

RUBBER
manufacturers
association

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2015 U.S. Scrap Tire Management Summary

August 2016

U.S. Scrap Tire Disposition 2015

Market or Disposition	Thousands of Tons	Millions of Tires	% change 2013-2015
Tire-Derived Fuel	1922.67	117.31	-9.3%
Cement Kilns	753.37	45.97	3.8%
Pulp & Paper	616.25	37.60	-14.0%
Electric Utilities	553.05	33.74	-4.0%
Industrial Boilers	0.00	0.00	
Dedicated Tires-to-Energy	0.00	0.00	-100.0%
Ground Rubber	1020.75	62.28	4.7%
Civil Engineering	274.92	16.77	59.8%
Exported	102.07	6.23	-58.5%
Electric Arc Furnace	26.00	1.59	-60.3%
Reclamation Projects	52.54	3.21	6.9%
Agricultural	7.10	0.43	0.0%
Baled Tires/market	9.19	0.56	-69.4%
Punched/ Stamped	41.20	2.51	2068.4%
Other	94.86	5.79	
Total to Market	3551.30	216.69	-3.2%
Generated	4038.80	246.43	5.6%
% to Market/Utilized	87.9%	87.9%	N/A
Land Disposed	451.40	27.54	37.7%
% Managed (includes Markets, Baled and Landfill)	99.1%	99.1%	N/A

U.S. Scrap Tire Market Summary (2007 – 2015)

(in Thousands of Tons)

Market or Disposition	2007	2009	2011	2013	2015
Tire-Derived Fuel	2484.36	2084.75	1427.03	2120.29	1922.67
Ground Rubber	789.09	1354.17	1093.50	975.00	1020.75
Land Disposed	593.98	653.38	491.65	327.78	451.40
Exported	102.08	102.10	302.48	245.84	102.07
Civil Engineering	561.56	284.92	294.99	172.00	274.92
Reclamation Projects	132.58	130.00	54.29	49.17	52.54
Electric Arc Furnace	27.14	27.10	65.55	65.56	26.00
Baled Tires/market	UNK	27.76	1.92	30.00	9.19
Agricultural	7.13	7.10	7.10	7.10	7.10
Punched/ Stamped	1.85	1.90	1.90	1.90	41.20
Baled/no market	9.31	15.57	32.78	No data	No data
Used Tires ¹	n/a	371.25	n/a	n/a	n/a
Other					94.86
Total to Market	4105.79	4391.05	3083.76	3666.85	3551.30
Generated ²	4595.72	5170.50	3781.00	3824.26	4038.80
% to Market/Utilized	89.3%	84.9%	81.6%	95.9%	87.9%
% Managed(incl. baled and landfilled tires)	102.5%	97.9%	95.4%	104.5%	99.1%

¹RMA began tracking tires culled from scrap tire collection entering domestic used passenger and light truck used tire markets in 2009. RMA changed the way it incorporated estimates of tires entering used tire markets between 2009 and 2011. In 2009, RMA included used tires as a market for scrap tires. In 2011 and 2013, RMA subtracted used tires from the total tires hauled to calculate total net scrap tire generation.

²RMA changed the basis for reporting scrap tire generated annually from state-provided data in 2005-2007 to a calculation of replacement market tires sold and vehicles scrapped for reports issued 2009 and after.

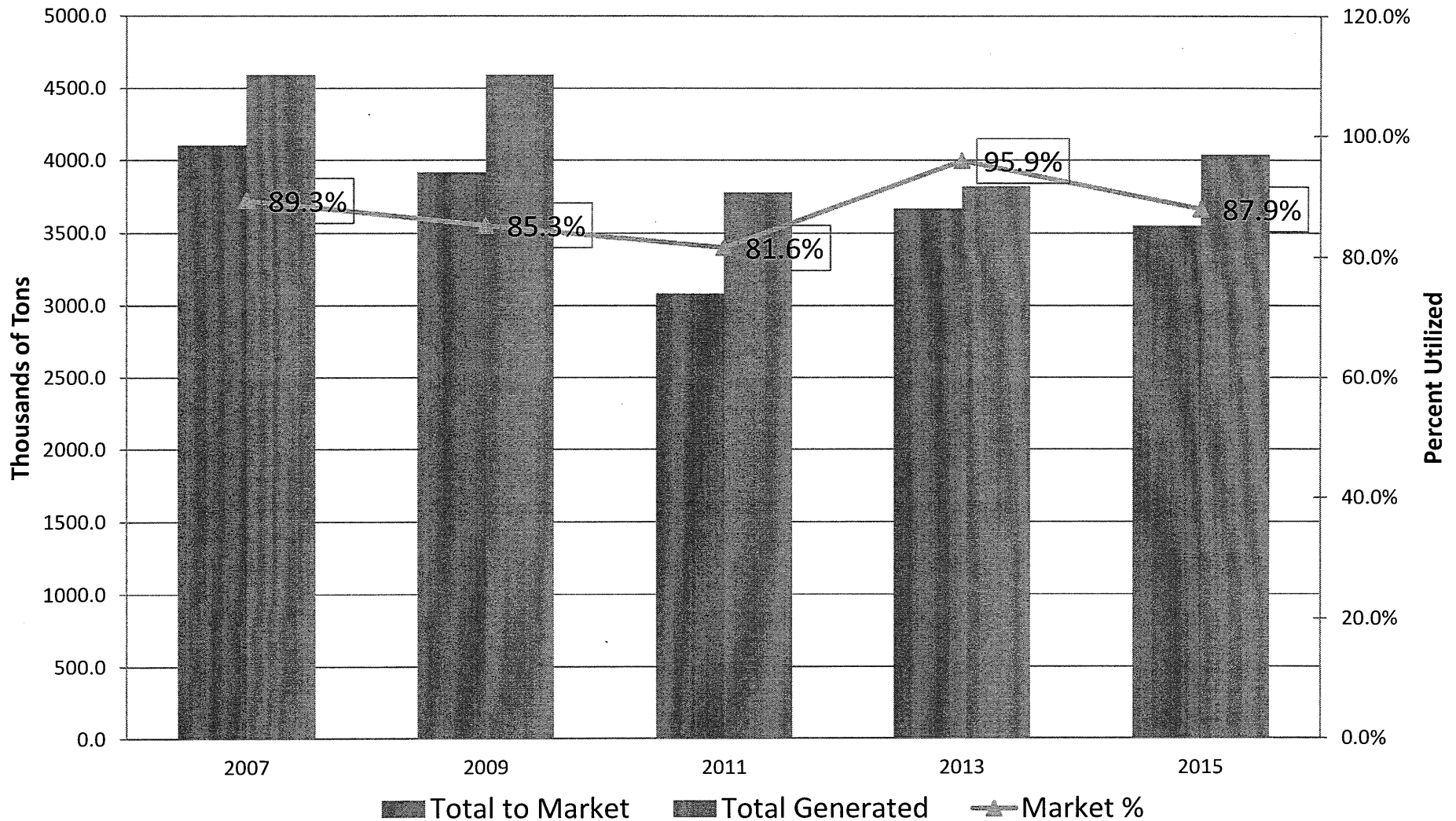
U.S. Scrap Tire Generation 2015

Tire Class	Millions of Tires	Market %	Average Weight (lbs)	Weight (thousands of tons)
Light Duty Tires	248.8	89.0%	22.5	2799.0
Passenger tire replacements ¹	206.1	73.7%		
Light truck tire replacements ¹	29.1	10.4%		
Tires from scrapped cars ²	13.6	4.9%		
Commercial Tires	30.9	11.0%	120.0	1854.0
Medium, wide base, heavy truck replacement tires ¹	17.9	6.4%		
Tires from scrapped trucks and buses ²	13.0	4.6%		
Total tires hauled	279.7	100.0%	33.3	4653.0
Used tires culled	36.9	13.2%	33.3	614.2
Net scrap tires	242.8			4038.8

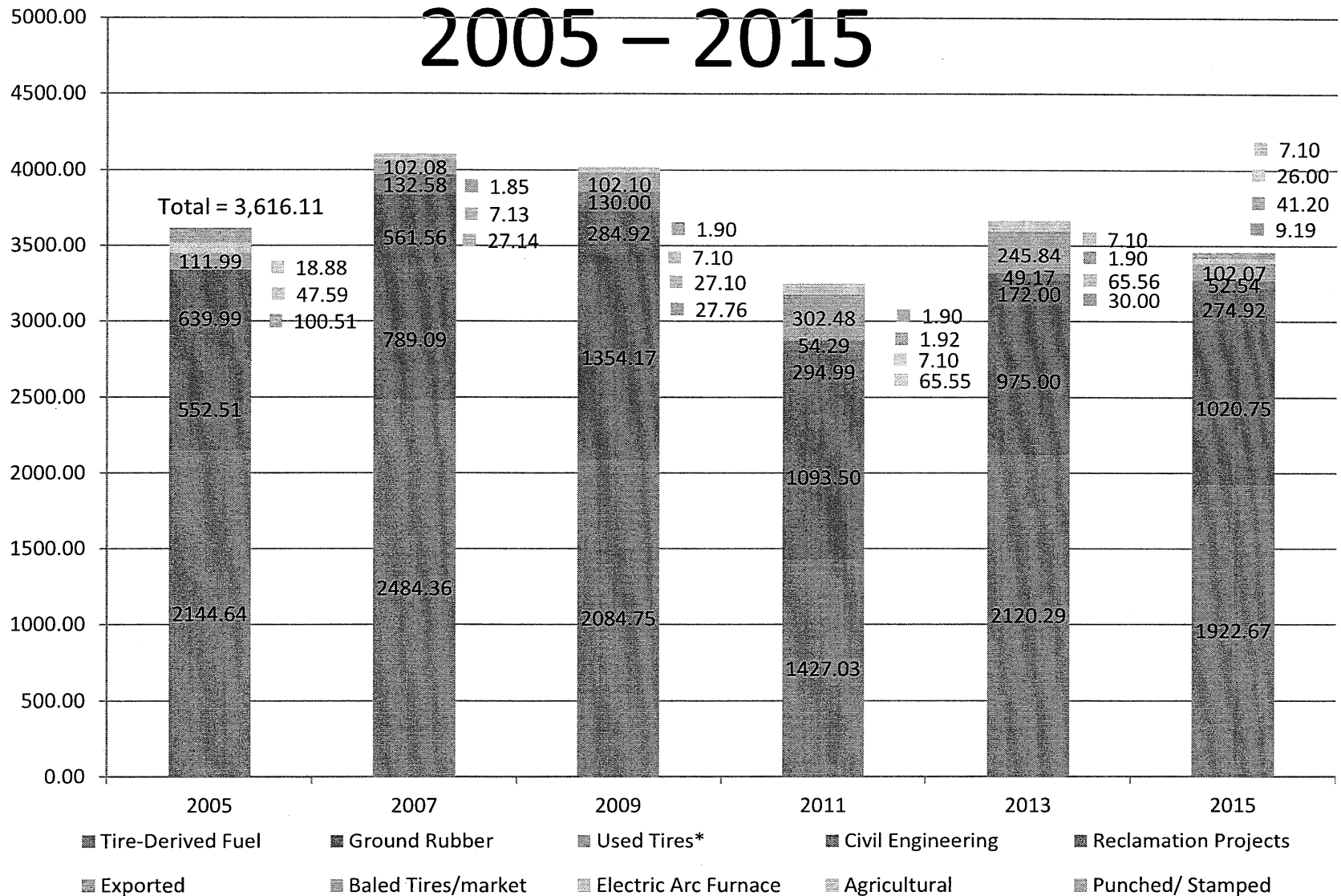
¹Factbook 2014: U.S. Tire Shipment/Activity Report for Statistical Year 2013, Rubber Manufacturers Association.

²Ward's Motor Vehicle Facts and Figures, 2014. Includes the total number of vehicles removed from service in 2013. In 2013, Ward's did not publish vehicles retired from service separated for the car and truck/bus category. Instead, it only published total vehicles scrapped from service. RMA estimated the split between cars and trucks/buses based on the average of the split from 2002 - 2012. Assumes two tires scrapped from light duty vehicles and 2.5 tires scrapped from trucks and buses.

U.S. Scrap Tire Trends 2007 - 2015



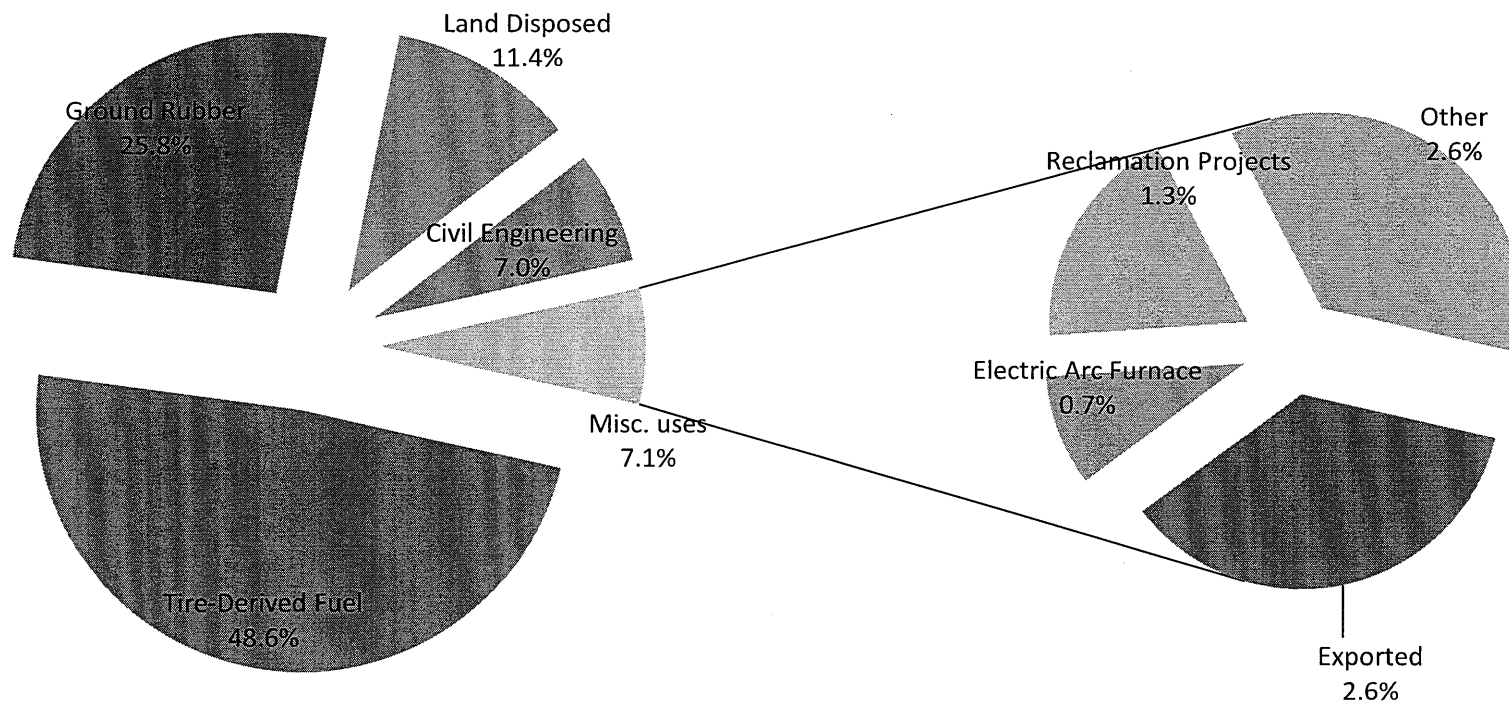
U.S. Scrap Tire Market Trends



Please note: RMA began tracking tires culled from scrap tire collection entering domestic used passenger and light truck used tire markets in 2009. RMA changed the way it incorporated estimates of tires entering used tire markets between 2009 and 2011. In 2009, RMA included used tires as a market for scrap tires. In 2011 and later, RMA subtracted used tires from the total tires hauled to calculate total net scrap tire generation.

U.S. Scrap Tire Disposition 2015

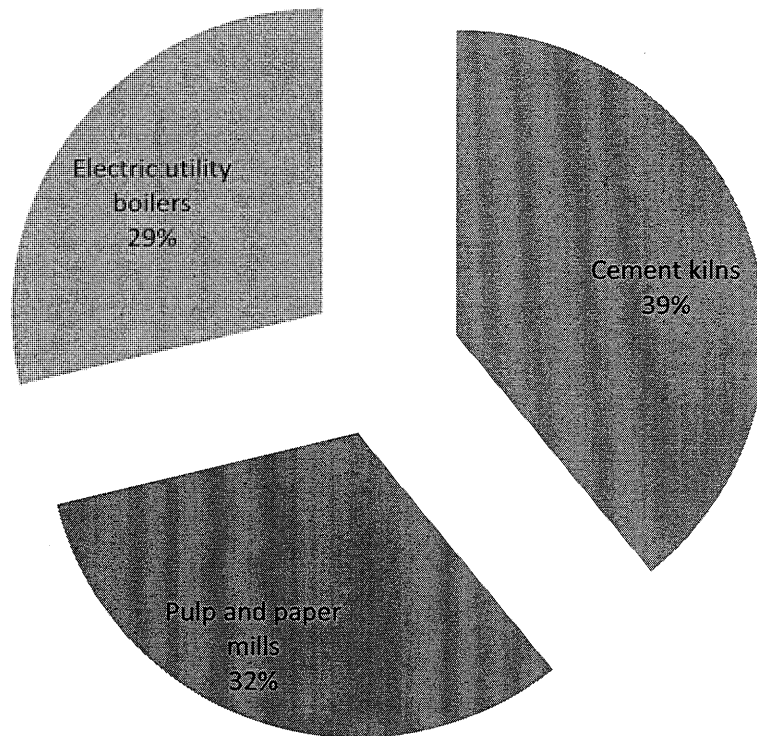
(percent of total tons generated annually)



Numbers may not add due to rounding.

U.S. Tire-Derived Fuel Markets 2015

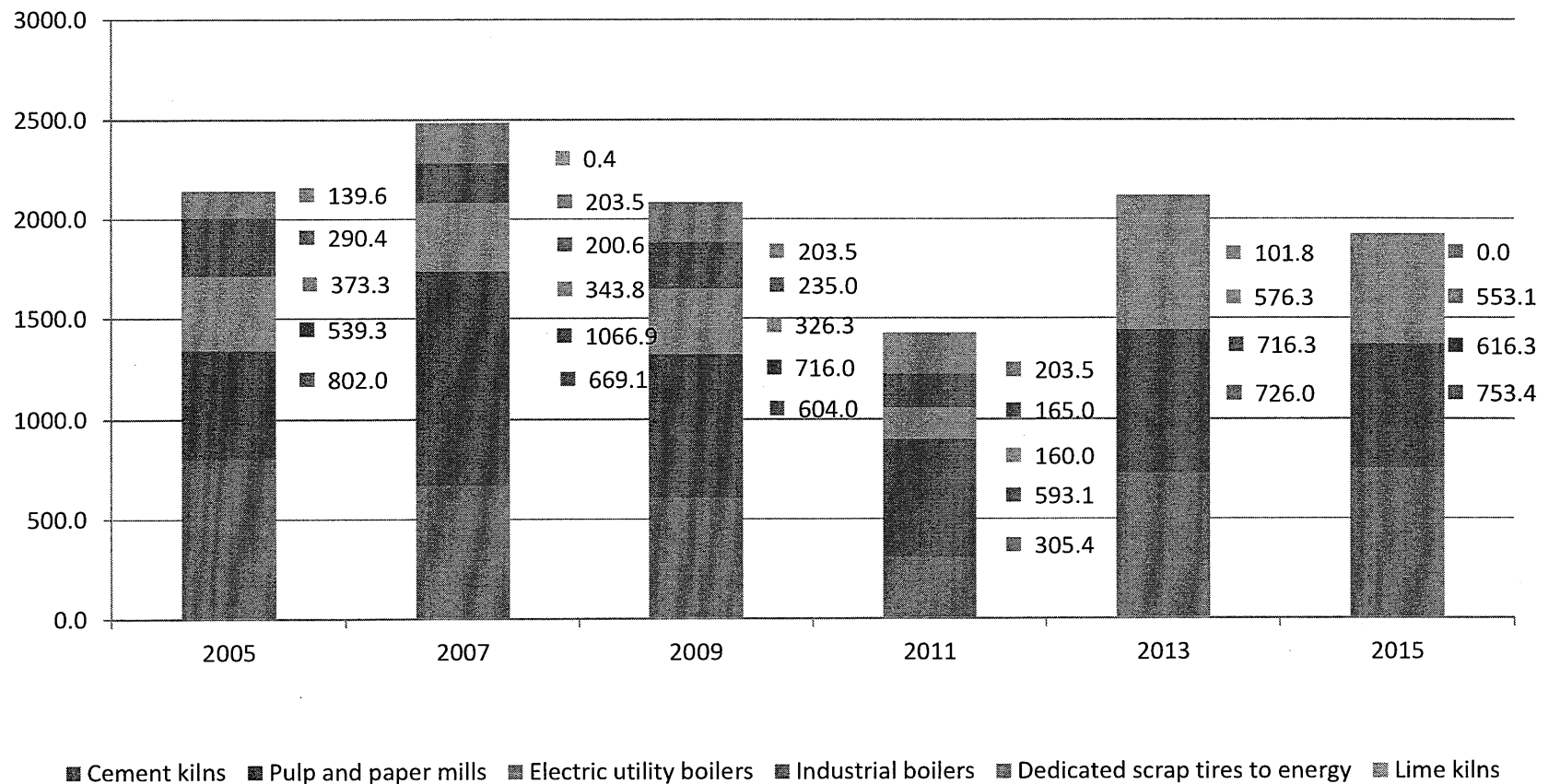
U.S. TDF Markets 2015



Did you know?

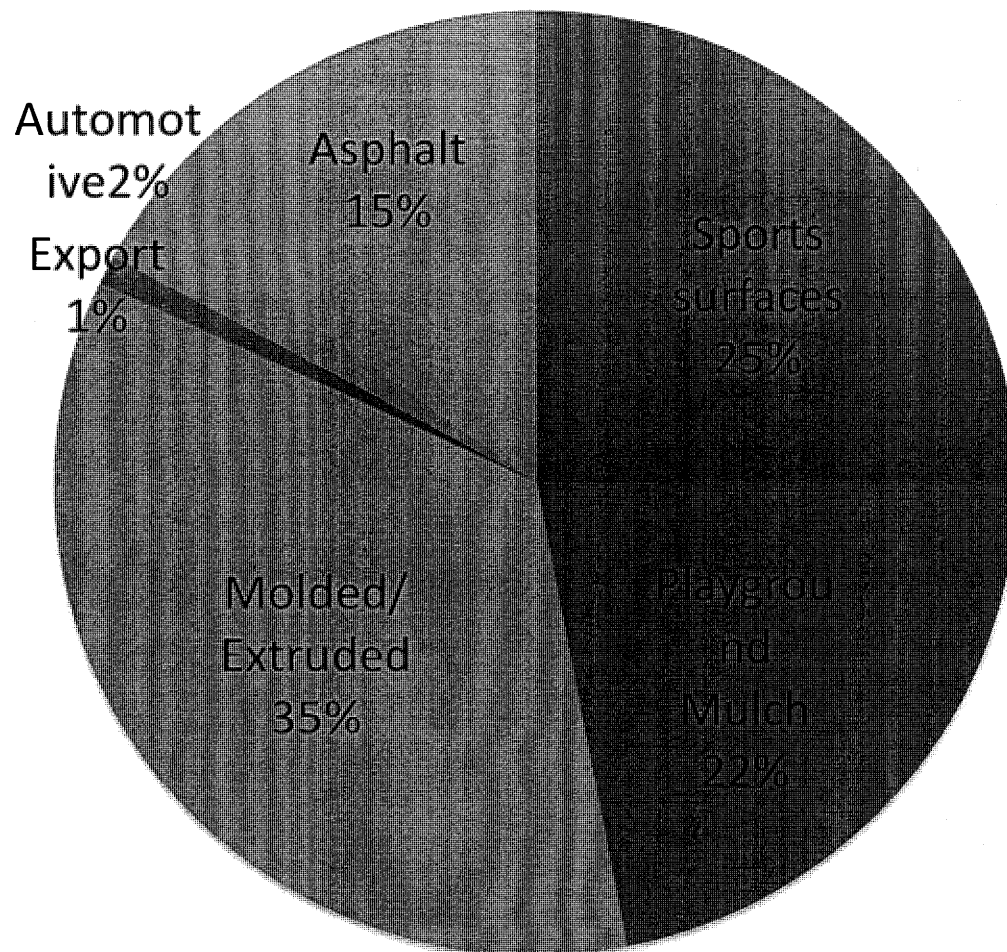
Total scrap tires diverted to TDF market:
1,922,000 tons or over
117 million tires

U.S. Tire-Derived Fuel Market Trends 2005 – 2015



U.S. Ground Rubber Markets 2015

(percent of total pounds of ground rubber consumed in market)



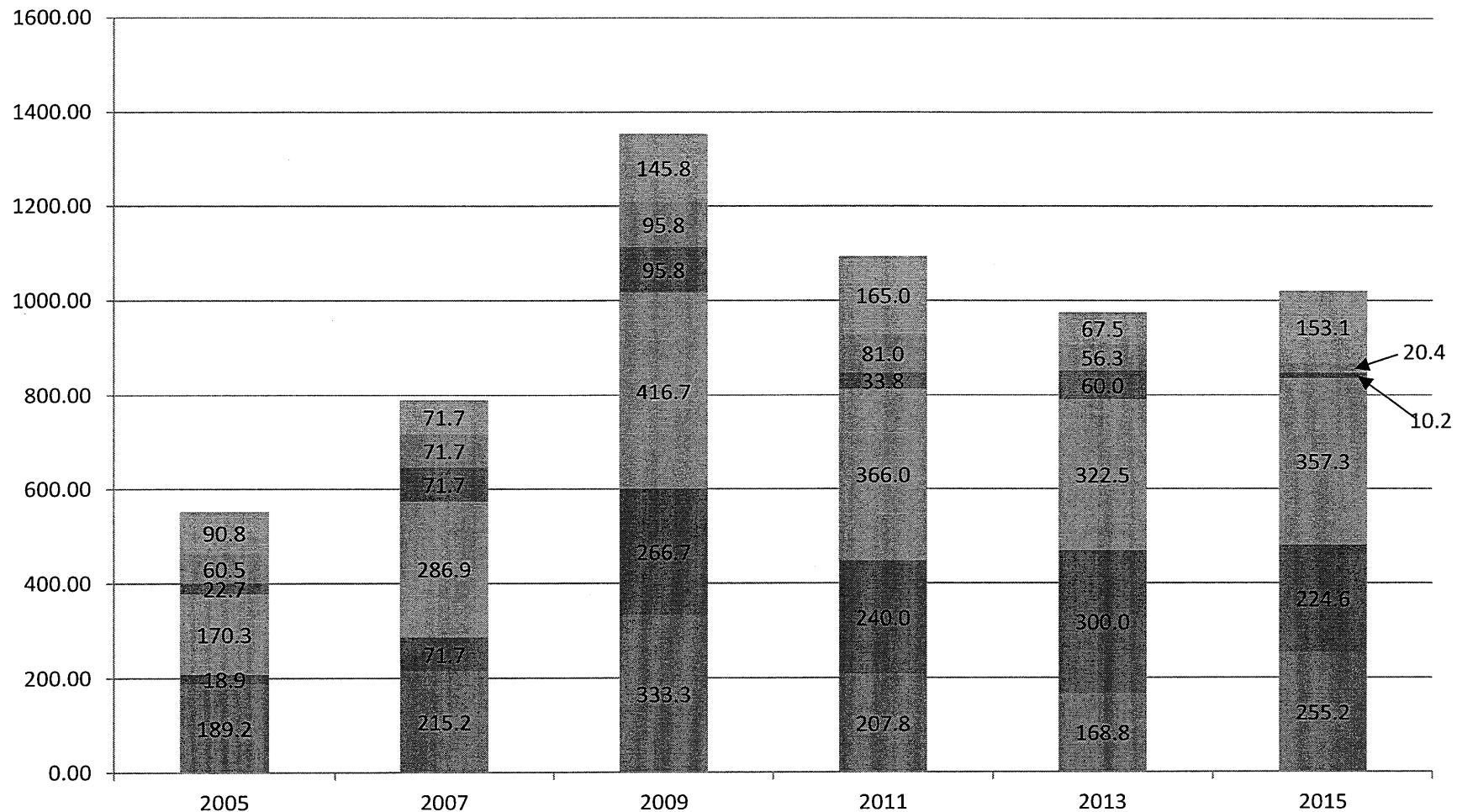
Did you know?

Total tire rubber consumed in ground rubber markets:
about 1,360,000,000 pounds

Total scrap tires diverted to these markets:
About 1,020,000 tons or over 62 million tires

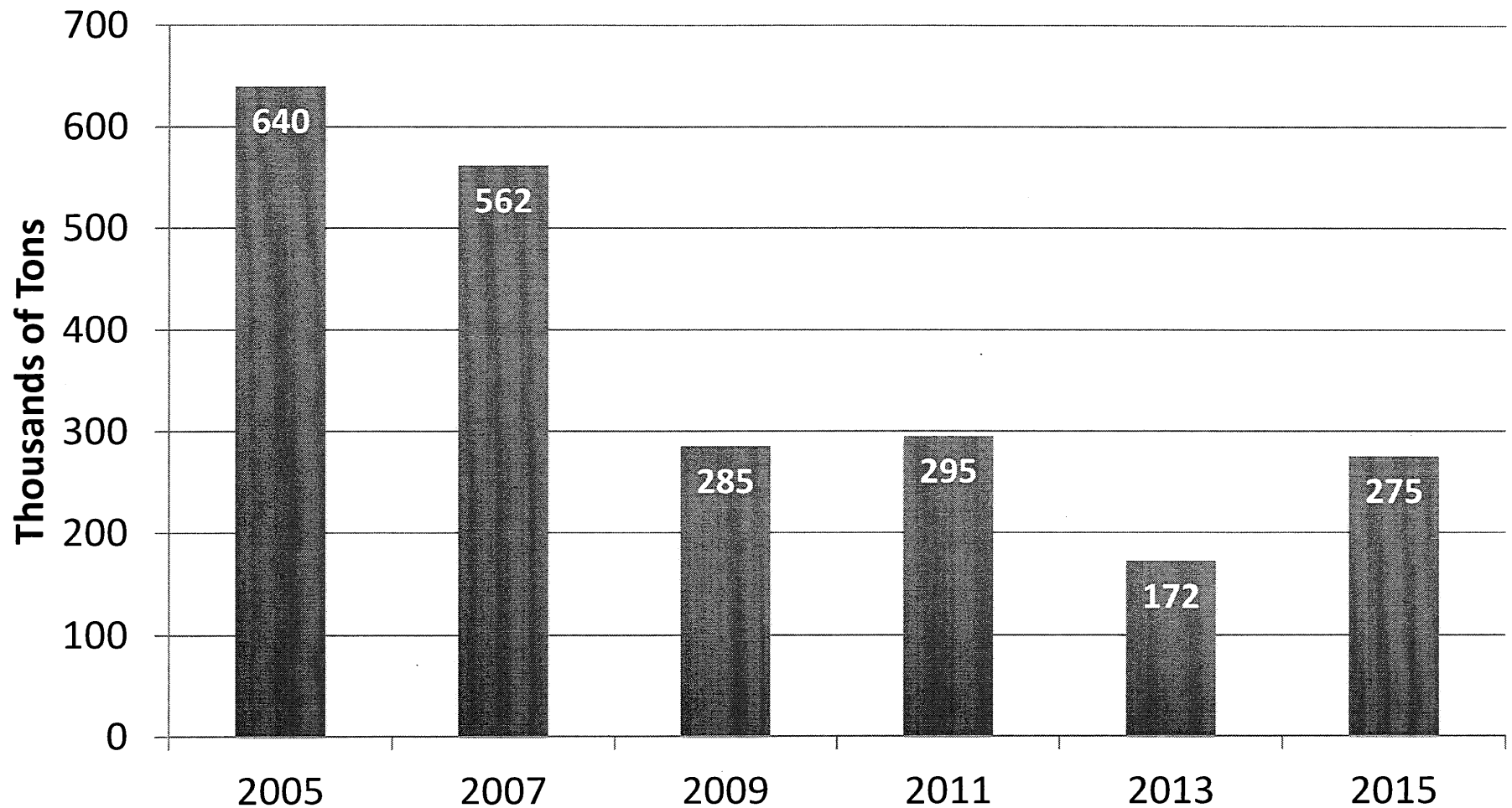
Please note: Ground rubber market distribution data are based on ground rubber consumed in end-use markets, not whole tires entering these market streams. The data represented in RMA U.S. scrap tire market summaries refer to the weight of whole tires diverted to all scrap tire markets, including ground rubber, whereas this chart refers to the weight of processed ground rubber (with wire, fluff and agglomerated rubber removed) that is consumed in ground rubber end-use markets.

U.S. Ground Rubber Market Distribution 2007 - 2015

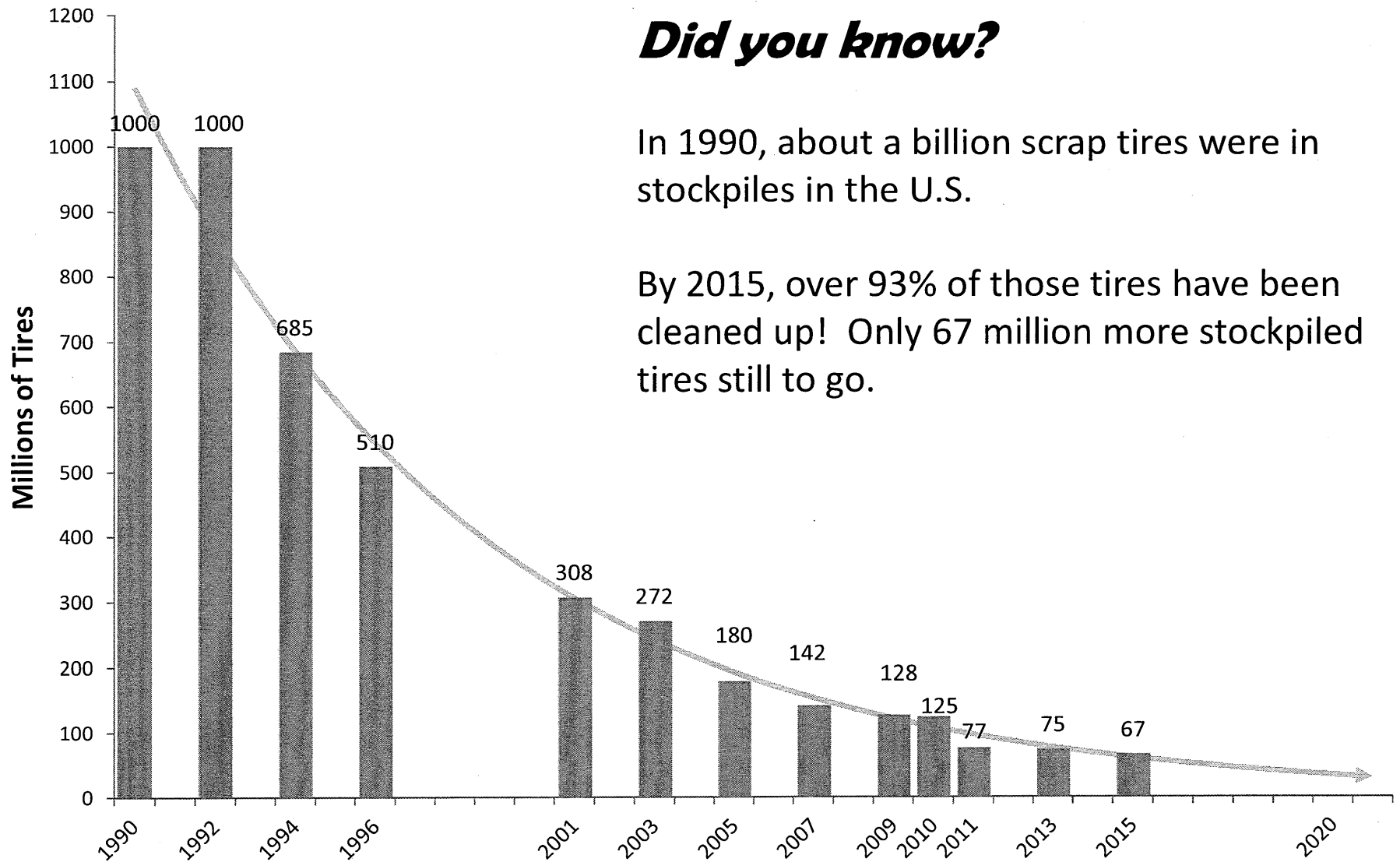


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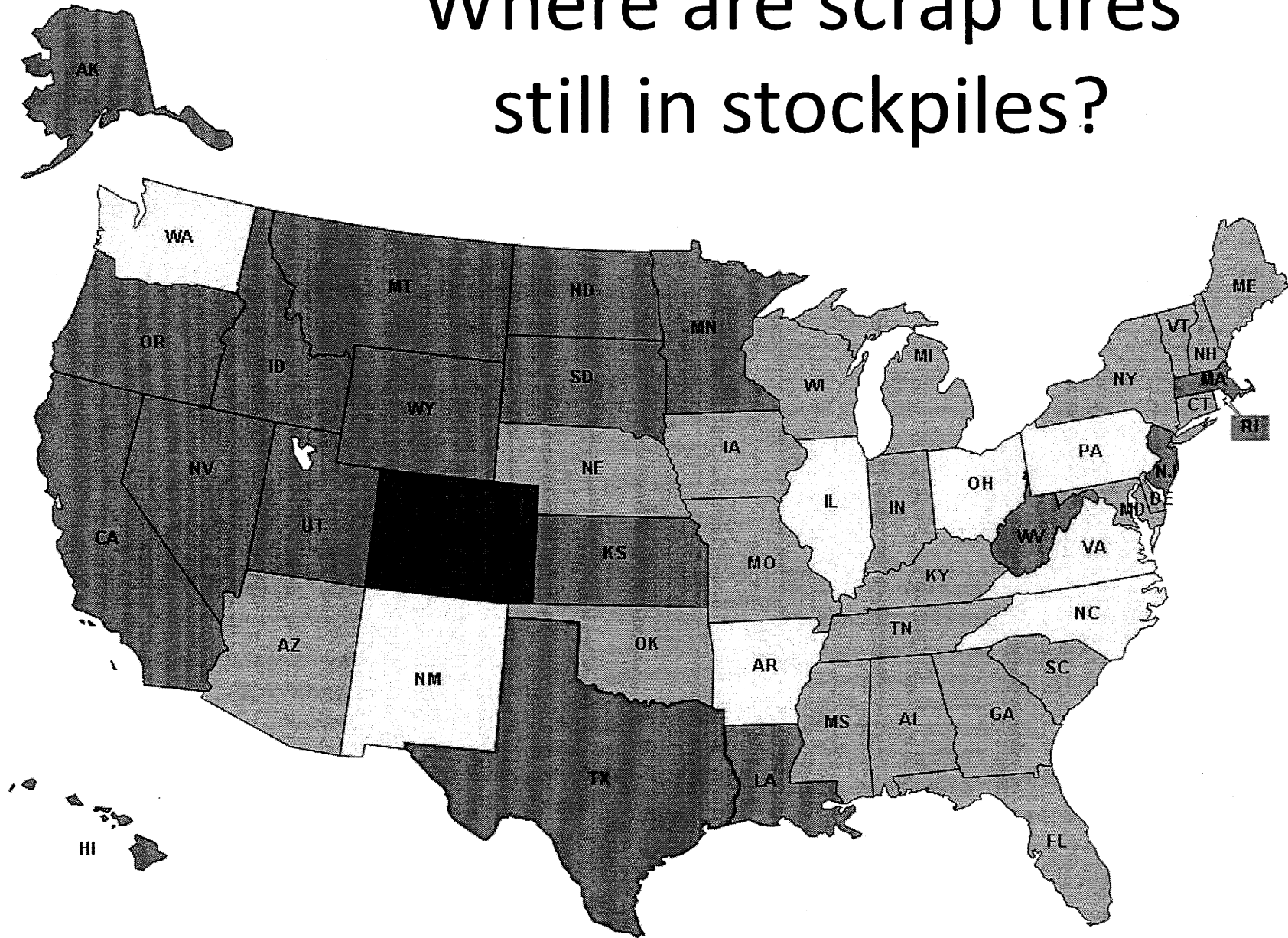
U.S. Civil Engineering Markets 2005 - 2015



U.S. Stockpiled Scrap Tires 1990 - 2015

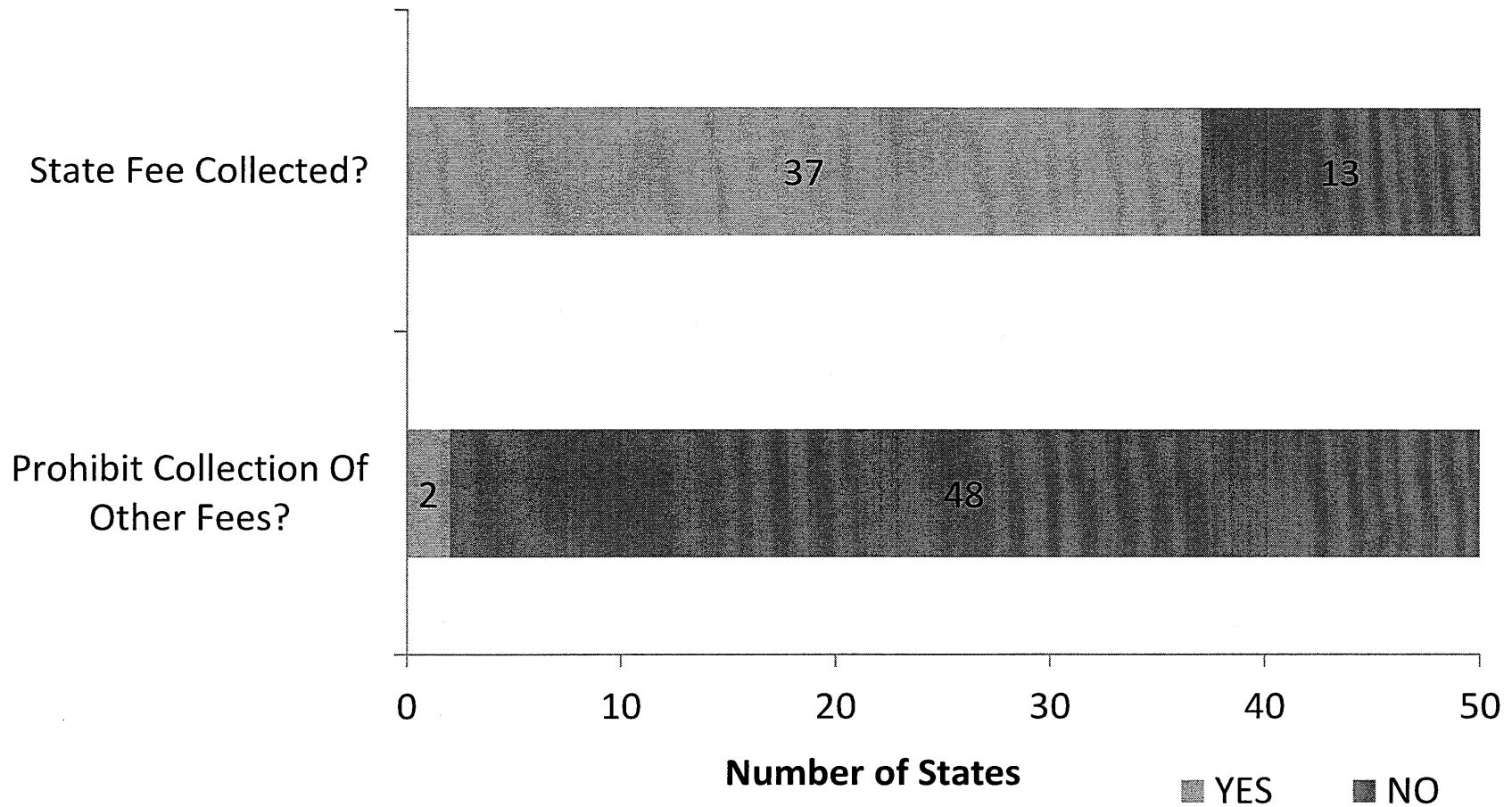


Where are scrap tires still in stockpiles?

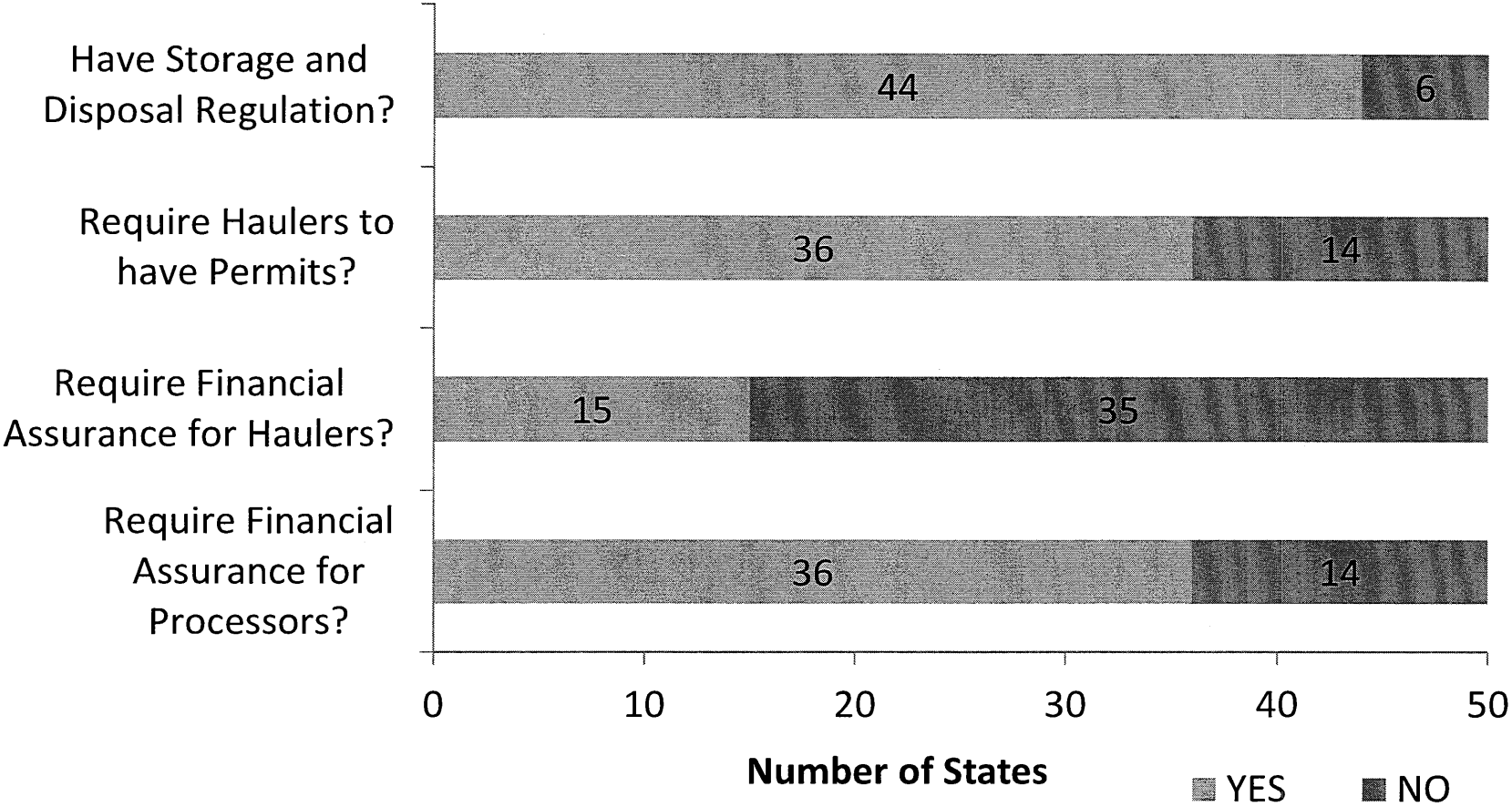


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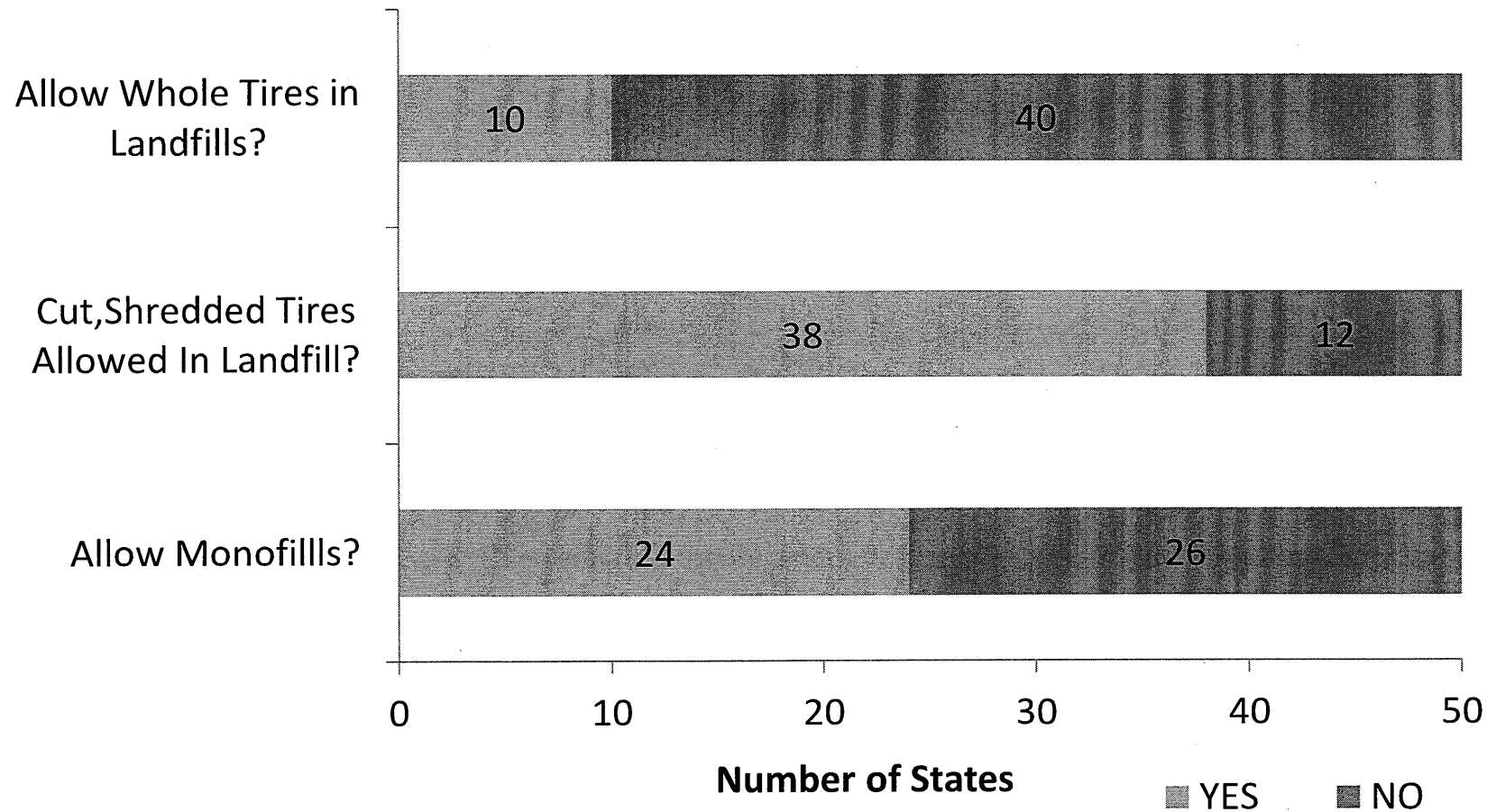
Overview of Current State Programs



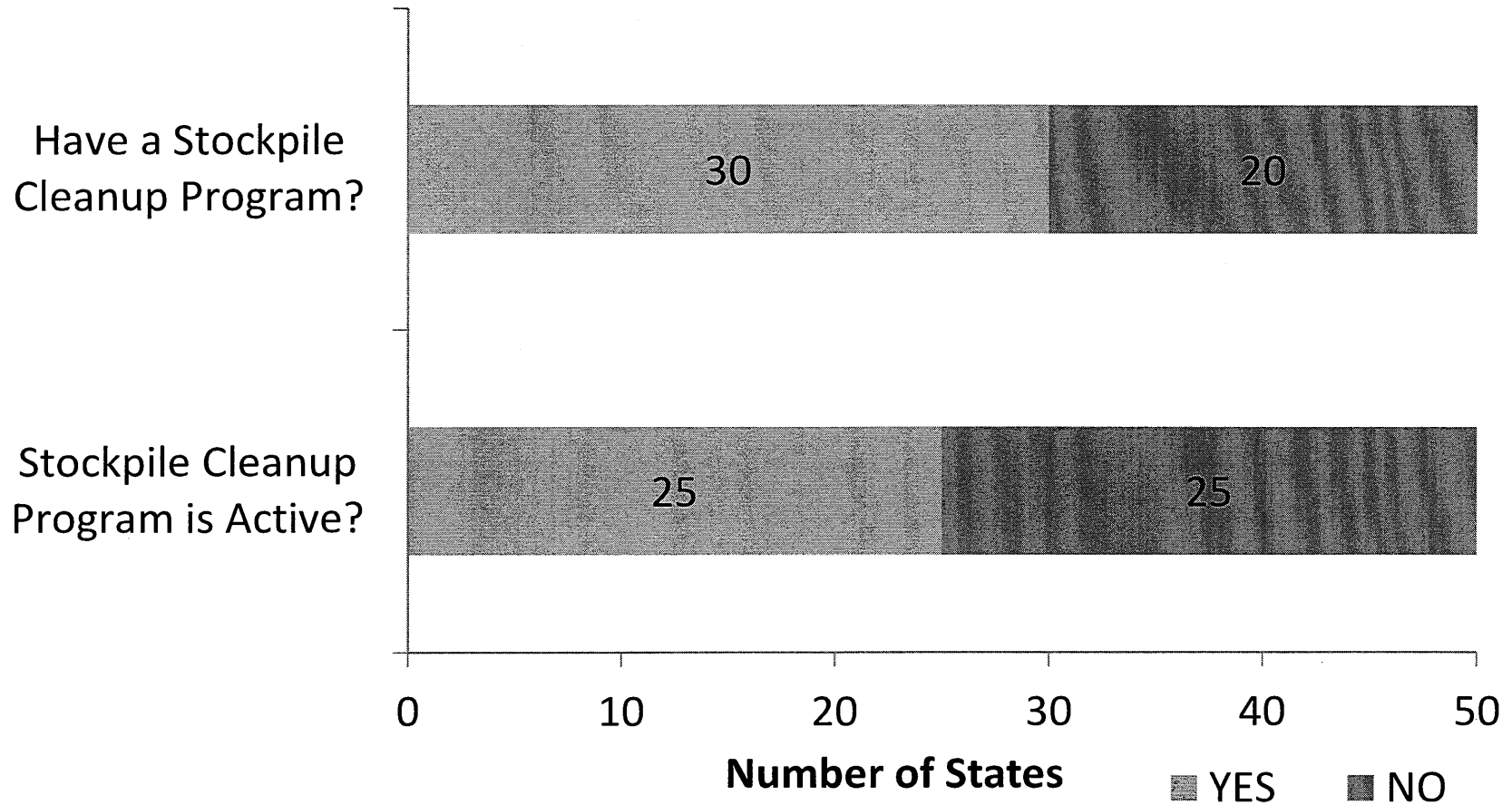
Overview of Current State Programs

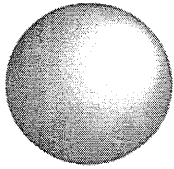


Overview of Current State Programs



Overview of Current State Programs





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About the Rubber Manufacturers Association

RMA is the national trade association representing tire manufacturers that make tires in the United States. RMA's scrap tire management efforts are a reflection of the tire industry's commitment to the concept of shared responsibility for its products when not suitable for use on vehicles.

RMA began its scrap tire program in 1990 under the auspices of the Scrap Tire Management Council. RMA works with all stakeholders, including states, U.S. EPA and the industry to develop markets, reduce scrap tire stockpiles and implement state regulations that that foster sustainable scrap tire markets. RMA supports all scrap tire markets that are environmentally sound and economically feasible.



SUMITOMO RUBBER NORTH AMERICA, INC.