



Colorado
Legislative
Council
Staff

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MEMORANDUM

August 1, 2009

TO: Transportation Legislation Review Committee
FROM: Kurtis Morrison, Senior Research Assistant, 303-866-3140
SUBJECT: Waste Tire Disposal and Recycling Program

This memorandum provides a summary of the Colorado Waste Tire Disposal and Recycling Program designed to reduce the high number of scrap tires stored or illegally discarded within Colorado state borders. Specifically, this memorandum discusses:

- background information;
- state programs supported by waste tire fee revenues;
- fees, distribution of fee revenues, and historical fee increases;
- transport of waste tires; and
- recent legislation.

Background

The Rubber Manufacturers Association (RMA) reports that of 128 million waste tires stored in stockpiles at the end of 2007, approximately 50 million (39 percent) were located in Colorado. According to a recent RMA survey, Colorado ranks 3rd among all states in overall waste tire tonnage (14.8 million tons) deposited in monofills.¹ The Colorado Department of Public Health (CDPHE) is required to submit an annual report by July 1 to the Transportation Legislation Review Committee (TLRC) on the total number of waste tires recycled in the state. The July 1, 2009, report states that:

- 5,158,468 waste tires were generated in Colorado during 2008;
- 4,080,749 tires were recycled in 2008, (79 percent of tires generated);
- 5,696,249 tires were deposited at waste tire facilities; and
- an estimated 447,415 tires were imported from other states and deposited in Colorado monofills.

A copy of the 2009 report is provided with this memorandum (Attachment A).

¹Scrap Tire Markets in the United States, *Rubber Manufacturers Association*, May 2009.

Waste Tire Disposal and Recycling Program

The Waste Tire Program is comprised of several cash funds that promote tire recycling, reuse, and disposal, and is supported by a \$1.50 per tire fee. The fee also supports higher education research. The following table displays the distribution of the \$1.50 fee, excluding administrative expenditures, according to the programs funded, and provides a description of each program and administering department.

Table 1
Colorado Waste Tire Disposal and Recycling Program:
Revenues and Program Expenditures

Program	Percent of \$1.50 Fee Credited to Program	Purpose / Description	Department	Statute
End User and Processor Partial Reimbursement Program	\$0.45 (30.0%)	<ul style="list-style-type: none"> Assists new tire recycling technologies to become economically feasible, in turn encouraging further use of waste tires by providing partial reimbursement to waste tire processors and end users of up to \$50 per ton of waste tire material used. 	Department of Local Affairs	Section 24-32-114 (1) (c), C.R.S.
Cleanup and Processing Grant Program for Counties and Municipalities	\$0.38 (25.3%)	<ul style="list-style-type: none"> Assists local and county governments in removing waste tires from monofills and dumping sites by providing grants to counties and municipalities to remove disposed or stored tires from illegal waste sites, and subsequent recycling or disposal. 	Department of Local Affairs	Section 24-32-114 (1) (a), C.R.S.
Recycling Resources Economic Opportunity Program	\$0.25 (16.7%)	<ul style="list-style-type: none"> Assists nonprofit, for-profit, and governmental entities in developing recycling initiatives, enhancing recycling infrastructure and programming, and developing new markets for recyclable materials. Provides grants and loans to local and municipal governments, nonprofit organizations, and for-profit organizations for recycling programs and partnerships that prioritize solid waste mitigation and promote recycling industries and infrastructure. 	Department of Public Health and Environment	Section 25-16.5-106.5, C.R.S.
Recycling Incentives for Purchasing and Using Recycled Waste Tire Products in Public Projects	\$0.17 (11.3%)	<ul style="list-style-type: none"> Encourages the use of recycled or reused tire products in civic and public projects such as playgrounds, running tracks, and athletic fields by providing grants to counties, municipalities, special districts, and state agencies to purchase products comprised of recycled or reused waste tires for use in public projects. 	Department of Local Affairs	Section 24-32-114 (1) (b), C.R.S.
Advanced Technologies Fund	\$0.15 (10.0%)	<ul style="list-style-type: none"> Encourages waste diversion and recycling projects emphasizing tires by provides grants to individuals, public, or private entities to support waste tire diversion and recycling projects. 	Pollution Prevention Advisory Board	Section 25-16.5-105 (2), C.R.S.
Innovative Higher Education Research Fund	\$0.10 (6.7%)	<ul style="list-style-type: none"> Supports Colorado higher education research initiatives by providing state funding to meet match requirements for federal grant funding. 	Department of Higher Education	Section 23-19.7-104, C.R.S.

Upon collection of the \$1.50 fee, revenues are allocated according to multiple formulas set in state law. Table 2 displays the breakdown of the fee according to credited cash fund, the allocation of cash fund revenues by program, and the administering agency of each program. A flow chart displaying the \$1.50 fee revenue distributions is also attached to this memorandum (Attachment B).

Table 2
Waste Tire Fee Revenue Distributions and Program Expenditures Required by State Law

\$1.50 Fee	Fund Credited	Fund Revenue Distribution*	Program and Administering Agency	Statute
\$0.75	Waste Tire Recycling Development Cash Fund*	67%	50% - Cleanup and Processing Grant Program for Counties and Municipalities (Department of Local Affairs)	Section 24-32-114 (1) (a), C.R.S.
			30% - End Processor and User Partial Reimbursement Program (Department of Local Affairs)	Section 24-32-114 (1) (c), C.R.S.
			20% - Recycling Incentives for Purchasing and Using Recycled Waste Tire Products in Public Projects (Department of Local Affairs)	Section 24-32-114 (1) (b), C.R.S.
		33%	60% - Advanced Technologies Fund (Pollution Prevention Advisory Board)	Section 25-17-202 (3) (b) (III), C.R.S. Section 25-16.5-105 (2), C.R.S.
			40% - Innovative Higher Education Research Fund (Department of Higher Education)	Section 25-17-202 (3) (b) (III), C.R.S. Section 25-16.5-105 (2) (e), C.R.S.
\$0.50**	Recycling Resources Economic Opportunity Fund	50%	Recycling Resources Economic Opportunity Program (Department of Public Health and Environment)	Section 25-17-202 (1) (a) (IV), C.R.S. Section 25-16.5-106.5, C.R.S.
	Waste Tire Cleanup Fund	25%	End Processor and User Partial Reimbursement Program (Department of Local Affairs)	Section 25-17-202 (1) (a) (IV) (A), C.R.S. Section 24-32-114 (1) (c), C.R.S.
		25%	Cleanup and Processing Grant Program for Counties and Municipalities (Department of Local Affairs)	Section 25-17-202 (1) (a) (IV) (B), C.R.S. Section 24-32-114 (1) (a), C.R.S.
\$0.25	Processors and End Users of Waste Tires Cash Fund	72%	End Processor and User Partial Reimbursement Program (Department of Local Affairs)	Section 25-17-202.5 (1) (a), C.R.S. Section 24-32-114 (1) (c), C.R.S.
		28%	Recycling Incentives for Purchasing and Using Recycled Waste Tire Products in Public Projects (Department of Local Affairs)	Section 25-17-202.5 (1) (b), C.R.S. Section 24-32-114 (1) (b), C.R.S.

Source: Colorado Department of Public Health

*Following appropriations for administrative costs to the Departments of Local Affairs, Public Health and Environment, and Revenue, remaining funds in the Waste Tire Recycling Development Cash Fund are deposited in the Waste Tire Cleanup Fund.

**Revenues generated from the \$0.50 fee are split evenly between the Recycling Resources Economic Opportunity Fund and the Waste Tire Cleanup Fee.

Historical fee increases. The state waste tire fee was established in 1993, as a \$1.00 fee for all disposed tires. Since its inception in 1993, the waste tire fee has been adjusted by the General Assembly three times. The current fee level is set at \$1.50 per tire, collected upon the purchase of a new tire. Table 3 displays historical fee changes to date.

**Table 3
Colorado Waste Tire Fee Increases and Decreases, 1993-2009**

Fee/Surcharge	1993 – 1999	2000 – 2002	2003 – 2006	2007 – Present
Waste Tire Recycling Development Cash Fund	\$1.00	\$0.75	\$0.75	\$0.75
Processors and End Users of Waste Tires Cash Fund	NA*	NA	\$0.25	\$0.25
Recycling Resources Economic Opportunity Fund, and Waste Tire Cleanup Fund	NA	NA	NA	\$0.50
Total Fee	\$1.00	\$0.75	\$1.00	\$1.50

Source: Section 25-17-202, C.R.S.

**NA" (Not applicable) indicates that the fee was not in effect during the respective time period.

Transport of Waste Tires

State law and regulations promulgated by the state Solid and Hazardous Waste Commission govern the transport of waste tires within Colorado state borders. The following sections discuss hauler requirements and regulations.

Hauler certification. Waste tire haulers are required to be certified by the Colorado Department of Public Health and Environment (CDPHE).² Commission regulations prohibit transporting waste tires unless a hauler has registered with the CDPHE by applying for a certificate of registration. Exemptions from this requirement are provided for:

- persons transporting products comprised of recycled waste tires for sale or distribution;
- commercial freight carriers hauling waste tires under contract with a waste tire hauler; and
- carriers that only travel through the state and do not unload or transfer any waste tires.³

The application and certification process is administered by the Solid Waste Unit of

²Section 25-17-204 (3), C.R.S.

³6 CCR 1007-2 (15)

the CDPHE Hazardous Materials and Waste Management Division.⁴ Certified haulers are required to file annual reports to CDPHE detailing the number of waste tires transported during the previous year. The report is also required to document the quantity of waste tires transported from out-of-state locations.⁵

Permissible delivery destinations. State law requires that waste tires may only be transported, for business purposes, to tire storage sites or landfills permitted by the city or county with jurisdiction over the site and in compliance with all applicable laws.⁶ Solid and Hazardous Waste Commission rules state that commercial transporters may only deliver waste tires to:

- waste tire storage sites;
- waste tire monofill sites;
- municipal or privately owned landfills in compliance with applicable laws;
- a beneficial user of waste tires;
- waste tire recycling facilities; and
- facilities that possess a valid air quality permit if the permit allows for an approved beneficial use of waste tires and such facilities are not used for waste tire storage in excess of 90 days prior to any beneficial use.⁷

All waste tire transporters are required to keep a manifest for each load delivered. The manifest records a transport's destination and quantity of tires hauled.⁸ Copies of each manifest are required by state law to be made available to the CDPHE upon request and to destination facilities.⁹

Penalties. Under state law, violations of waste tire transportation state laws and regulations are misdemeanor offenses punishable by a fine of up to \$2,000, a sentence of up to 30 days, or both. Violations of the law are treated as separate offenses for each day that the transporter is in violation.¹⁰ State regulations provide that commercial waste tire haulers are subject to inspection, without notice, to ensure compliance with state laws and regulations.¹¹

⁴6 CCR 1007-2 (15.3.2)

⁵6 CCR 1007-2 (15.4.3)

⁶Section 25-17-204 (1), C.R.S.

⁷6 CCR 1007-2 (15.3.1)

⁸6 CCR 1007-2 (15.4.1)

⁹6 CCR 1007-2 (15.4.2)

¹⁰Section 25-17-204 (4), C.R.S.

¹¹6 CCR 1007-2 (15.5)

Upon determining that a person is in violation of waste tire hauler regulations, CDPHE may take the following steps:

- suspend or revoke the hauler's certificate of registration;
- initiate compliance advisories informing the person that he/she is in violation;
- take administrative enforcement action.

2009 Legislation

Senate Bill 09-289. One bill amending the Waste Tire Disposal and Recycling Program was passed by the General Assembly during the 2009 session and enacted into law - Senate Bill 09-289. Prior to enactment of the bill, the \$1.50 waste tire fee was collected when a consumer would discard of a used tire. Senate Bill 09-289 provides for the fee to now be collected at the time of a new tire sale. The bill also altered state statutes pertaining to tire monofills. Existing law prevented local and municipal governments from granting applications for new waste tire monofills. The bill eliminated this restriction and established the following new requirements:

- any tire disposed of in a monofill must be shredded into pieces no longer than 12-inches; and
- counties with a monofill(s) within their jurisdiction must submit an annual report to the CDPHE regarding monofill status, and must adopt a plan to eliminate all monofills by 2019.

Senate Bill 09-289 also enhanced requirements upon waste tire haulers. The bill requires tire recycling facilities to only do business with tire haulers certified under state law. The bill further provides that haulers must provide copies of his or her certificate of registration provided by CDPHE to retailers upon accepting a tire to be transported.

STATE OF COLORADO

Bill Ritter, Jr., Governor
James B. Martin, Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

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Colorado Department
of Public Health
and Environment

July 1, 2009

The Honorable Buffie McFadyen, Representative
Transportation Legislation Review Committee
Colorado State Capitol
200 East Colfax
Denver, Colorado 80203

Dear Chairwoman McFadyen and Committee Members:

Enclosed is a copy of the fifth annual report to the Transportation Legislation Review Committee on the status of waste tire recycling in Colorado. House Bill 04-1428 requires this report.

Sincerely,

Gary W. Baughman, Director
Hazardous Materials and Waste Management Division

w/Enclosure

STATE OF COLORADO



**Colorado Department
of Public Health
and Environment**

Fifth Annual Report to the Transportation Legislation Review Committee on the Status of Waste Tire Recycling In Colorado for Calendar Year 2008

Submitted to the Transportation Legislation Review Committee
by the Division of Hazardous Materials and Waste Management
Colorado Department of Public Health and Environment
July 1, 2009

DOCUMENT INFORMATION



Title: Fifth Annual Report to the Transportation Legislation Review Committee on the Status of Waste Tire Recycling in Colorado

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Subject: The report describes the status of waste tire recycling activities in the state of Colorado for calendar year 2008.

Statute: Section 25-17-202.7, C.R.S.

Date: July 1, 2009

Number of pages: 8

For additional information or copies:

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**Annual Report to the Transportation Legislation
Review Committee
on the Status of Waste Tire Recycling
in Colorado for Calendar Year 2008**

This 2008 calendar year annual report on waste tire recycling in Colorado is being transmitted to the Transportation Legislation Review Committee (the Committee) as required by House Bill 04-1428 and section 25-17-202.7, C.R.S. The statute requires the Colorado Department of Public Health and Environment (the Department) to issue a report to the Committee on or before July 1st each year that includes the total number of waste tires recycled in the state. This information is submitted to the department pursuant to the Regulations Pertaining to Solid Waste Sites and Facilities (6 CCR 1007-2, Sections 8.4.1(B) and 10.2.2.).

Executive Summary:

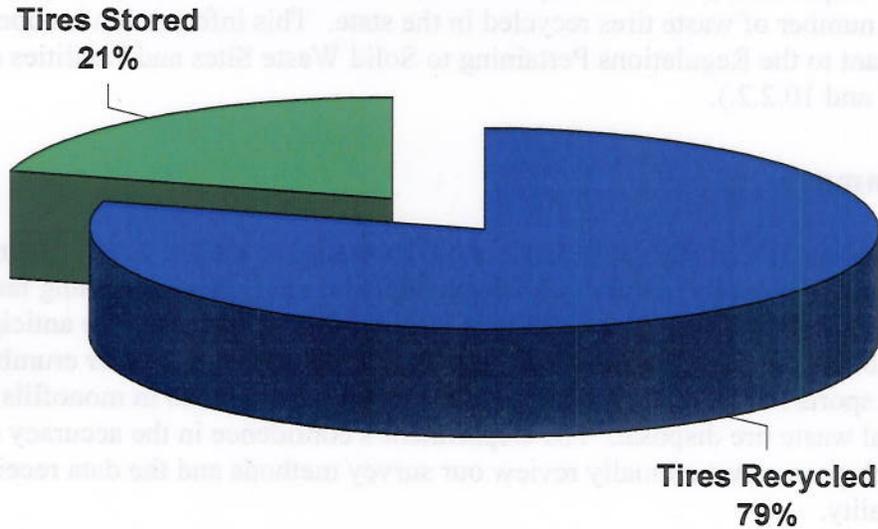
Calendar year 2008 marks the fifth year the division has compiled data related to the number of waste tires collected at end-processing facilities in the state of Colorado. End-processing facilities are facilities that recycle and reuse tires, or place tires in monofills for storage. We anticipate the tires stored in the monofills will be reused at a later date for tire derived fuel; rubber crumb for roadways, playgrounds, and sports fields; or for other uses. Therefore, placing tires in monofills for storage does not constitute final waste tire disposal. The Department's confidence in the accuracy of the reported data increases each year, as we annually review our survey methods and the data received in an attempt to improve its quality.

Colorado recycled 4,080,749 tires in 2008, which amounts to 79% of the tires generated that year. This represents a decrease from the 82% recycling rate achieved in 2007, but an overall increase in the number of tires recycled because more waste tires were generated. A portion of this decrease in the recycling rate is likely due to an improvement in our data tracking and evaluation methodology in conjunction with training industry to be more accurate in accounting for their inventories.

Colorado waste tire facilities reported receiving 5,696,249 tires during calendar year 2008. This number includes an estimated 447,415 tires that were not generated in Colorado, but brought in from states to the north and northeast for placement in Colorado's monofills. Conversely, we know of about 268,000 tires that were generated in Colorado, but sent to a recycling facility in Utah. There were approximately 5,158,468 waste tires generated in the state of Colorado during calendar year 2008. The division works with facilities to define the number of waste tires generated in the state, and we will expand this effort over the next year to create an even more accurate accounting and report for calendar year 2009.

Figure 1

**WASTE TIRES GENERATED IN 2008
PERCENTAGE OF TIRES RECYCLED**



A total of 4,080,749 waste tires (or scrap tires) were recycled in Colorado during calendar year 2008. As shown in Figure 1 (above), this represents the recycling of 79% of the waste tires generated during this period. The remaining 21% of waste tires generated were either sent for long-term storage in permitted tire monofills or added to inventory storage at tire recycling facilities awaiting further processing. An additional 355,362 waste tires were recycled during 2008 as compared to 2007. The increase in total waste tires recycled is attributed to the identification of a recycler on the western slope that processes approximately 268,000 tires a year into crumb rubber for engineering applications. Also, an existing waste tire recycler in the Denver area substantially increased waste tire processing for landscaping applications.

Figure 2

**ANNUAL COMPARISON
PERCENT OF WASTE TIRES RECYCLED**

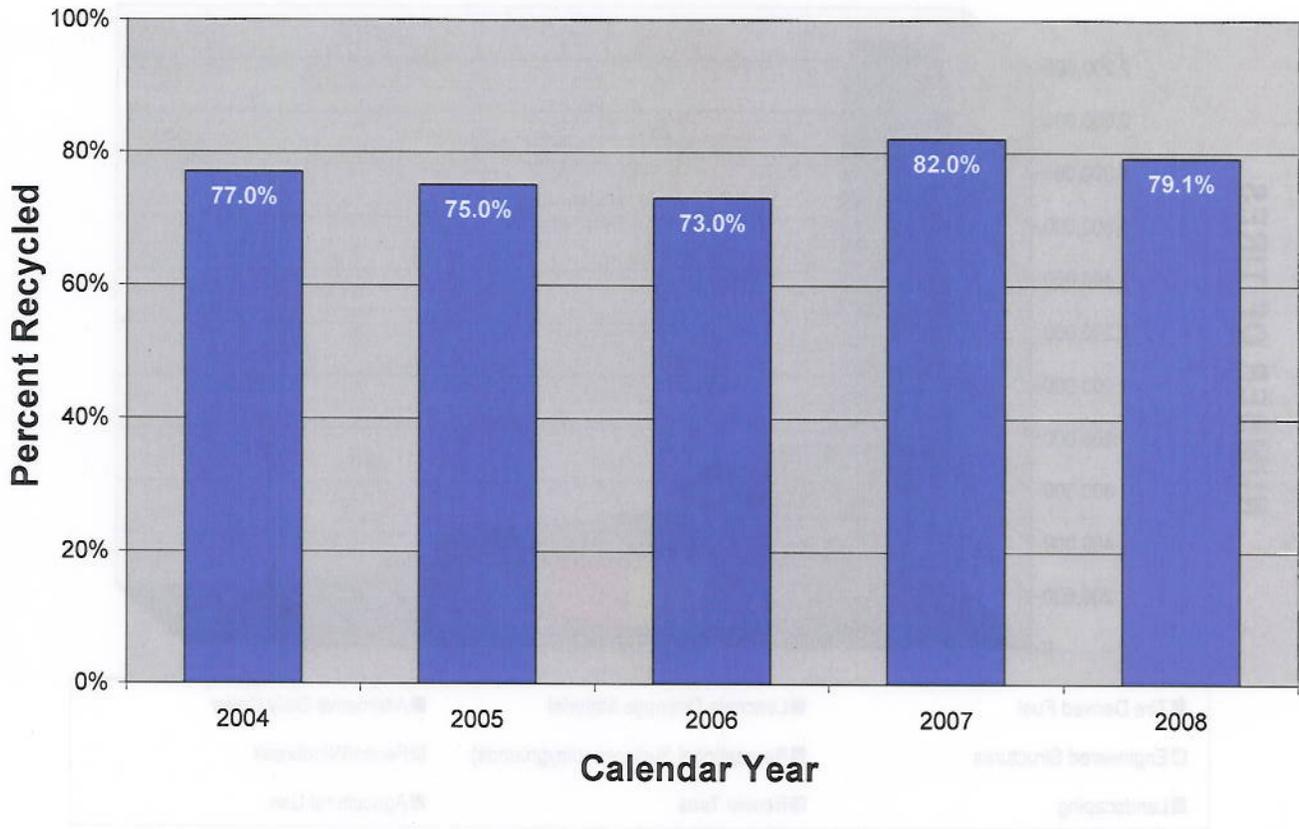


Figure 2 (above), provides an annual comparison of Colorado's waste tire recycling rates for the last five years. The recycling rates remained relatively consistent each year.

Based on the reported number of scrap tires received by waste tire facilities, about 5,158,468 waste tires were generated in Colorado during calendar year 2008. Considering Colorado's population of approximately 4,909,524 people, this estimated number is slightly greater than the accepted nationwide industry standard that predicts a tire generation rate of 1 waste tire/person/year.

The division gathers this information through annual reporting from waste tire collection, recycling and storage facilities. The division continued outreach efforts to educate tire facilities regarding their compliance and reporting responsibilities. Furthermore, the regulated community took significant strides to improve inventory accounting methods and reporting accuracy. Hence, the division believes this submittal is the most accurate waste tire recycling report to date.

Figure 3

2008 RECYCLED WASTE TIRE END USE MARKETS

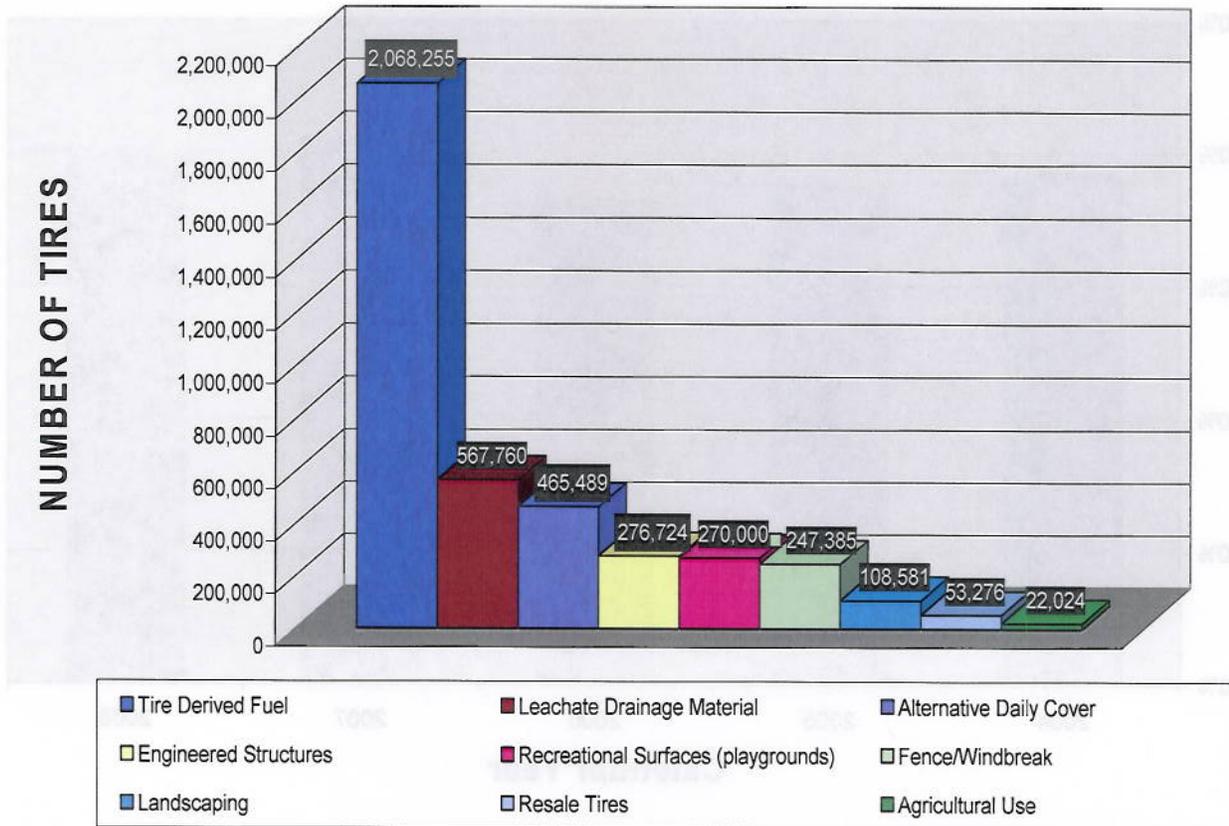


Figure 3 (above) captures the end-use markets for waste tires recycled during calendar year 2008. Of the nine end-use markets identified, the top five end-use markets included burning waste tires as tire derived fuel, the use of tire shreds as the leachate drainage layer in private and government-owned sanitary landfills, the use of tire shreds as alternative daily cover at sanitary landfills, the use of tires in engineered structures, and the use of tire shreds in recreational surfaces.

Figure 4

2008 WASTE TIRE INVENTORY

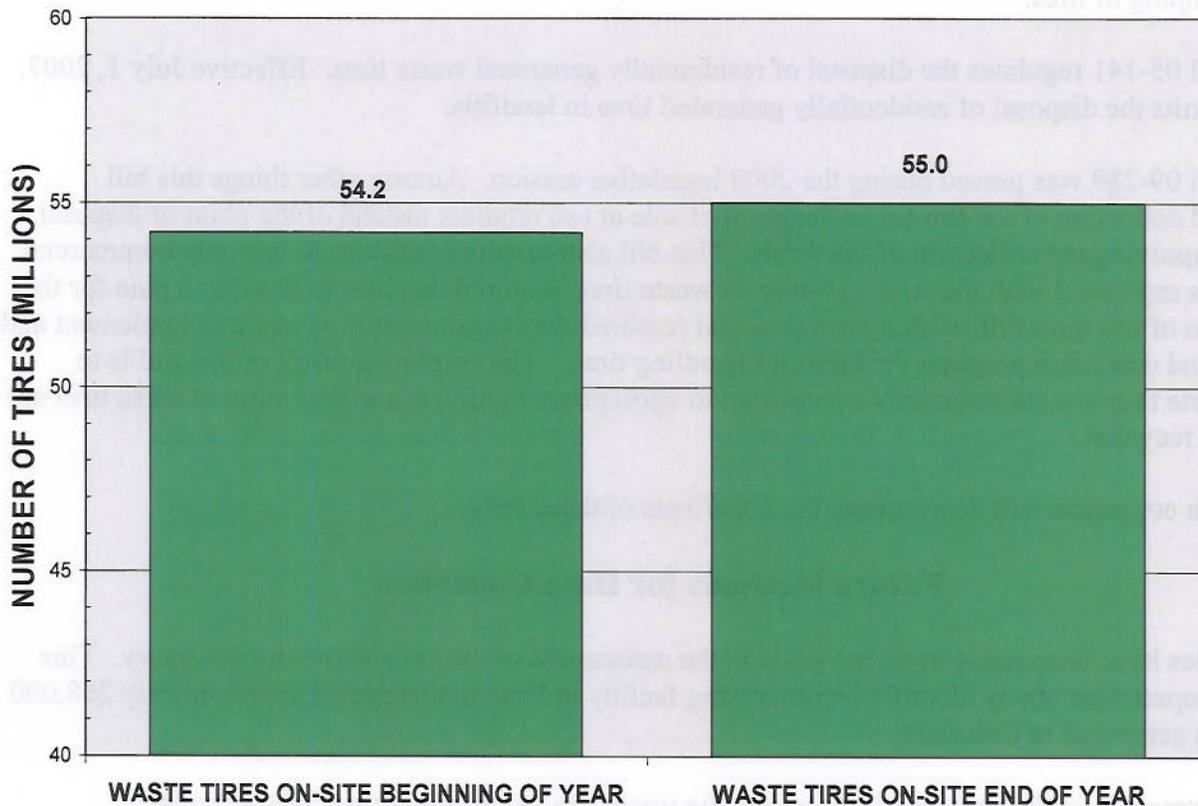


Figure 4 (above) reflects the number of waste tires in storage at designated tire facilities statewide at the end of calendar year 2008. The on-site waste tire inventory increased by 783,000 tires during the year. Some tire handling facilities in the state increased their storage inventories while awaiting further processing and development of end-use markets. Other tire facilities decreased their storage inventory by shipping tires offsite for reuse. The number of tires going into final end-use markets increased from 3,725,387 in 2007 to 4,080,749 in 2008, representing a 9.5% increase in the number of tires going to final end use markets over 2007. This increase represents a continuing trend of more waste tires going to end use markets in Colorado. There was an increase of 13.7% in 2007, and an increase of 1% in 2006 of waste tires entering end use markets.

In 2006, nearly 1,500,000 tires entered the Colorado's waste tire inventory. We observed a decline during 2007 to 830,000 waste tires entering waste tire inventory, and another decline to 783,000 tires entering waste tire inventory in 2008.

2005-2009 Tire Legislation

Two bills were passed during the 2005 legislative session that directly affected the management of waste tires in Colorado. The Waste Motor Vehicle Tire Hauler Act (HB 05-1126) requires the registration of commercial transporters of waste motor vehicle tires. The intent of this legislation is to ensure transportation and delivery of waste tires to proper storage and recycling facilities and to minimize the illegal dumping of tires.

Senate Bill 05-141 regulates the disposal of residentially generated waste tires. Effective July 1, 2007, this bill limits the disposal of residentially generated tires in landfills.

Senate Bill 09-289 was passed during the 2009 legislative session. Among other things this bill reallocated collection of the tire fee to the point of sale at tire retailers instead of the point of disposal, thereby improving the collection of the funds. This bill also required facilities to use only commercial tire haulers registered with the state to transport waste tires, required the state to develop a plan for the elimination of tire monofills within ten years, and required the Department of revenue to implement and outreach and education program for facilities handling tires. The combined result of this bill is to ensure waste tires are commercially transported to appropriate facilities, and that more of these tires are ultimately recycled.

Future data collection will demonstrate the net effects of these bills.

Future Methods for Data Collection

Great strides have been made in recent years in the assessment of the state waste tire inventory. This year the Department newly identified a processing facility in Utah that recycled approximately 268,000 waste tires generated in Colorado.

The Department is in the process of improving the waste tire facility reporting form to collect information related to the source of waste tires. One specific problem encountered this year was the influx of tires from out-of-state sources. We believe our waste tire facilities provide a safe disposal option for surrounding states where illegal tire piles are created due to lack of waste tire collection facilities. However, the reports provided to us by these facilities result in data that creates a seemingly inflated waste tire generation rate for our state. Our combined efforts of facility outreach and refining our reporting forms gives us confidence that each year we will improve the accuracy of waste tire generation within the state.

In the spirit of outreach and data clarification, the Department plans to create a multi-state workgroup to gain an understanding of the flow of waste tires in the region. The workgroup will include state officials responsible for collecting data concerning waste tires. Policies in surrounding states play a role in waste tire disposal in Colorado, and we hope to begin to model the flow of tires across state boundaries. In addition, we plan to coordinate the efforts of this Department, the Department of Local Affairs, and the Department of Revenue to develop an integrated, internally consistent approach to ensure the safe management and increased recycling of tires in Colorado.

Tire Fee - Statutory Basis and Distribution

Attachment B

