

Mississippi Waste Tire Management Program 2007 Annual Report



**Solid Waste Policy, Planning and Grants Branch
Office of Pollution Control
Mississippi Department of Environmental Quality**

MDEQ Mission Statement

The mission of the Mississippi Department of Environmental Quality is to safeguard the health, safety, and welfare of present and future generations of Mississippians by conserving and improving our environment and fostering wise economic growth through focused research and responsible regulation. This mission is furthered, in part, by the work of the Mississippi Waste Tire Management program which promotes waste reduction, recycling, research and proper management of waste tires in the state. This annual report will provide information on these efforts for 2007.



2007 Annual Report Overview

The Mississippi Legislature, in response to growing problems with proper waste tire management and disposal, adopted the state's Waste Tire Law in 1991. This law authorized the Mississippi Commission on Environmental Quality to establish regulations for the collection, transportation, storage, processing, and disposal of waste tires. The Legislature also tasked the Mississippi Department of Environmental Quality (MDEQ) with the goal of attaining statewide recycling of waste tires.

Over the past 16 years, the MDEQ has worked to promote proper waste tire management and disposal and to increase recycling of waste tires in Mississippi. Through a comprehensive waste tire management program encompassing the permitting of waste tire activities, compliance assurance and enforcement actions, grant and financial support activities, and policy and planning aspects, waste tire management in Mississippi has progressed from landfilling greater than 90% of our waste tires in the early 1990's to recycling over 90% in little more than a decade. However, due to the ever changing conditions of waste tire management, both regionally and nationally, Mississippi must continue to seek innovative approaches in waste tire market development, strong in compliance assurance, consistent in enforcement actions and supportive of the waste tire recycling industry to maintain, if not increase, the current levels of waste tire recycling.

The 2007 Annual Report of the Mississippi Waste Tire Management Program has been developed by the Mississippi Department of Environmental Quality to provide information on the status of waste tire management and recycling conditions in Mississippi. This report provides details for calendar year 2007 on waste tire collection, transportation, storage, processing, recycling, disposal and waste tire grants in Mississippi.

Updated Waste Tire Conversion Factors (PTE's)

Weight vs. Unit

In previous years, the MDEQ received information on the quantities of waste tires collected and processed in various forms including both a per tire (or unit) basis as well as a tonnage (or weight) basis. This information was then converted to represent the total number of tire units managed by Mississippi facilities without regard to tire size or weight. Beginning in 2007, MDEQ began tracking and reporting the quantity of tires transported, collected, processed and disposed in Mississippi using updated conversion factors which take the different sizes and weights of various tires into consideration. These new conversion factors allow the numbers of waste tires managed in Mississippi to be expressed on a weight basis rather than a unit basis and is referred to as a Passenger Tire Equivalent or PTE. Additionally, analyzing waste tire management quantities on a weight-based system is a national trend that is consistent with the efforts of other states and with the goals of the U.S. EPA's Resource Conservation Challenge Waste Tire Workgroup.

This new conversion was developed by the Rubber Manufacturers Association (RMA), a national trade organization representing the tire manufacturing industry. In the 2005 Edition of the RMA's *Scrap Tire Markets in the United States*, the RMA conducted a survey of waste tire processors across the nation in an effort to determine a new and updated average of passenger tires and commercial or truck tires. Over time, the average weights of tires have increased as the vehicle sizes have increased. This survey resulted in the calculation of a new national average for light duty (passenger) tires at 22.5 pounds and for commercial (truck) tires at 110 pounds. Additionally, based on the numbers of these types of tires in use across the country, a single average weight for all classes was determined. This new average weight for all classes of tires was calculated by the RMA at 33 pounds.

Upon review of these efforts by the RMA, MDEQ adopted the use of this updated conversion factor. Unless otherwise noted, the Waste Tire Management Program 2007 Annual Report will utilize



Waste Tire Collection and Transportation

Waste Tire Transportation

An important component of the waste tire management industry in Mississippi are the waste tire haulers who move waste tires from waste tire generators to processors and recyclers. These haulers must register with MDEQ if they transport 50 or more waste tires or transport waste tires for compensation. During calendar year 2007, 95 waste tire haulers were authorized to collect waste tires from retail tire stores, automobile salvage yards, and other waste tire generators and transport those waste tires within Mississippi. Fifty-two of those haulers were commercial, receiving compensation from the waste tire generators to properly haul the waste tires to an authorized processing or disposal facility. The remaining fifty-four waste tire haulers were private haulers, only hauling waste tires generated by their business. By comparison, in calendar year 2006 108 waste tire haulers were registered to transport waste tires in Mississippi.



Waste tire haulers are required to submit an annual report detailing their activities for the previous calendar year. The most recent reports available at the time of this report detail the activities of the 2006 calendar year. Based on these reports, 136,000 Mississippi waste tires were transported by private waste tire haulers.** Additionally, just over 400,000 waste tires were transported to out-of-state facilities. The remaining 2.4 million waste tires generated in Mississippi were collected and transported by commercial waste tire haulers to Mississippi waste tire processing facilities.

It is interesting to note , since the closure of the tire recycling facility in south Mississippi, the number of waste tires transported to out-of-state waste tire processing facilities increased by over 200,000 tires from 2005 to 2006. The only waste tire recycling business in south Mississippi closed due to Hurricane Katrina in early 2006 resulting in over 400,000 tires being transported out-of-state in calendar year 2006. In calendar year 2005, just under 200,000 waste tires were transported out-of-state. This represents a 100% increase in the number of tires being transported out-of-state due to the closure of the only waste tire recycling facility in south Mississippi.

** The numbers of tires reported in the Waste Tire Transportation section reflect actual numbers and not PTE's since this information was gathered from 2006 annual waste tire hauler reports. Please refer to the Overview on Page 2 for more information.

Waste Tire Collection and Transportation Cont'd.

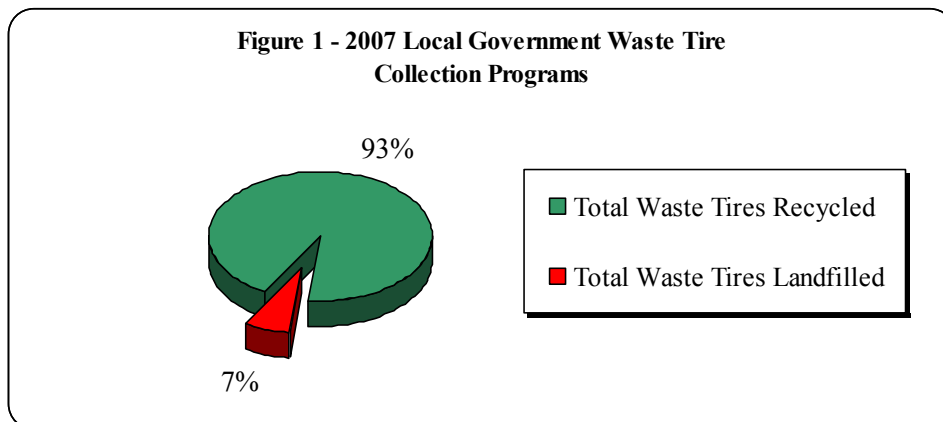
Local Government Waste Tire Collection Programs

As required by law, each county, or regional solid waste management authority is required to operate a local waste tire collection program. This program must maintain an adequate number of waste tire collection sites within its jurisdiction at which small quantity generators of waste tires, including residents and small businesses, may deposit waste tires for proper disposal or recycling. These tires from smaller generators would likely not be collected were it not for local collection programs. During 2007, all 82 counties and several municipalities in Mississippi operated waste tire collection programs. These programs involved the operation of 145 waste tire drop-off centers to be used by small quantity waste tire generators.



During calendar year 2007, over 630,000 passenger tire equivalents (PTE's) were collected by Mississippi's local government waste tire collection programs. These tires represented approximately 14% of the waste tires that were generated in Mississippi during 2007. Of these tires collected by the local governments, 93% were recycled at Mississippi waste tire processing facilities in 2007.

Also in 2007, 13 new grants totaling \$564,400 were awarded to local governments for the operation, advertisement, and overall maintenance of their local government waste tire collection programs. Additionally, over \$900,000 in grant support was provided to local governments for the continued operation of their local government waste tire collection programs.



Waste Tire Collection and Transportation Cont'd.

Commercial Waste Tire Collection Sites

Commercial waste tire collection sites serve as temporary storage and transfer points for waste tires from waste tire haulers and generators. These waste tires are then generally loaded onto long haul vehicles for transfer to waste tire processing and recycling facilities. In some instances, the collection sites also operate as points of separating re-usable tires for re-sale.

In addition to the 145 local government collection sites, there were also six commercial waste tire collection businesses in the state that accepted waste tires “for profit” from waste tire haulers, retail tire stores, automobile salvage yards and other large waste tire generators in 2007. These commercial businesses collected and transferred 343,000 PTE’s to Mississippi waste tire recycling facilities. This figure represents a decrease of 100,000 waste tires from 2006 managed at these sites. This decrease is due to the closure of one waste tire collection site in central Mississippi. However, due to its close proximity to other waste tire recycling businesses, waste tires in the area were transported directly to area recycling facilities in 2007.

Additionally, in calendar year 2007, reports indicate that just over 11,000 tires were culled for re-use or resale from the waste tires collected at these commercial waste tire collection sites. Once separated from the waste tires and determined suitable for reuse or resale, these tires are no longer considered waste tires and may be returned to useful life. These used tires represented 3.3% of the tires managed by Mississippi’s commercial waste tire collection sites. This percentage may have been as much as twice as high in past years; however, a number of larger retailers are now requiring that all waste tires generated by their businesses be processed onsite prior to removal. This practice is influencing the number of reusable tires made available for re-sale to consumers.

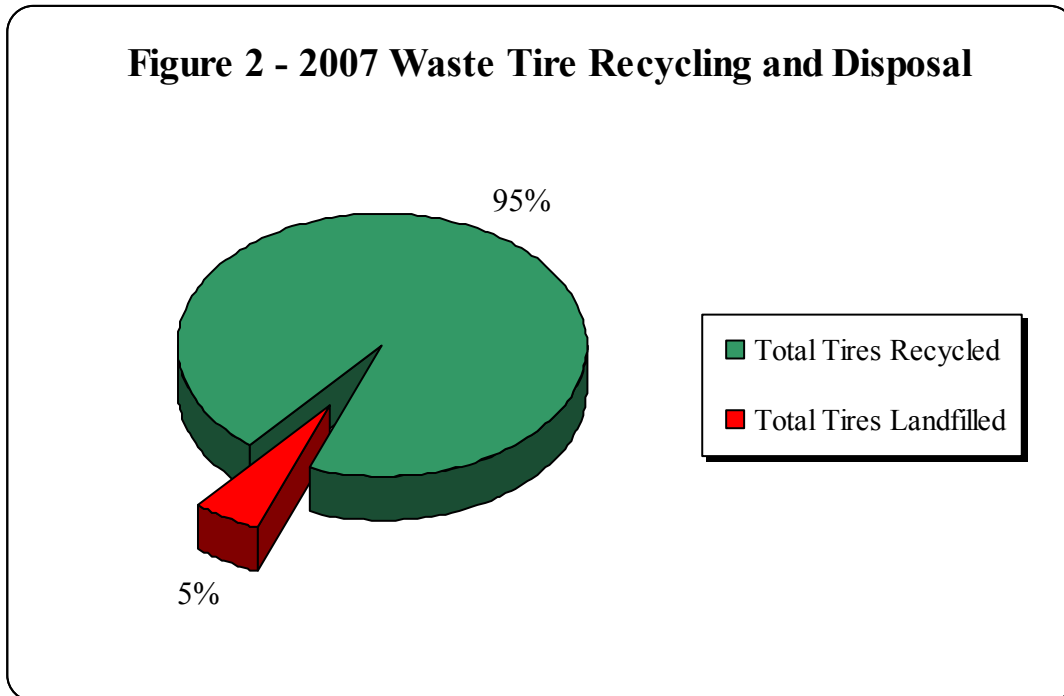


Waste Tire Processing and Recycling

Waste tire processing facilities are permitted businesses that receive waste tires from various generators, haulers, and collection sites. The processing facilities cut, shred, chip or otherwise process the collected tires into smaller components. This processed waste tire material may then be properly disposed or preferably used for beneficial purposes such as tire derived fuel, crumb rubber products, civil engineering uses, or further processed for recycling into other manufactured products.

Calendar Year 2007

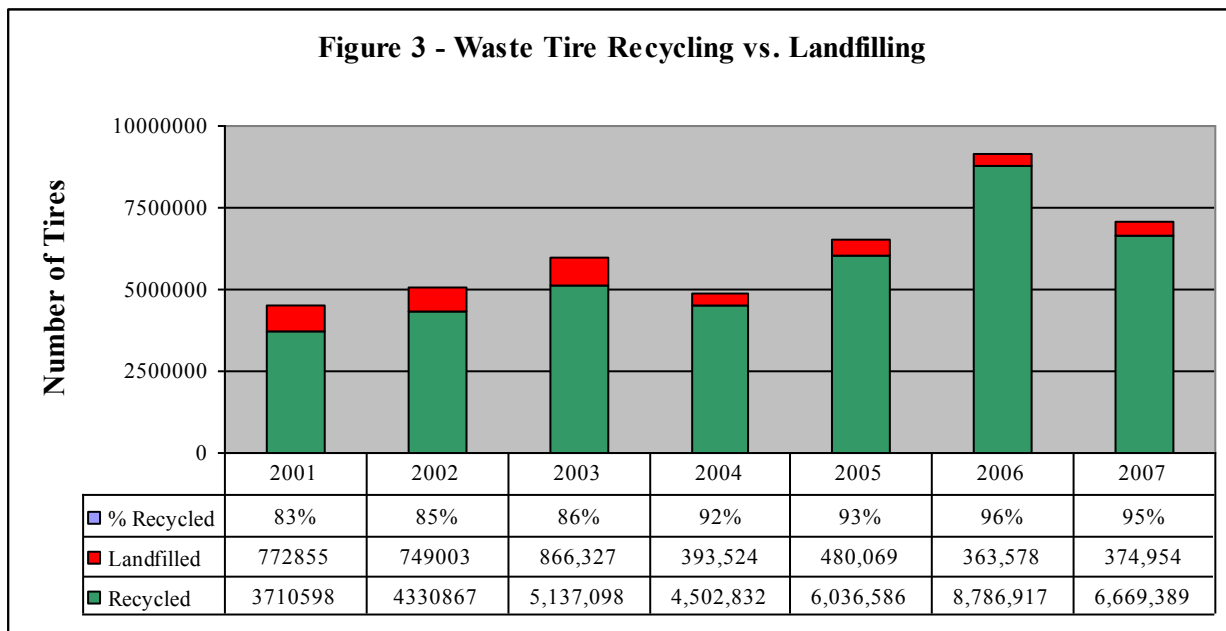
In calendar year 2007, there were 6 Mississippi waste tire processors which collected and processed waste tires throughout Mississippi. Three of these facilities processed waste tires for recycling and beneficial use purposes. Together, the Mississippi waste tire recycling facilities collected and processed 9.78 million Passenger Tire Equivalent's (PTE) during calendar year 2007. This resulted in a recycling rate of 95% for 2007 compared to 96% for 2006. The three remaining Mississippi waste tire processing facilities exclusively processed waste tires received for landfill disposal. These facilities managed only a high of 2.47% of the tires processed in Mississippi. Collectively, these facilities processed 550,000 PTE's.



Waste Tire Processing and Recycling Cont'd.

Past Trends (2001—2007)

As indicated in Figure 2, Mississippi continues to recycle waste tires collected and processed in the state at a high rate. The recycling rate for calendar year 2007 for all tires managed stood at 95%, a slight decrease from the 96% rate in 2006. This slight drop can be partly attributed to the closure of the only recycling facility in south Mississippi. Also, the use of the new conversion factors discussed on Page 2 appears to have resulted in a slightly lower overall number of tires being reported as processed in Mississippi in 2007 as shown in Figure 3.



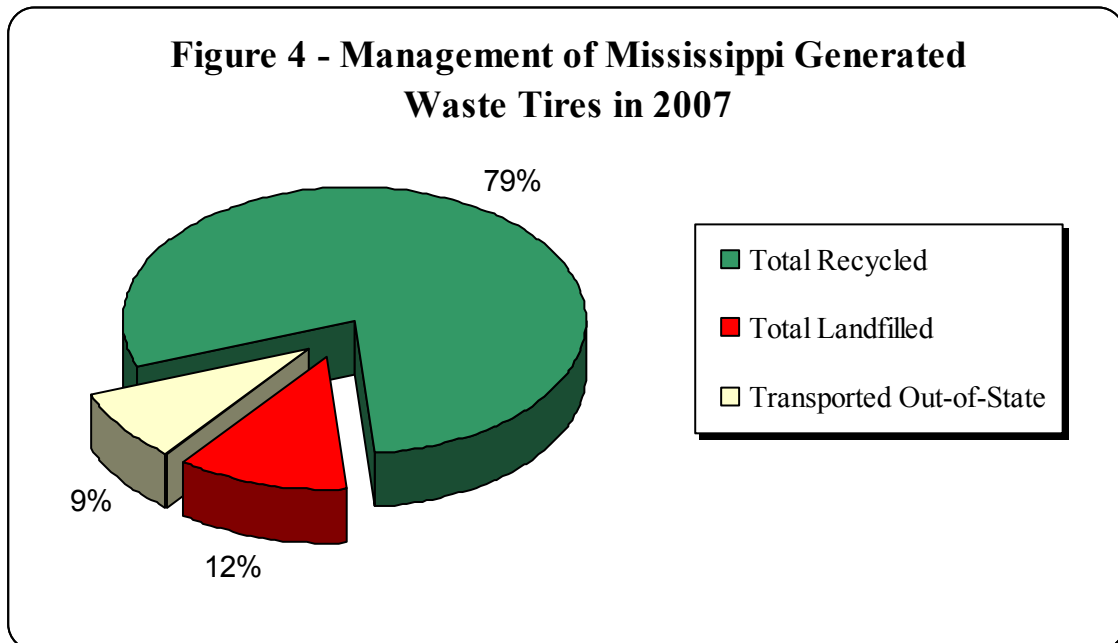
** For consistency, the number of tires reported for 2007 in this section and Figure 3 are reported in Tire Equivalents, or the new 33 pound average weight for all classes of tires. This conversion provides the most accurate correlation between data collected in 2007 and previous years. Please refer to the Overview on Page 2 for more information.

Waste Tire Processing and Recycling Cont'd.

Waste Tires Generated in Mississippi

Annually, it is estimated that the State of Mississippi generates approximately 3,000,000 waste tires, or approximately 1 tire per person per year. Based on the new, updated conversion factors discussed on Page 2 of the report, this equates to approximately 4.4 million PTE's. As reported by Mississippi's waste tire processors, these facilities managed 4.2 million PTE's from Mississippi sources. As shown in Figure 4, Mississippi's tire recycling and reuse facilities collected and recycled 79% of the Mississippi-generated waste tires. Although this figure represents a 4 % decrease from calendar year 2006, the decrease in the number of Mississippi tires recycled can partly be attributed to the closure of south Mississippi's only waste tire recycling facility due to Hurricane Katrina.

In addition, there were two waste tire processors with landfills operating in the northern and southern parts of the state that only receive processed waste tires from Mississippi. During calendar year 2007, these disposal businesses landfilled 460,000 PTE's accounting for 10% of the Mississippi generated waste tires. Overall, including processed waste tires disposed of at other waste management facilities, a total of 12% of the Mississippi generated waste tires were landfilled. Further, it is estimated that 9% of the Mississippi generated waste tires were transported out-of-state to facilities.



Waste Tire Program Outlook

After unprecedented growth and unforeseen challenges within the Mississippi waste tire management program in 2006, Mississippi maintained a recycling rate of waste tires managed in the state at over 90%. Although two of Mississippi's waste tire recycling facilities have added facility components or improvements to increase recycling rates in the recent past, the lack of adequate recycling in south Mississippi remains a critical challenge for the program. Additional considerations and challenges of the program for the future continue to be the outcome of national litigation regarding the use of tire derived fuel, finalization of an MDEQ effort to provide for online permitting and records reporting, and continued efforts to work with regional states and national organizations to increase waste tire recycling and expand available reuse markets for waste tires.



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