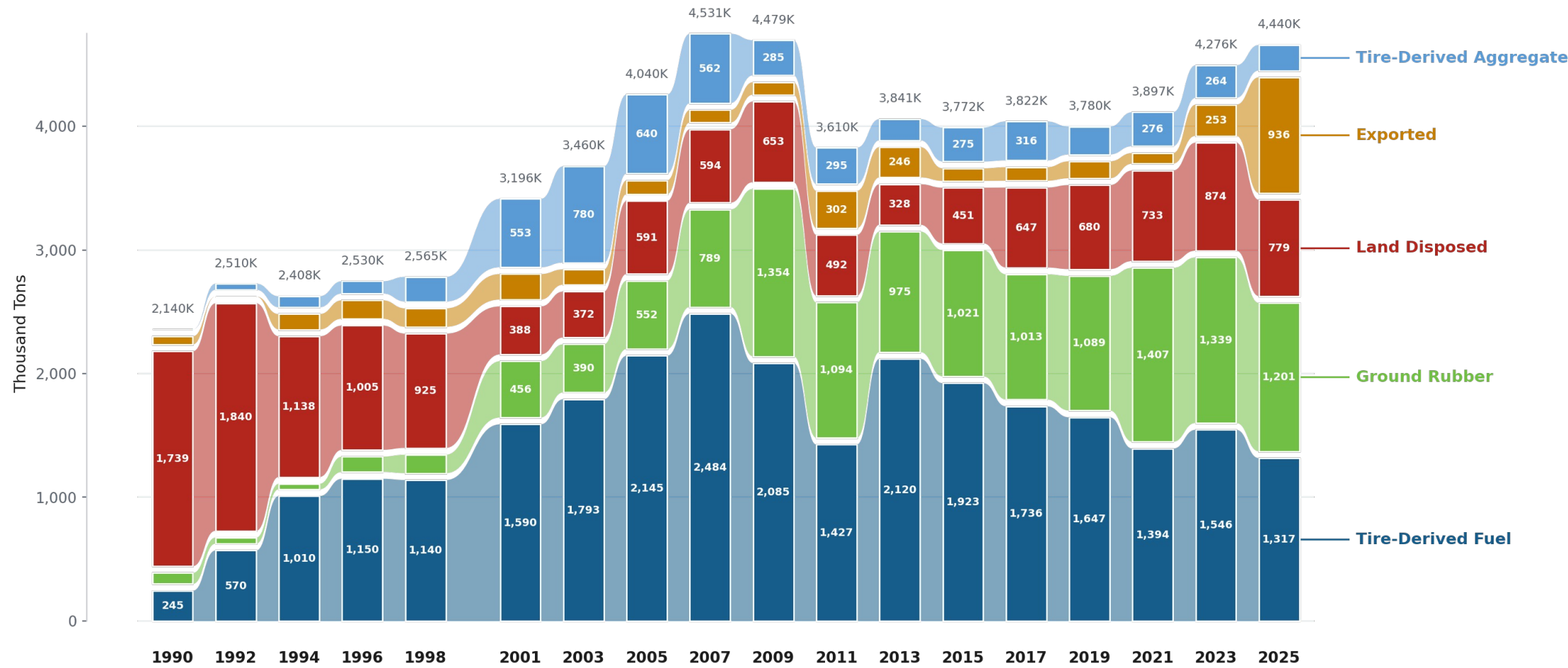
Supplementary historical trend exhibits (market trends, tire-derived fuel, ground rubber, and generation by source), extended back as far as each series' underlying Rubber Manufacturers Association/USTMA data allows.

U.S. ELT Market Trends, 1990–2025



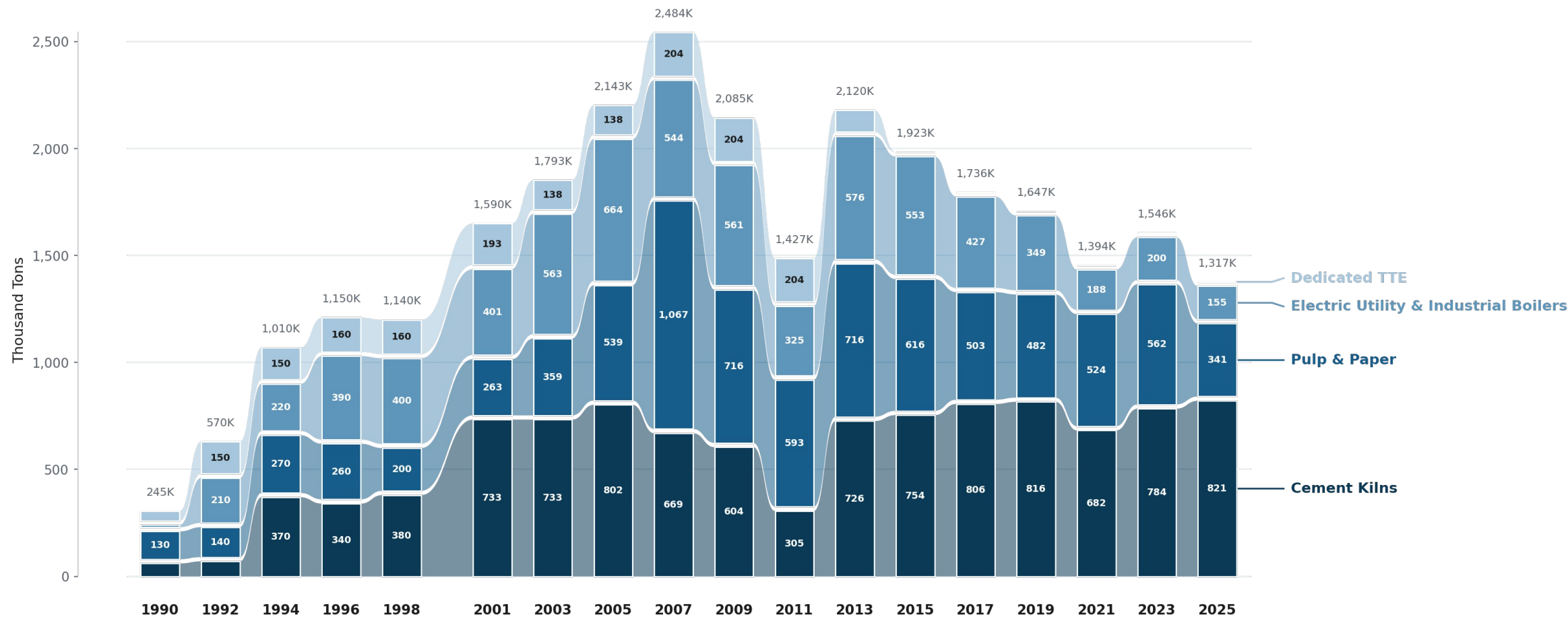
Total to Market and Generated in thousand tons (left axis); Market % (right axis) is Total to Market ÷ Generated. 1990-2003 converted from each era's own tire-count retrospective at 20 lbs/tire (10.0 K tons/million tires), Rubber Manufacturers Association's assumption through its 2003 report, before the heavier 13.827 K tons/million tires factor took effect with the 2005 report, published in 2006; 2005 onward are Rubber Manufacturers Association's published tonnage figures.

Market Mix & Utilization Trends, 1990–2025



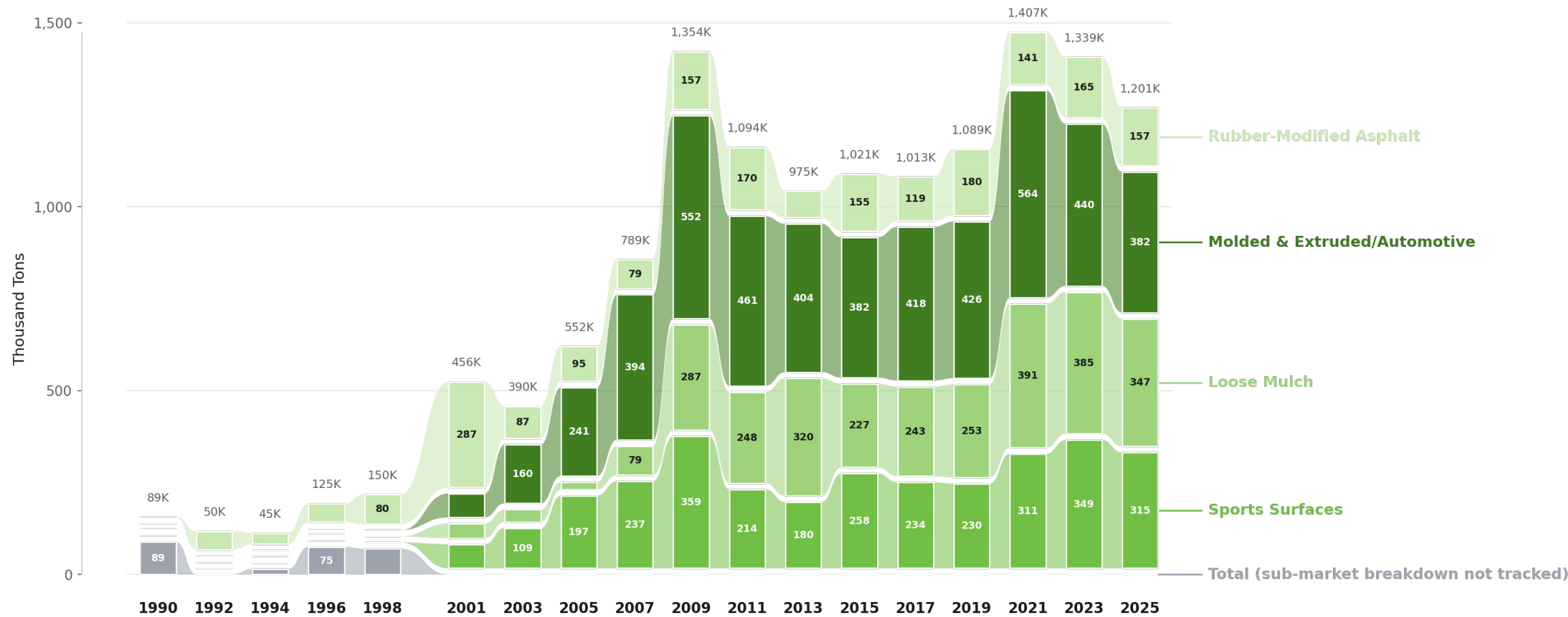
Thousand tons diverted per market, by year. Tire-Derived Aggregate and Exported are shown as 0 in 1990 and 1992 respectively -- real reported values (neither market had measurable volume that early), not missing data. 1996/1998 come from the 2001 report's own "Appendix B: Scrap Tire Market Data 1990-2001" retrospective table. Column spacing is proportional to the actual year gaps.

Tire-Derived Fuel Market Trends, 1990–2025



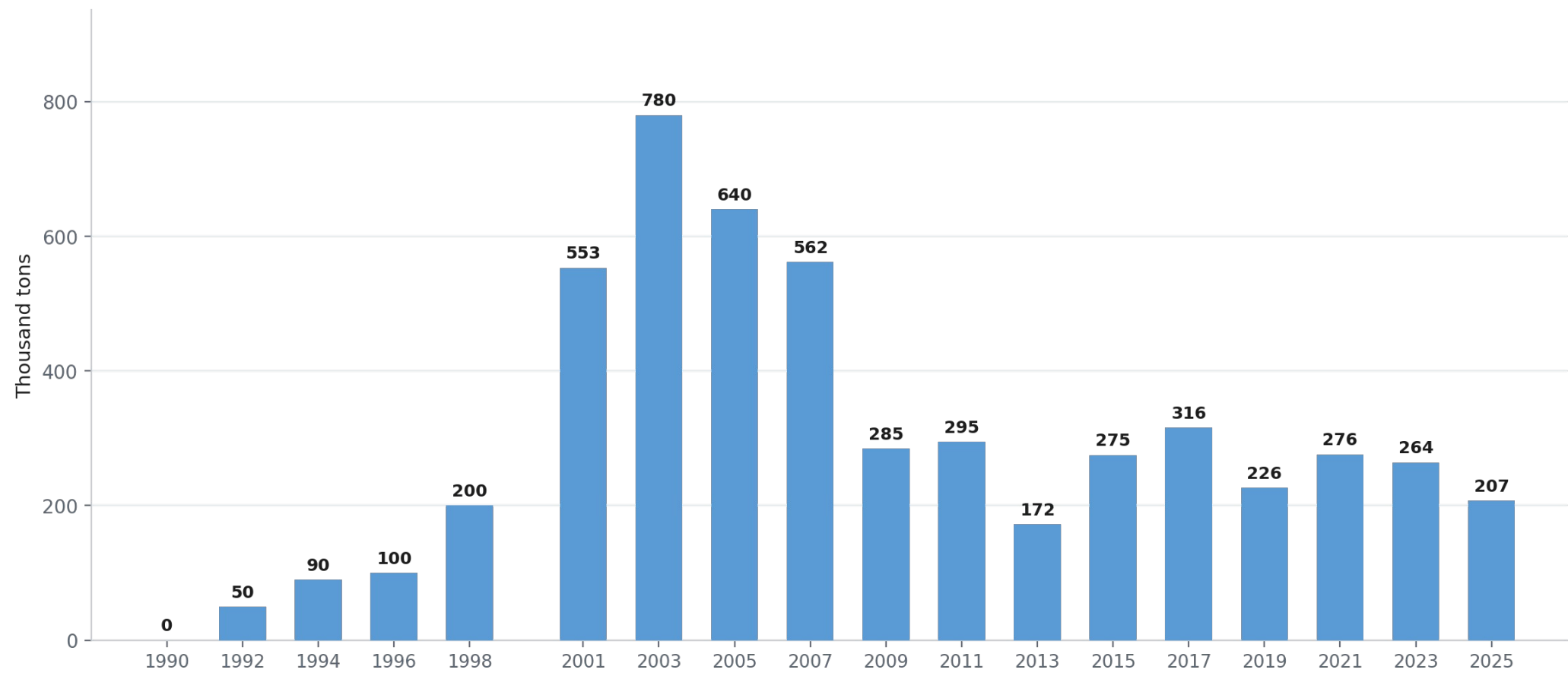
Thousand tons diverted to TDF sub-markets. Electric Utility Boilers, Industrial Boilers, and Lime Kilns are combined into one category (Lime Kilns was never more than a rounding error). 1990, 1992, 1996 & 1998 use the flat 20 lbs/tire (10.0 K tons/million tires) factor the Rubber Manufacturers Association itself used in its own tables. 2001 & 2003 use the heavier ~27.65 lbs/tire (13.827) factor instead, since a flat passenger-tire weight understates true tonnage once truck/bus tires are weighted in (per the 1996 report's own tire-class weight table). 2005-2007 are Rubber Manufacturers Association's published figures; 2009-2025 from each report's chart data. Dedicated TTE folds into Electric Utility & Industrial Boilers from 2015 onward, a reporting change by Rubber Manufacturers Association.

Ground Rubber Market Trends, 1990–2025



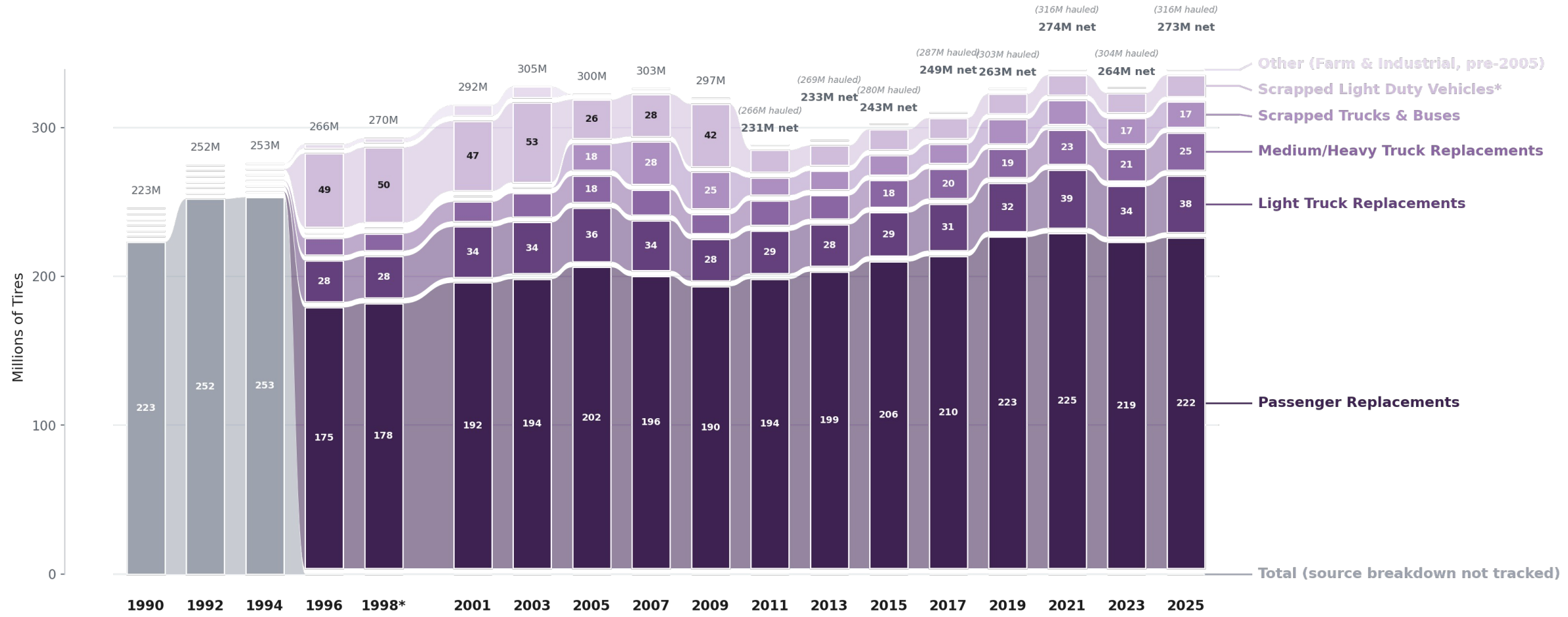
Thousand tons of end-of-life tires diverted to ground-rubber sub-markets, by year. 2005–2025 uses Rubber Manufacturers Association's reported/reconciled tonnage. 2001, 2003, 2005, 2007, 2009, 2011, 2013, 2015 & 2023 are each rescaled so the four categories sum to Rubber Manufacturers Association's top-level Ground Rubber total that year, preserving that year's own reported split (the as-reported sub-market figures for this stretch appear to net out metal/fiber removal, a different basis than the top-level total); 1992 reflects only Rubber-Modified Asphalt, the sole ground-rubber use Rubber Manufacturers Association's report broke out that early. 1994, 1996, and 1998 come from the 2001 report's own "Appendix B: Scrap Tire Market Data 1990-2001" retrospective table. 1990 (gray bar) is that report's own single un-split ground-rubber total -- no sub-market breakdown exists for that year, so it is not shown divided across categories.

Tire-Derived Aggregate Use, 1990–2025



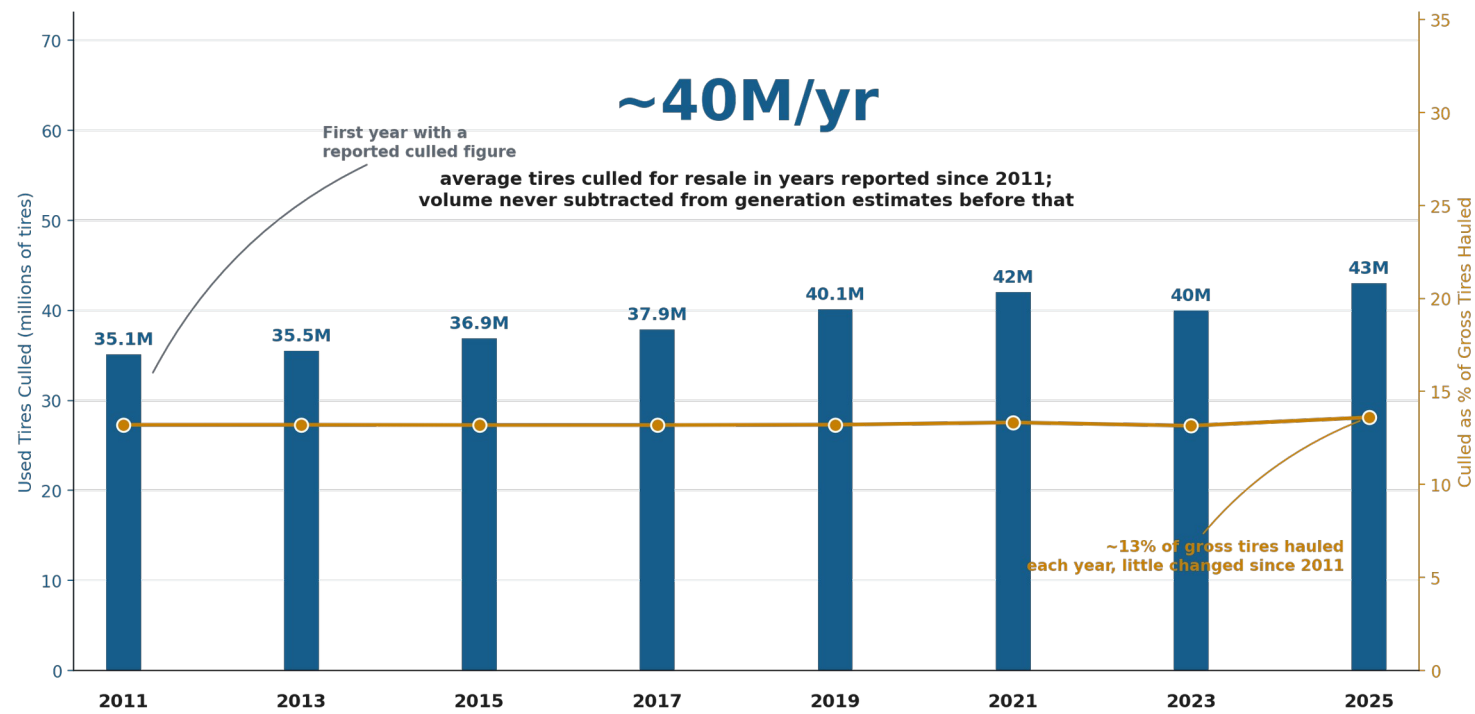
Thousand tons of end-of-life tires diverted to Tire-Derived Aggregate (TDA), also called civil engineering applications in older reports -- the same market. 1990 is shown as an explicit 0: a real reported value, not missing data -- the market did not yet exist as a distinct category that year, same as on the Market Mix & Utilization Trends flow diagram. 1992, 1996 & 1998 use the flat 20 lbs/tire (10.0 K tons/million tires) factor the Rubber Manufacturers Association itself used. 2001 & 2003 use the heavier ~27.65 lbs/tire (13.827) factor instead, since a flat passenger-tire weight understates true tonnage once truck/bus tires are weighted in (per the 1996 report's own tire-class weight table). 2007–2015 are Rubber Manufacturers Association's published tons figures; 2017–2025 are USTMA's own published tons figures.

Generation by Source, 1990–2025



Millions of tires generated, by source, each a native tires figure (no tons conversion). Gray bars (1990/1992/1994) show total generation only -- the Rubber Manufacturers Association did not publish a tire-class breakout until 1996, and category schemes shifted several times since (Farm & Industrial folded into "Other"; *1996-2003 figures under "Scrapped Light Duty Vehicles" are still combined with trucks & buses -- the Rubber Manufacturers Association did not report that split separately until 2005). *1998 has no real per-class breakdown in any report checked, so each 1996 category is scaled up proportionally to the estimated total-generation increase.

What About Used Tires?

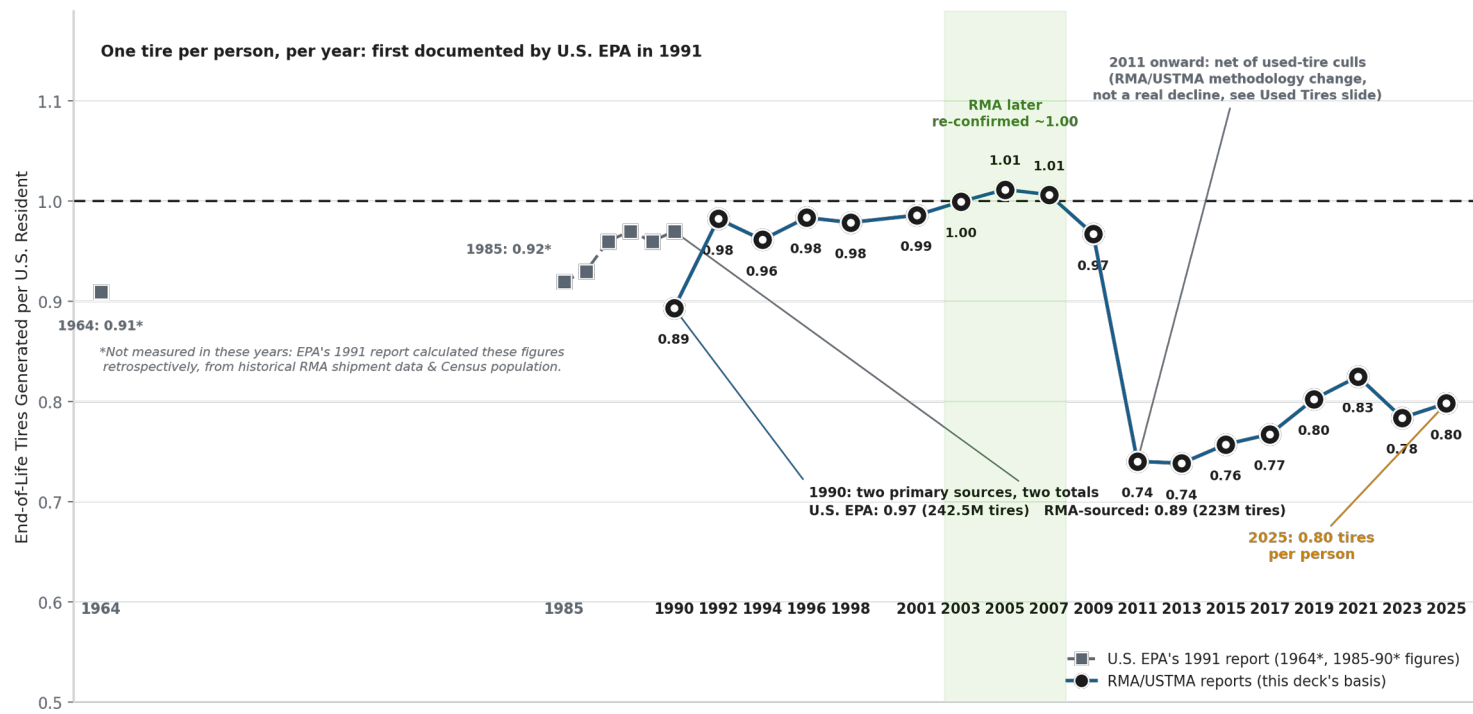


Better data with each report. Since 2011, USTMA has subtracted used tires that go back into service from ELT generation totals, a more accurate count. Each cycle adds new markets (pyrolysis in 2025) and measures (a weight-based benchmark).

Culled ≠ safe. Used tires can carry hidden damage and an unknown history. USTMA recommends a qualified inspection before any used tire goes back into service.

Bars = used tires culled from the ELT stream and diverted for resale each year (millions of tires); line = that volume as a share of gross tires hauled.

One Tire Per Person?



A working benchmark of 0.8. The net ratio has held below 0.85 since USTMA began netting out used tires in 2011, averaging about 0.78 and sitting at 0.80 in 2025. We recommend the industry adopt a working benchmark of roughly 0.8 tires generated per U.S. resident annually, which reflects that reporting change.

U.S. EPA's Markets for Scrap Tires (Oct. 1991) documented "about one tire per person per year" as an already "commonly accepted" industry estimate, computing a ratio of 0.91–0.97 for 1964 and 1985–1990 -- a decade before Rubber Manufacturers Association's reports began explicitly re-confirming ~1.00 (2003, 2005, 2007). The drop after 2011 is a reporting change, not a real decline -- Rubber Manufacturers Association/USTMA began netting out used-tire culls starting that year (see the Used Tires slide) -- so 2025's net ratio of 0.80 is not comparable to the pre-2011 figures. U.S. EPA and Rubber Manufacturers Association-sourced totals for 1990 itself disagree (242.5M vs. 223M tires) and are both shown rather than reconciled.

A Weight-Based Alternative



Why weight, not just count? The “one tire per person” convention counts every tire as one unit (1 passenger tire equivalent, conventionally ~25 lbs). Commercial tires average roughly 120 lbs each, nearly 5x a passenger/light-truck tire, so weight adds a complementary view of the material handled.

How we recalculated it

- Split each year’s generation-by-tire-class data (1996-2025, the same series behind Generation by Source) into two buckets: light-duty (Passenger + Light Truck + Scrapped Light Duty Vehicles) and commercial (Medium/Heavy Truck + Scrapped Trucks & Buses).
- Weight light-duty tires at ~25 lbs and commercial tires at ~120 lbs -- the two-point approximation used in this report -- then scale the total down by that year’s actual net-of-culling ratio, same basis as the 0.8-tires benchmark.
- Divide by that year’s U.S. resident population. Limitation: still a two-point approximation, not validated per-class weights -- off-road, agricultural, and aircraft tires remain out of scope.

Lbs of ELT generated per U.S. resident

Year	Lbs / resident
1996	28.6
2007	39.5
2011	25.9
2017	27.5
2021	30.3
2025	30.0
2011-2025 avg	28.0



Recommendation. Adopt roughly 28-30 lbs of ELT generated per U.S. resident annually as a companion weight-based benchmark alongside the 0.8-tires-per-resident count metric (2011-2025 average 28.0 lbs; 30.0 lbs in 2025). Commercial tires have grown from about 4% of gross tires in 1996 to about 13% today. Because they weigh roughly five times as much as passenger tires, counting tires alone can understate how much material recyclers actually handle. Measuring by weight gives a fuller picture.

Sources: generation_by_class_millions_tires and us_population_millions (this deck’s own historical dataset, 1996-2025); the 25/120-lb weight approximation and net-of-culling methodology are this deck’s own “Generation by Source, 2025” and “One Tire Per Person?” slides. The 25-lb/PTE convention and the case for a weighted approach come from John Sheerin’s review.



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U.S. Tire Manufacturers Association. (2024). *2023 end-of-life tire management report*.

ADDITIONAL SOURCES CITED IN THIS REPORT

Slide 37, “One Tire Per Person?”: U.S. EPA, Office of Solid Waste. (1991). *Markets for scrap tires* (EPA/530-SW-90-074A).

Slide 36, “What About Used Tires?”: USTMA. (2024). *Passenger and light truck used tires* (Tire Info. Service Bulletin, Vol. 45, No. 6).

Slide 11, ASTM standards: D5603-23, D6270-25, D6700-19.

Slide 12, TDF biogenic content (about 24%): U.S. EPA. 40 CFR § 98.33(e)(3)(iv)(B), default biogenic fraction for tires.

Slide 19, Lead Acid Batteries (98%): Battery Council International. (2026). *U.S. recycling rate study (2020–2024 study period)*.

Slide 19, Paper (65%): American Forest & Paper Association. (2026). *How much paper was recycled in 2025?* (61–65% reported range.)

Slide 19, Aluminum Cans (43%): Aluminum Assoc. & Can Mfrs. Institute. (2024). *Aluminum can recycling report*.

Slide 19, Glass Bottles (40%): Glass Packaging Institute. (2019). *Glass recycling facts (2018 beer/soft-drink bottle rate, 39.6%)*.

Slide 7, driving and fuel prices: Federal Highway Administration, Traffic Volume Trends (Dec. 2023, Dec. 2025); U.S. Energy Information Administration, gasoline prices (2026).

Slide 19, Plastic (PET) Bottles (30%): NAPCOR. *PET recycling report (annual; U.S. PET bottle rate has run ~27–33% across recent editions)*.