U.S. Scrap Tire Management Summary
2005 - 2009

October 2011; Updated September 2013
# 2009 U.S. Scrap Tire Market Summary

*(in Thousands of Tons)*

<table>
<thead>
<tr>
<th>Market or Disposition</th>
<th>2005</th>
<th>2007</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tire-Derived Fuel</td>
<td>2144.64</td>
<td>2484.36</td>
<td>2084.75</td>
</tr>
<tr>
<td>Ground Rubber</td>
<td>552.51</td>
<td>789.09</td>
<td>1354.17</td>
</tr>
<tr>
<td>Land Disposed</td>
<td>590.81</td>
<td>593.98</td>
<td>653.38</td>
</tr>
<tr>
<td>Used Tires</td>
<td>n/a</td>
<td>n/a</td>
<td>371.25</td>
</tr>
<tr>
<td>Civil Engineering</td>
<td>639.99</td>
<td>561.56</td>
<td>284.92</td>
</tr>
<tr>
<td>Reclamation Projects</td>
<td>UNK</td>
<td>132.58</td>
<td>130.00</td>
</tr>
<tr>
<td>Exported(^1)</td>
<td>111.99</td>
<td>102.08</td>
<td>102.10</td>
</tr>
<tr>
<td>Baled Tires/market</td>
<td>UNK</td>
<td>UNK</td>
<td>27.76</td>
</tr>
<tr>
<td>Electric Arc Furnace</td>
<td>18.88</td>
<td>27.14</td>
<td>27.10</td>
</tr>
<tr>
<td>Baled/no market</td>
<td>42.22</td>
<td>9.31</td>
<td>15.57</td>
</tr>
<tr>
<td>Agricultural</td>
<td>47.59</td>
<td>7.13</td>
<td>7.10</td>
</tr>
<tr>
<td>Punched/ Stamped</td>
<td>100.51</td>
<td>1.85</td>
<td>1.90</td>
</tr>
<tr>
<td>Total to Market</td>
<td>3616.11</td>
<td>4105.79</td>
<td>4391.05</td>
</tr>
<tr>
<td>Generated(^2)</td>
<td>4410.73</td>
<td>4595.72</td>
<td>5170.50</td>
</tr>
<tr>
<td>% to Market/Utilized</td>
<td>82.0%</td>
<td>89.3%</td>
<td>84.9%</td>
</tr>
<tr>
<td>% Managed (including baled and landfilled tires)</td>
<td>96.3%</td>
<td>102.5%</td>
<td>97.9%</td>
</tr>
</tbody>
</table>

\(^1\)RMA began tracking tires culled from scrap tire collection entering domestic used passenger and light truck used tire markets in 2009.

\(^2\)RMA 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 in 2009.

© Rubber Manufacturers Association, 2013. May not be used, reproduced or cited without proper attribution.
# 2009 U.S. Scrap Tire Generation

<table>
<thead>
<tr>
<th>Tire Class</th>
<th>Millions of Tires</th>
<th>Market %</th>
<th>Average Weight (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Light Duty Tires</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passenger tire replacements(^1)</td>
<td>189.50</td>
<td>63.86%</td>
<td></td>
</tr>
<tr>
<td>Light truck tire replacements(^1)</td>
<td>27.80</td>
<td>9.37%</td>
<td></td>
</tr>
<tr>
<td>Tires from scrapped vehicles(^2)</td>
<td>41.8</td>
<td>14.10%</td>
<td></td>
</tr>
<tr>
<td><strong>Commercial Tires</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium, wide base, heavy truck replacement tires(^1)</td>
<td>13.0</td>
<td>4.38%</td>
<td></td>
</tr>
<tr>
<td>Tires from scrapped trucks and buses(^2)</td>
<td>24.6</td>
<td>8.29%</td>
<td></td>
</tr>
<tr>
<td><strong>Total scrapped tires</strong></td>
<td>296.7</td>
<td>100.0%</td>
<td>34.8</td>
</tr>
</tbody>
</table>


U.S. Scrap Tire Management Trends
2005 - 2009

© Rubber Manufacturers Association, 2013. May not be used, reproduced or cited without proper attribution.
2009 U.S. Scrap Tire Disposition*
(percent of total tons generated annually)

- Tire-Derived Fuel: 40.3%
- Ground Rubber: 26.2%
- Land Disposed: 12.6%
- Used Tires: 7.2%
- Civil Engineering: 5.5%
- Other: 8.2%

* Numbers may not add due to rounding.

© Rubber Manufacturers Association, 2013. May not be used, reproduced or cited without proper attribution.
U.S. Scrap Tire Market Trends
2005 – 2009

© Rubber Manufacturers Association, 2013. May not be used, reproduced or cited without proper attribution.
U.S. Tire-Derived Fuel Markets 2009
(percent of total tons of scrap tires diverted to TDF market)

- Pulp & Paper: 34%
- Cement Kilns: 29%
- Electric Utilities: 16%
- Industrial Boilers: 11%
- Dedicated Tires to Energy: 10%

Total scrap tires diverted to TDF market: 2,084,750 tons

© Rubber Manufacturers Association, 2013. May not be used, reproduced or cited without proper attribution.

© Rubber Manufacturers Association, 2013. May not be used, reproduced or cited without proper attribution.
U.S. Ground Rubber Markets 2009¹
(percent of total pounds of ground rubber consumed in market)

- Automotive: 31% (7%)
- Molded/ Extruded Products: 24% (31%)
- Sports Surfacing: 20% (24%)
- Playgrounds/ Mulch/ Animal Bedding: 11% (20%)
- Asphalt: 11% (11%)
- Export: 7% (7%)

Total tire rubber consumed in ground rubber markets: about 1,625,000,000 pounds

¹Ground 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
2005 - 2009

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.

© Rubber Manufacturers Association, 2013. May not be used, reproduced or cited without proper attribution.
U.S. Civil Engineering Markets
2005 - 2009

Thousands of Tons

- 2005: 639.99
- 2007: 561.56
- 2009: 284.92

© Rubber Manufacturers Association, 2013. May not be used, reproduced or cited without proper attribution.
U.S. Stockpiled Scrap Tires 1990 - 2010

Millions of Tires


© Rubber Manufacturers Association, 2013. May not be used, reproduced or cited without proper attribution.
U.S. State Scrap Tire Program Features*

- **State Fee Collected?**
  - NO
  - YES

- **Prohibit Collection Of Other Fees?**
  - NO
  - YES

- **Storage/Disposal Reg or Permit Required?**
  - NO
  - YES

- **Hauler Permit Required?**
  - NO
  - YES

- **Financial Assurance For Haulers?**
  - NO
  - YES

- **Financial Assurance For Processor?**
  - NO
  - YES

* Current as of 2011. Data not available for all 50 states.

© Rubber Manufacturers Association, 2013. May not be used, reproduced or cited without proper attribution.
U.S. State Land Disposal Regulations*

- **Active Stockpile Clean Up Program?**
  - YES
  - NO

- **Stockpile Cleanup Program Exist?**
  - YES
  - NO

- **Monofills Allowed?**
  - YES
  - NO

- **Cut, Shredded Tires Allowed In Landfill?**
  - YES
  - NO

- **Whole Tires Allowed In Landfill?**
  - YES
  - NO

* Current as of 2011. Data not available for all 50 states.

© Rubber Manufacturers Association, 2013. May not be used, reproduced or cited without proper attribution.
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.