



Maryland Scrap Tire Annual Report Fiscal Year 2007

Prepared for the

Senate Education, Health and Environmental Affairs Committee
and the
House Environmental Matters Committee

January 9, 2008




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This is the Fiscal Year (FY) 2007 Scrap Tire Annual Report as required by Environment Article, Section 9-275(b), which is prepared for the standing committees of the Maryland General Assembly. The report addresses Maryland's Scrap Tire Program activities as undertaken by the Maryland Department of the Environment (the Department or MDE) and the Maryland Environmental Service (MES) from July 2006 through June 2007, and describes activities for the coming year.

FY 2007 Accomplishments and Results

- *Maryland generated **5.6 million** scrap tires in FY2007 that were managed in the following manner: **Recycled in Maryland (81%), Exported to other states for disposal (1%), and Used as fuel in Maryland (18%).***
- *A total of **7.5 million** scrap tires from all sources (including imports from surrounding states) were processed by Maryland licensed scrap tire facilities. Approximately 78% of these tires were recycled and 22% were used as supplemental fuel in cement plants and waste-to-energy facilities.*
- *Since the inception of the Scrap Tire Program in 1992, over **8.5 million** scrap tires have been recovered from **690 stockpile** cleanup sites.*
- *A total of **25 illegal scrap tire stockpile** sites were cleaned up in FY 2007 and approximately **11,390** tires were removed.*
- *Approximately **80%** of all stockpile site cleanups accomplished in FY 2007 were achieved by using administrative enforcement (without using the Used Tire Cleanup and Recycling Fund).*
- *A total of **178** new scrap tire licenses were issued.*
- *A total of **109** scrap tire licenses were renewed.*
- *At the end of FY 2007, there were a total of **3,156** valid Maryland scrap tire licenses.*
- *Almost **800** scrap tire site inspections/investigations were performed.*

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Financial Statement Summary*

The Fund, as authorized by the Environment Article, Section 9-275, provides the funding for administration of the Scrap Tire Program. In FY 2007:

- *The Fund generated revenues of:* **\$ 4,471,080**
- *Scrap Tire Program Expenditures by the Department and MES totaled:* **\$ (3,481,590)**
- *The Fund balance at the end of FY 2007 was:* **\$ 4,841,151**

**See Table VII for additional detail (Page 25).*

Due to the inheritance exemption discussed below and established by the Maryland Legislature, cost recovery will not be sought for some of the completed, ongoing, and planned scrap tire cleanup sites. This is expected to reduce the amount of Fund revenues in future years.

Legislative Update

During the FY2005 legislative session, the scrap tire law (Environment Article 9-276) was amended to exempt certain inherited scrap tire stockpile sites from cost recovery. The law exempts from cost recovery provisions those sites where tires were stored or disposed of prior to 1989, and where the owner:

- *is not in the tire business and did not allow or cause the tires to be stored or disposed, and*
- *obtained the property or an interest in the property by inheritance, bequest, or otherwise at the death of the transferor prior to January 1, 2000.*



Introduction

This report has been prepared for the *Senate Education, Health, and Environmental Affairs Committee and the House Environmental Matters Committee* as required by the scrap tire law to advise the Standing Committees of the progress the Department is making in implementing the law and ensuring the proper management of scrap tires in Maryland. This report is structured to include additional information about the program and future activities.

The Scrap Tire Recycling Act established a mechanism for the cleanup of scrap tire stockpiles and for the collection, transportation and recycling or processing of all scrap tires that are generated annually in Maryland. The

Act established the State Used Tire Cleanup and Recycling Fund (Fund) as the funding support for the Scrap Tire Program.

- ❖ The Department uses the Fund for administration of the program, licensing activities, stockpile cleanups, enforcement/compliance, remedial actions, and for the development and distribution of public information concerning scrap tire issues.
- ❖ Under the Department's authorization, the Maryland Environmental Service (MES) may use portions of the Fund to implement and oversee programs established as part of a Scrap Tire Recycling System and other projects that reduce, recover and/or recycle scrap tires.



Scrap Tire Stockpile Cleanups

The Departmental Scrap Tire Cleanup Objective for FY 2007 has been to initiate the planning and cleanup process within 30 days of discovery for 100% of illegal scrap tire stockpile sites identified during the year. During FY 2007, the Scrap Tire Program continued clean up and recovery of the remaining 1.7 million scrap tires identified in stockpiles at the end of FY 2005, along with those tires from 26 stockpiles newly identified during the year.

In order to achieve this goal, the following strategies were undertaken:

- The initial employment of administrative enforcement procedures to persuade property owners to remove stockpiles using their own resources;
- Use of the Fund to clean up stockpile sites only when administrative enforcement efforts were unsuccessful; and
- Targeting efforts toward eliminating all scrap tire stockpile sites.
- In instances in which administrative enforcement efforts are not successful in encouraging owner cleanups, the Department will file (or has filed) complaints with the court system for State access to these properties.
- The Department will seek cost recovery for expenses incurred for those sites determined to be non-eligible for exemption from those determined to be responsible parties.

Cleanup Accomplishments in FY 2007

- ❖ Since the inception of the Scrap Tire Program in 1992, over 8.6 million scrap tires have been recovered from completed and ongoing stockpile cleanup sites.
- ❖ During FY 2007, the Scrap Tire Program successfully completed Cleanup of 25 illegal scrap tire stockpiles, consisting of approximately 11,390 scrap tires. These sites were located in 11 of the State's 24 jurisdictions and ranged in size from 75 to 2,000 tires. (See Table I for a list of stockpiles completed during FY2007.)
- ❖ Most of the scrap tire stockpile cleanup success occurred without using the Fund. Eighty percent (80%) of all stockpile abatements completed in FY 2007 (20 out of 25 completed stockpile cleanups) used the administrative approach. The remaining 5 sites (all located on public lands) for which cleanup was completed in FY 2007 (20% of the stockpile abatements) were conducted using the Fund for cleanup activities.



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Morgan Scrap Tire Cleanup
November 11, 2007
An ongoing multi-year cleanup

Table I
Scrap Tire Cleanup Sites Completed in FY 2007

Site Name	County	Initial Number of Tires
Bryant/Elkton	Prince George's	2,000
3610 Conowingo Road LLC	Harford	1,616
Hoffman, Cole, Smith / Park Hall	Anne Arundel	1,200
White / Elkton	Cecil	1,000
Holt / Accokeek	Prince George's	998
Foard / Chesapeake City	Cecil	625
Kings / Annapolis Junction	Anne Arundel	600
Chaiken & Breckenridge / Accokeek	Prince George's	500
Olsen / Burrsville	Caroline	300
Shriver / Westminster	Howard	300
BW Conference of United Methodist/Accokeek	Prince George's	250
EJP, LLC / North East	Cecil	236
Harford County Investors Trust/Churchville	Harford	200
Ruffner / Mechanicsville	St. Mary's	200
Saval Foods / Elkridge	Howard	200
Wilson Street LLC / Havre De Grace	Harford	200
DNR / Severn Run State Park	Anne Arundel	150
DNR/Deep Creek State Park	Garrett	125
Front Street Properties, LLC/Kennedyville	Kent	112
Discount Auto Centers, LLC / Westminster	Carroll	103
DNR / Poolesville	Montgomery	100
DNR / Potomac-Garrett State Forests	Garrett	100
Fincham / North East	Cecil	100
Howard County / Ellicott City	Howard	100
Robinson / Hollywood	St. Mary's	75
TOTAL TIRES REMOVED:		11,390

Stockpile Cleanups Ongoing in FY 2007

The Department plans to complete or initiate the cleanup of the majority of known scrap tire stockpiles throughout Maryland. Unfortunately, numerous new stockpile sites are continually being identified for cleanup in Maryland. A total of 70 stockpile sites have been targeted for either continuation of cleanup efforts or completion during FY2007. (See Table II for details.) Following are the highlighted cleanups during FY 2007.

- ❖ **Garner/Brandywine scrap tire stockpile cleanup:** This is one of the few remaining very large scrap tire dumps remaining in Maryland. This stockpile consists of over one million tires. With the recent passage of legislation exempting inherited scrap tire sites, like this site, from cost recovery requirements, the owners granted the Department access for a State cleanup in FY 2005, and the Board of Public Works approved partial funding to initiate the cleanup. The project will be funded through the Used Tire Cleanup and Recycling Fund, and the property owners qualify for the inheritance exemption.
Status: The Maryland Environmental Service (MES) has initiated planning studies and permitting activities to perform scrap tire removal and cleanup processes. MES and MDE have been to the site numerous times with contractors, surveyors, and other Federal, State, and County government representatives. MES and MDE have also met with Prince George's County officials on several occasions regarding the permitting process. The permits Prince George's County requires for this process include

grading, sediment control, and forest stand delineation approvals. A State/federal wetlands permit may be required as well. MES hired consultants to survey and help delineate the property boundaries, topographic elevations, scrap tire limits, wetlands, forestry, etc. Cleanup activities are expected to begin in FY2009 and should conclude by the end of FY2010.

- ❖ **Boehm/Crownsville scrap tire stockpile cleanup:** This is an old commercial landfill that has 300,000 scrap tires partially buried in the ground. The project funding was approved by the Board of Public Works in FY2003.
Status: MES completed the initial planning of the cleanup process and was in the process of obtaining permits from State and local authorities for the next phase of the project. However, the property owner died in 2006, and the Department is now in the process of gaining legal access from the heirs and determining the status of the site with regard to cost recovery.
- ❖ **Morgan/Mechanicsville scrap tire stockpile cleanup:** This stockpile consists of an estimated 200,000 tires. The project will be funded through the Used Tire Cleanup and Recycling Fund, and the property owner qualifies for the inheritance exemption.
Status: The cleanup contractor has been chosen via the bid process. Cleanup activities began in November 2007 and should conclude by the end of 2008. (See picture of the work in progress on page 2).

St. Mary's County/Sandgates scrap tire stockpile cleanup: This publicly owned property is located at the old, closed St. Mary's County landfill.

Status: MES successfully removed approximately 80,000 scrap tires and restored the site during FY2006. Several storm events caused erosion damage to the site before slope stabilization was finished. Additional engineering controls were installed to address the erosion issues, and the final sediment and erosion control permit was released during FY2007, at which point the cleanup was completed.

Table II
Scrap Tire Stockpile Cleanups Ongoing in FY 2007

Site Name	County	Legislative District	Initial Number of Tires
Garner/Brandywine	Prince George's	27A	~1,000,000
Boehm/Crownsville	Anne Arundel	33	301,125
St. Mary's County/Oakville/Sandgates	Saint Mary's	29A	159,881
Morgan/Mechanicsville	Saint Mary's	29B	~200,000
Tyler Towing/Clarksville	Howard	13	50,000
Polvi/Brandywine	Prince George's	27A	50,000
Suraci Family LTD/Davidsonville	Anne Arundel	33B	45,000
Sachs/Linthicum	Anne Arundel	32	25,000
Schwartz / Eagle Harbor	Prince George's	27A	25,000
Mt. Airy Auto & Truck Parts, LLC/Mt. Airy	Frederick	4A	15,000
Era's Auto Salvage/Hurlock	Dorchester	37A	11,750
Howard 2 / Reisterstown	Baltimore County	04	10,000
Patuxent Research Refuge/Laurel	Anne Arundel	23A	10,000
Tucker/West River	Anne Arundel	30	10,000
Insley/Cambridge #2	Dorchester	37B	6,655
SOMCO Towing & Salvage/Westover	Somerset	38A	6,000
Kern/Joppa	Harford	35B	5,000
G & TL. Smith Contracting LLC/ Chesapeake Beach	Calvert	27B	5,000
Wise / Clarksville	Wicomico	13	4,500

Table II (Continued)

Site Name	County	Legislative District	Initial Number of Tires
Mizzell/Aquasco	Prince George's	27A	4,000
Joppa 420, LLC/Joppa	Harford	07	4,000
Trieschman/Elkridge	Howard	1A	4,000
Harpers/Elkton	Cecil	36	3,000
Waterview Hotel/Nanticoke	Wicomico	37A	2,800
Larchmont Ave. Dump/Capitol Heights	Prince George's	24	2,500
Bruso / Aquasco	Prince George's	27A	2,100
Pechin / Sudlersville	Queen Anne's	36	1,500
MacFarland/Ridgely #2	Caroline	37B	1,100
Ragan / Conowingo	Cecil	34B	1,000
Schillaci/Westminster	Carroll	5A	1,000
Reichert / White Hall	Baltimore	5B	1,000
Sherling/Fort Washington	Prince George's	26	1,000
Vlamis / Elkton	Cecil	36	1,000
Dwyer/Elkton	Cecil	36	900
Christian Homes & Buildings/Ijamsville	Frederick	3B	700
Ekee / Capitol Heights	Prince George's	24	700
Geipe / Jessup	Howard	13	700
Reid / Darlington	Harford	35A	700
Harris/Nanticoke	Wicomico	37A	600
Szymanski Rock Hall #2	Kent	36	600
Sockwell/Fairmount Heights	Prince George's	24	500
Decatur/Cumberland	Allegany	1C	500
Delano/Federalburg	Caroline	37B	500
Kramer/Nanticoke	Wicomico	37A	500
Lee / Conowingo	Cecil	34B	500
Roop / Rising Sun	Cecil	34B	500
Turner Transit/Capitol Heights	Prince George's	24	500
Munson/Waldorf	Charles	28	500
Battle / Brandywine	Prince George's	29A	400
EJP, LLC / North East	Cecil	34B	400
Mechanics Valley/North East #2	Cecil	36	400
Lofland/Sudlersville#2	Queen Anne's	36	400
Nicely / Middle River	Baltimore	7	300
Riggleman / McCoole	Allegany	11	300

Table II (Continued)

Site Name	County	Legislative District	Initial Number of Tires
St. Mary's / California	St. Mary's	29C	250
Zepp / Pasadena	Anne Arundel	31	250
CSX / Elk Mills	Cecil	36	200
CSX/Knoxville	Frederick	3B	200
Harris Construction / Elkton	Cecil	34B	200
Heath Salvage #2/Millington	Kent/Queen Anne's	36	200
KST, LLC / North East	Cecil	36	200
Susquehanna / Conowingo	Cecil	34B	200
Warner/Easton	Talbot	37	200
Hairston / Brandywine	Prince George's	27A	150
Kris-Leigh / Severn Park	Anne Arundel	33A	150
Comer / Darlington	Harford	35A	100
Dove / Pasadena	Anne Arundel	2	100
Gab Realty, LLC / Joppa	Harford	7	53
Bauer / Middle River	Baltimore	29A	40
TOTAL TIRES REMAINING TO BE REMOVED:			1,586,404

Sites listed above in bold represent State-funded cleanups.

Cost Recovery Actions

- ❖ The Department continues to use the services of the Attorney General's Office to handle scrap tire cost recovery actions (see Table III for details).
- ❖ To date, 134 cleanups have been performed using the Used Tire Cleanup and Recycling Fund.
- ❖ Cost recovery actions have been pursued against 36 scrap tire cleanup property owners initiated by the State and utilizing the Used Tire Cleanup and Recycling Fund.
- ❖ Cost recovery actions were not performed against:
 - 89 sites because they were on publicly owned property;
 - 6 sites because they qualified for the inheritance exemption;
 - 2 sites because the property owner died and the estate was closed before a cost recovery action could be completed; and,
 - 1 site because the cost to pursue the case was higher than the amount sought.
- ❖ To date, the Department has sought a total of **\$3,438,877.55** and has collected a total of **\$319,988.24** in cost recovery actions. Many of these cases are still in litigation. Some cases are on payment plans, with the property owners making monthly payments against their cleanup debts. Some cases were settled out-of-court for less than the amount originally sought.

- ❖ The Garner/Brandywine and Morgan/Mechanicsville sites, slated for State-funded cleanup efforts to continue in FY2008, both qualify for the inheritance exemption. Therefore, cost recovery will not be sought after cleanup efforts conclude on these sites.

**Oakville (St. Mary's County/Sandgates)
Scrap Tire Cleanup Site**



**Table III
Initiated Cost Recovery Actions Through FY 2007**

<i>Site Name</i>	<i>County</i>	<i>Cleanup Year</i>	<i>No. of Tires</i>	<i>\$ Amount Sought</i>
Hughesville/Underwood	Charles	1996	720,000	\$1,015,299.72
Western Commercial/Smithburg	Washington	1996	505,500	\$770,174.47
Oak Hill Realty/Easton	Talbot	1997	158,325	\$375,294.16
Lofland/Sudlersville	Queen Anne's	1996	120,000	\$226,083.74
Mack1,2,&3/Reisterstown	Baltimore	2000	44,087	\$184,451.09
Snyder/Calvert	Cecil	1996	129,526	\$151,266.00
Shorter/Waldorf	Charles	1998	129,626	\$137,902.00
Tull/Federalsburg	Caroline	1997	61,688	\$104,586.00
Johnson/Sunderland	Calvert	2003	10,735	\$91,123.00
Howard/Crisfield	Somerset	2002	21,505	\$86,395.00
Insley/Cambridge	Dorchester	2002	20,747	\$60,908.91
Hustle Tire/Ingleside	Queen Anne's	1998	26,852	\$48,437.69
Brown/Williamsport	Washington	1998	18,672	\$27,482.37
Dotson/Preston	Caroline	2000	24,000	\$26,403.70
Sproates/Golts	Kent	1998	6,825	\$26,118.75
Warfield/Bethlehem	Caroline	1997	14,338	\$24,596.24
Myers/Baltimore	Baltimore	2002	7,179	\$22,349.00
Williams/Vienna	Dorchester	2002	3,642	\$14,611.00
Elwood's Auto/Smithburg	Washington	2000	266,664	\$11,388.02
Husted/Crisfield	Somerset	2003	1,650	\$7,598.00
Clark/Choptank	Caroline	2004	2,007	\$5,495.00
Betts/Crisfield	Somerset	2002	922	\$3,877.00
Heath Salvage/Millington	Kent/Queen Anne's	2001	3,478	\$3,200.00
Thomas/Rhodesdale	Dorchester	2003	350	\$2,450.00
Joy & Morgan Developers/Temple Hills	Prince George's	2002	238	\$1,855.00
Truxon/Hillsboro	Caroline	2003	758	\$1,799.00
Goodyear/Elkton	Cecil	2003	1,013	\$1,200.00
McMannis/Cumberland	Allegany	1997	887	\$998.00
Carter/Queenstown	Queen Anne's	1998	1,117	\$982.00
Spencer/Golts	Kent	1997	230	\$950.00
Wilkinson/Oldtown	Allegany	2002	248	\$800.00
Holley/Collins Road	Somerset	1997	217	\$788.00
Lane/Princess Anne	Somerset	2003	300	\$750.00
King/Annapolis Junction	Anne Arundel	1999	0	\$533.19
Turner/White Hall	Harford	2003	500	\$500.00
Miller/Churchton	Anne Arundel	2004	16,000	<u>\$231.50</u>
Total Amount Sought (Through FY2006):				\$3,438,877.55

Scrap Tire Projects

MES has the primary role in the planning and implementation of scrap tire projects to promote the development of new technologies for recycling scrap tires while reducing, recovering and recycling scrap tires from stockpiles in Maryland.

Projects Initiated During FY 2007

Public School Playground and Athletic Field Construction (Statewide)

- The Department and MES are working with the Department of Education to construct and/or renovate several playground and athletic facilities using recycled tires and recycled tire materials. Since this ongoing program began, 72 schools throughout the State have participated in and benefited from the program.
- In past years this project was used to renovate playground facilities at public elementary and middle schools. During FY2007, the scope of this project was expanded to include athletic venues at elementary, middle, and high schools.
- The FY2007 project is funding refurbishment of 10 playgrounds, 3 athletic fields, and 2 running tracks using various types of recycled scrap tire products.

Citizen Drop-Off Day Project (formerly Amnesty Day)

- During FY2007, planning took place for the Scrap Tire Citizen Drop-Off Day project, which will

be executed as five regional one-day events held on Saturdays throughout April and May, 2008.

- Participating jurisdictions are Allegany, Calvert, Caroline, Carroll, Cecil, Charles, Dorchester, Frederick, Garrett, Kent, Queen Anne's, St. Mary's, Somerset, Talbot, Washington, Wicomico, and Worcester Counties.
- County residents are encouraged to participate in the project by delivering scrap tires using non-commercial vehicles to a primary event location chosen by each participating County.



- Residents are permitted to deliver up to 10 scrap tires per vehicle on Citizen Drop-Off Day free of charge.

Berlin Walking Path (Worcester County)

- The Department, MES, and the Town of Berlin are participating in a demonstration of the beneficial use of scrap tires in a community park by constructing a walking path utilizing ground rubber from scrap tires.
- Planning activities performed during FY2007 included developing specifications for the path design, hiring a landscape architect to design the path

based on the Town's specifications, surveying the site and delineating the layout of the walking path, ensuring adherence to Americans with Disabilities Act ("ADA") accessibility guidelines, and finalizing other details of the project.

- To meet ADA accessibility guidelines, the pathway will have a required minimum width of five feet.
- During FY2008, the Town will obtain any required permits, MES will procure all materials and services necessary for the project, and the path will be constructed, with an informational sign placed at the path entrance.

State Park Tire Playground Improvement Project

- This is the fifth year that MDE and MES will work with the Department of Natural Resources (DNR) to provide repairs and improvements to the ten previously constructed scrap tire playgrounds.
- This project is intended to promote recycling improvement projects in state-funded parks.
- Due to enormous popularity and high usage of these sites, coupled with the age of the equipment, many of these playgrounds are in need of repairs and improvements beyond normal maintenance.
- The intended playground repairs and improvements focused on the reapplication of ground cover (both tire and wood mulch), the repair/replacement of parts of

structures to ensure compliance with current guidelines, and the training of park staff to perform routine maintenance inspections and repairs. Wear mats were purchased and installed under swings and slides to limit groundcover kick-out and reduce weekly maintenance; structures were sealed to protect the wood and increase longevity; stone dust was applied to top-off existing ADA access paths; and licensed professionals conducted safety inspections of the completed repairs.

- Funding for project materials and services was provided through the Tire Fund.



- MDE, MES, and DNR provided all necessary labor to complete the improvements.

Rubber-Modified Asphalt Project (Talbot County)

- The Department and MES are working with Talbot County to install rubber-modified asphalt on County roads in several targeted high/diverse use areas.
- The County anticipates applying over 1,600 tons of asphalt for these projects, with amounts for potential municipal projects still under consideration.
- During FY2007, planning meetings were conducted to review potential County paving installations and time-line, discuss project parameters and specifications, develop a draft project schedule, and

determine current interest from local municipalities in project participation.

- During FY2008, MES, the County, and any participating municipalities will confirm project sites, procure rubber-modified asphalt production and installation services, develop project specifications, and initiate paving installations.
- MDE and MES will invite interested parties (contractors, SHA personnel, County and municipal personnel, etc.) to view the paving installation and will furnish informational signage for the sites.
- The design of this project is intended to increase discussion among contractors, County public works staff, and State Highway Administration (“SHA”) regarding rubber-modified asphalt and ultimately provide a climate for future opportunities within the State for projects utilizing this technology.

Projects Continuing from Previous Years

Rubber Modified Asphalt Project (Talbot County)

- MDE and MES, in conjunction with Talbot County, conducted a project to install a rubber modified asphalt product on a County owned roadway and parking lot, in lieu of traditional paving materials.
- On May 2 and 3, 2006, rubber modified asphalt was manufactured and installed on a section of Glebe

Road near the Talbot County Department of Public Works offices (the old Black & Decker Plant).

- In October 2006, approximately 1,330 tons of rubber-modified asphalt were manufactured and installed in the parking lot at the Talbot County Community Center.



- The asphalt contractor was David A. Bramble, Inc., located in Wye Mills, Queen Anne’s County, under the guidance of Rubber Asphalt Solutions (“RAS”) of Illinois who patented the paving process.
- Representatives from State Highway Administration, Anne Arundel County and various other interested parties toured the asphalt plant during production of the rubber modified asphalt and observed the application of the material on the parking surface.
- This project demonstrated and encouraged the use of rubberized asphalt products by public agencies and private contractors in Maryland.
- The rubberized asphalt is expected to show several advantages over traditional materials including:
 - Increased flexibility and durability, and
 - Decreased slumping, reflective cracking, and noise.

- This project was a physical demonstration of how to work with and install rubberized asphalt, and was intended to familiarize public agencies and contractors with how to utilize the product in an actual application.
- Talbot County has expressed enthusiastic approval of the project thus far and subsequently committed to participate in a rubber asphalt project during FY2008.
- Additionally, this project inspired rubberized asphalt paving projects that were fully funded without use of the Used Tire Cleanup and Recycling Fund.

Rubberized Natural Grass Athletic Field (Frederick County)

- MDE, MES, and Frederick County Community College participated in a demonstration of the beneficial use of scrap tires in the refurbishment of an existing athletic field.



Crumb Rubber Top Dressing

- The application involved topdressing the field with crumb rubber in three separate applications. The first application occurred in April 2005, the second in July 2006, and the third in July 2007.

- The crumb rubber application is expected to improve field conditions by decreasing compaction of the soil and increasing drainage capacity, thereby minimizing the impact of inclement weather events.
- This application provides an option for improving the quality of an existing grass athletic field by utilizing scrap tire derived crumb rubber and providing some of the same benefits of a synthetic field, (primarily increased play hours), for a fraction of the cost without requiring a complete renovation of the field or additional maintenance.
- During FY2007, field refurbishment was initiated. The contractor aerated the soccer field, applied the first crumb rubber application in July 2006, and applied the second crumb rubber application in August 2006.
- The first game was played on the refurbished field in September 2006. The field was in use throughout Fall 2006 and was reseeded in Spring 2007.
- The final crumb rubber topdressing was applied to the field in July 2007, after the newly planted grass had become established.



Rubberized Natural Grass Athletic Field

Green Roof Crumb Rubber Growth Media Project

- MES coordinated with Mr. Ed Snodgrass, a local green roof plant expert and owner of Emory Knoll Farms, and Dr. Steven Cohan of the University of Maryland to develop a growth media mix and design the laboratory testing to be performed.
- The test plot will be installed from October 2007 through April 2008, and media monitoring will take place from May 2008 through March 2009.

Development of Scrap Tire Chip Design Manual Project

- The Department, MES, and GeoSyntec Consultants have partnered to develop a guidance manual, for using scrap tire chips in various civil and environmental engineering applications.



- The purpose of the manual is to provide design guidelines that would be used as a practical reference tool by both regulators and engineers.
- Some scrap tire recycling applications that would likely be

included in the manual would be engineering properties of scrap tires, use as light weight backfill in retaining walls and trenches, drainage layers, gas collection media, and light weight aggregate in pavements.

- During FY2007, the draft manual underwent technical review by the Department.
- The final draft, technical review, and finalization of the manual are expected to be completed during FY2008.

Citizen Drop-Off Day Project (*formerly Amnesty Day*)

- The Scrap Tire Citizen Drop-Off Day project was executed as five regional one-day events held during Saturdays throughout September and October, 2006.
- Participating jurisdictions were Allegany, Calvert, Caroline, Carroll, Cecil, Charles, Dorchester, Frederick, Garrett, Kent, Queen Anne's, St. Mary's, Somerset, Talbot, Washington, Wicomico, and Worcester Counties.



- County residents were encouraged to participate in the project by delivering scrap tires using non-commercial vehicles to a primary event location chosen by each participating County.
- Residents were permitted to deliver up to 10 scrap tires per vehicle on Citizen Drop-Off Day free of charge.

Scrap Tire Projects Planned for FY 2008

- **Public School Scrap Tire Playgrounds and Athletic Fields Project - (Statewide)**
- **State Park Scrap Tire Project – (Statewide)**
- **Septic Tank Scrap Tire Chip Project – (Caroline County)**

Continuing Project Monitoring

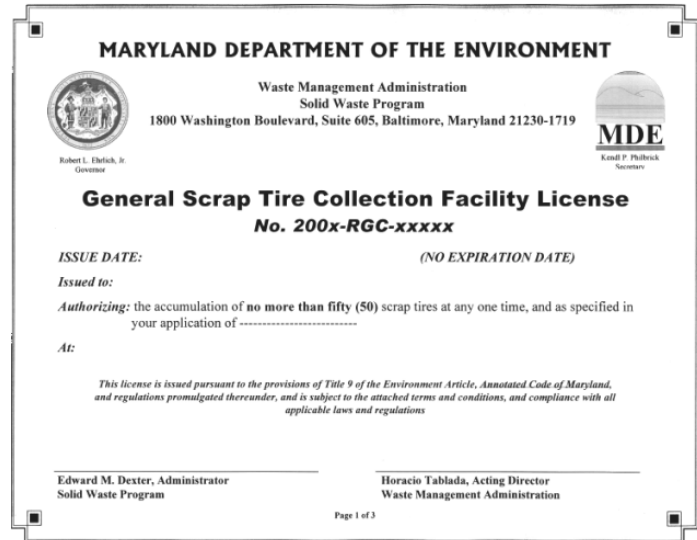
- Several scrap tire projects that were completed in previous years have ongoing monitoring programs to assess the suitability of these scrap tire applications and their success in meeting project goals.
- Monitoring continued for the following projects:
 - **Garrett County Landfill**
Garrett County
 - **Reich's Ford Landfill**
Frederick County
- At the completion of the project monitoring periods final reports will be prepared that summarize the data collected and conclusions reached.



Licensing

Under Maryland law (Section 9-228 of the Environment Article), the Department is required to regulate scrap tire facilities and scrap tire haulers.

- ❖ Facilities that collect or process scrap tires are required to obtain an appropriate license for their respective operations.
- ❖ Scrap tire haulers are also required to obtain licenses for their activities.
- ❖ This comprehensive licensing program allows for the efficient management of scrap tires from the point of generation through a licensed or approved transportation system to a licensed or approved scrap tire facility for the transfer, collection, or processing of scrap tires.



The Department issues the following types of scrap tire licenses:

- **Scrap Tire Recycler License:**
For activities that convert scrap tires into a marketable product.
- **Scrap Tire Collection Facility License:**
For operations that collect or accumulate scrap tires temporarily on a site and transfer scrap tires to licensed or approved scrap tire facilities. There are three categories of collection facility licenses:
 - **General License:** Sites with up to 50 scrap tires at any given time.
 - **Secondary License:** Sites with up to 1,500 scrap tires at any given time.
 - **Primary License:** Sites with more than 1,500 scrap tires at any given time.
- **Scrap Tire Hauler License:**
For a person who, as a part of a commercial business, transports scrap tires in the State.
- **Substitute Fuel/Tire Derived Fuel (TDF) Facility Approval:**
For operations that use scrap tires (whole or chips) to replace existing fuel sources.
- **Solid Waste Acceptance Facility Approval:**
For a permitted refuse disposal or acceptance facility that accepts scrap tires for collection or processing.

Licensing Accomplishments in FY 2007

- ❖ A total of 287 scrap tire licenses (178 new licenses and 109 renewals) were issued. (see Table IV).
- ❖ All (100%) of the license applications received were processed within the standard license application processing time of 60 days, exceeding the Department's goal of 90%. Approximately 47% of the license applications were processed within 30 days.

Table IV
Scrap Tire Licenses – FY 2007

Type	New	Renewed	Total Issued (FY07)	Total Valid Licenses
General Collection	62	N/A	62	1,555
Secondary Collection	41	58	99	778
Primary Collection	0	0	0	2
Recyclers	0	0	0	4
TDF Facility	0	0	0	3
Solid Waste	0	0	0	3
Haulers	<u>75</u>	<u>51</u>	<u>126</u>	<u>811</u>
Total:	178	109	287	3,156



Scrap Tire Markets and Market Development

Market Analysis

During FY 2007, the State's scrap tire processing capacity handled approximately 7.5 million tires generated from Maryland and out-of-state facilities.

- This represents a 12% increase from the previous year. (See Figure 1.)
- Out of the 7.5 million scrap tires processed, approximately 78% were recycled, as compared to 83% reported in FY 2006.
- Ninety-nine percent (99%) of the total (5.6 million) scrap tires generated in Maryland were recycled or used as fuel in Maryland. Approximately 81% of Maryland generated scrap tires were recycled and 18% were used as fuel in Maryland facilities during FY 2007. (See Figure 2.)
- Emanuel Tire Company (Maryland's largest scrap tire recycling facility) processed about 4.0 million tires in FY 2007.
- The Auston Tire Recycling facility in Harford County processed a significant number of tires and increased its capacity to 1.1 million tires, a gain of 1 million tires from FY 2006.

- The St. Lawrence Cement Company, in Washington County, increased its capacity to 1.2 million tires, a 103% increase from the reported quantities in FY2006.
- The MES scrap tire crumb rubber production facility in Baltimore, processed 591,099 tires, a 48% decrease from the reported quantities in FY2006. The operation was processing at a minimal capacity by the end of FY2007 and is expected to shut down entirely during FY2008. The facility is currently for sale.

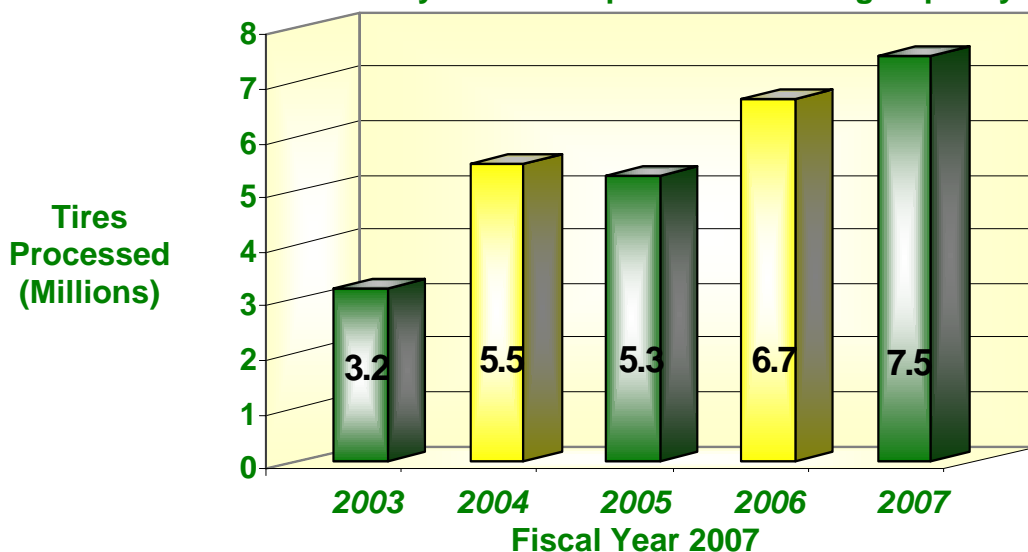
Maryland's Scrap Tire Flow and Destinations

All licensed scrap tire facilities and haulers are required to submit semi-annual reports to the Department. Reports must include:

- The origin and number of scrap tires received, collected, or processed at the facility.
- Identification of scrap tire haulers transporting the scrap tires, quantities in number or weight, and delivery facility information.

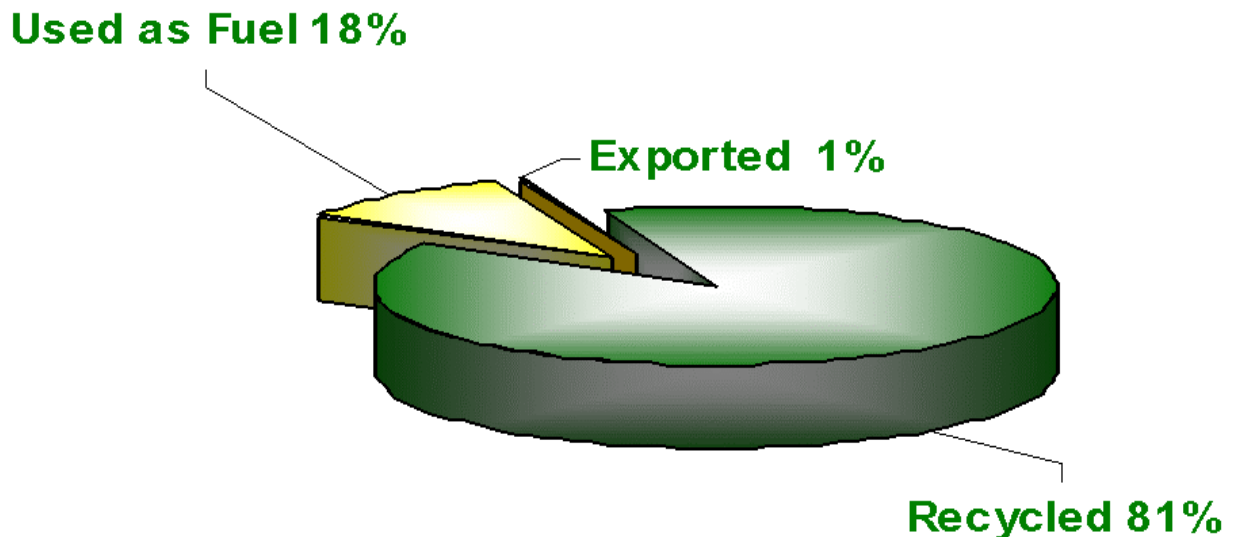
Figure 1

Maryland's Scrap Tire Processing Capacity



- During FY2007, Maryland processed 99% of all scrap tires that were generated in Maryland. The portion of scrap tires recycled in Maryland increased slightly to 81% in Maryland during FY2007 from 78% reported in FY2006. Thus, 4.5 million scrap tires that Maryland generated during FY2007 were recycled into marketable products. The existing operations increased their processing capacities and reported 3% more recycling than in FY2006. The newly established scrap tire facilities enhanced this trend during this year resulting in an additional 1 million scrap tires. This progress reflects the success of scrap tire recycling initiatives and markets that Maryland offers to its business community in accordance with the legislative priority established in 1991. This was due to several factors, including the successful execution of periodic Citizen Scrap Tire Drop-Off Day events, increasing public awareness of the benefits of recycling and proper disposal of wastes, the continued operation and expansion of existing recycling operations (including MES's crumb rubber manufacturing facility), and the addition of new scrap tire processing facilities, that have resulted in competitive tipping fees throughout the industry.
- The overall capacity of processing scrap tires (Maryland and out-of-state) increased by 11% over FY2006. This significant increase is due to a relatively constant rate of importation of scrap tires from out-of-state sources and a lesser exportation of Maryland scrap tires to out-of-state facilities. Only approximately 50,000 (1% of Maryland generated scrap tires) scrap tires were exported during FY2007, similar to the previous year. Maryland cement kilns continued to use scrap tires as a supplemental fuel and consumed a little over 1.2 million scrap tires during the fiscal year.

Figure 2
How Maryland-Generated Scrap Tires
Were Managed In FY 2007



- The overall data suggests an upward trend for Maryland scrap tire recycling and processing markets. Additions of new recycling facilities in future years would increase recycling or scrap tires and improve the marketability of tire products in the Mid-Atlantic States.
- Continued emphasis needs to be given to market development of scrap tire products and processed raw materials. The Department is continuing to work with the Maryland Environmental Service and the private sector on a project to develop a “best practices” manual to encourage engineers and designers to incorporate the use of tire-derived products into civil engineering projects. The manual will be able to advise the design engineer of possible uses for engineering materials derived from scrap tires, including the use of tire chips in drainage layers. The guidance will increase the utilization of these materials, and using these alternatives will help conserve natural resources, such as gravel and crushed stone.

Figure 3

**Scrap Tire Flow
FY 2007**

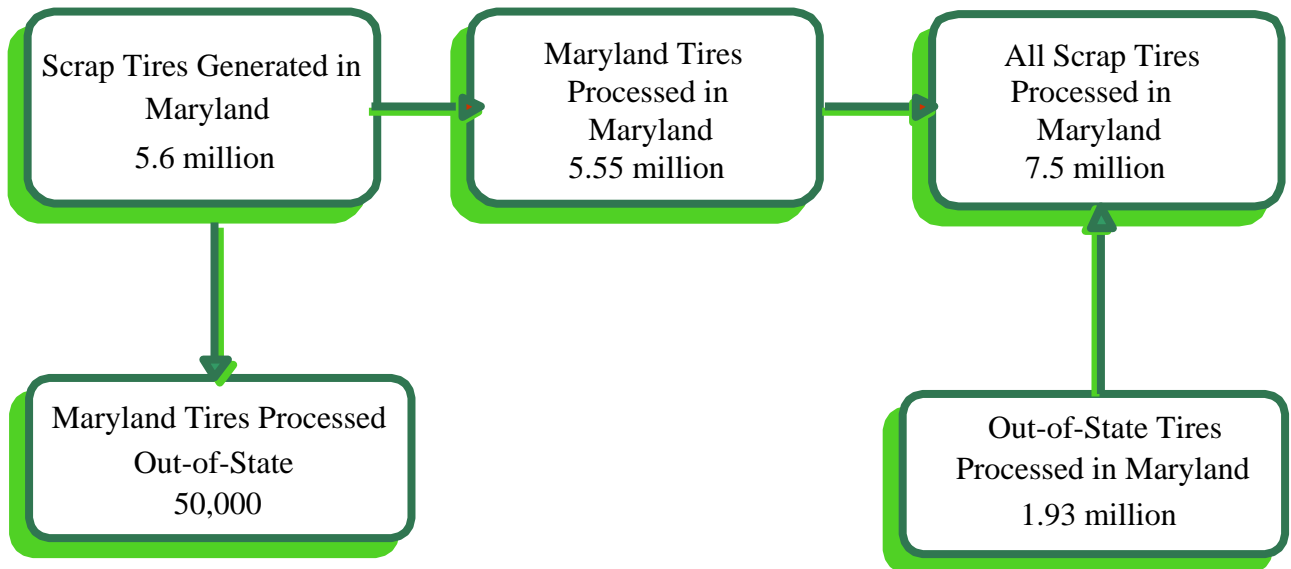


Figure 3 shows schematically the flow and processing of tires into and out of the State of Maryland.

Table V
Maryland Licensed Scrap Tire Processing Facilities

Facility Name/Type	Location Address	Operation	Telephone	Tires Processed FY-2007
Emanuel Tire Company/ Recycler	1300 Moreland Ave Baltimore MD 21216	The company has been processing scrap tires for the last four decades. The operation converts scrap tires into 1 to 2 inch size tire chips.	(410) 947-0660	4,018,522
Maryland Environmental Services Facility/ Recycler	4653 Hollins Ferry Rd Halethorpe MD 21227	The operation processes scrap tires into crumb rubber.	(410) 242-5039	591,099
K & K Tire, Inc./ Recycler	816 Oregon Avenue Linthicum MD 21090	Processes scrap tires into products.	(410) 636-2002	70,543
Auston Tire Recycling/ Recycler	1202 Pauls Lane Joppa MD 21085	Processes scrap tires into products.	(410) 335-1016	1,130,112
ESSROC Cement Corporation/ TDF	4120 Buckeystown Lime Kiln MD 21702	The operation utilizes whole passenger scrap tires as a supplemental fuel in its two cement kilns to generate 20 to 30 percent of the process heat needed to convert the raw material into cement.	(301) 874-8271	0
St. Lawrence Cement Co./ TDF	1260 Security Road Hagerstown MD 21741	The operation utilizes tire chips as a supplemental fuel in its cement kiln to generate up to 35 percent of the process heat needed to convert the raw material into cement.	(301) 739-1150	1,202,906
Lehigh Portland Cement Company/TDF	675 Quaker Hill Road Union Bridge MD 21791	Same process as ESSROC. Temporarily shut down operations due to installation of the new kiln.	(410) 386-1288	0
Harford Waste-to-Energy Facility/ Incinerator	1 Magnolia Road Joppa MD 21085	The facility processes up to 360 tons per day of municipal solid waste with a tire content of up to 72 tons per day. Steam is generated at the facility to generate electricity for Aberdeen Proving Ground Army facility.	(410) 679-6200	472,100
Wheelabrator Baltimore LP (BRESKO)	1801 Annapolis Road Baltimore MD 21230	The facility has been approved to burn scrap tires with municipal solid waste.	(410) 234-0808	2,000
Fort Detrick	393 Beasley Road Frederick MD 21702	The facility burns scrap tires with solid waste and medical waste.	(301) 619-2323	90
			Total:	7,487,372

Source: Submitted Scrap Tire Semi-Annual Reports

Compliance and Enforcement Activities

The goal of the Department's compliance and enforcement activities is to ensure that all of Maryland's licensed scrap tire facilities, scrap tire haulers, and scrap tire stockpiles are in full compliance with the scrap tire law, regulations and license conditions.

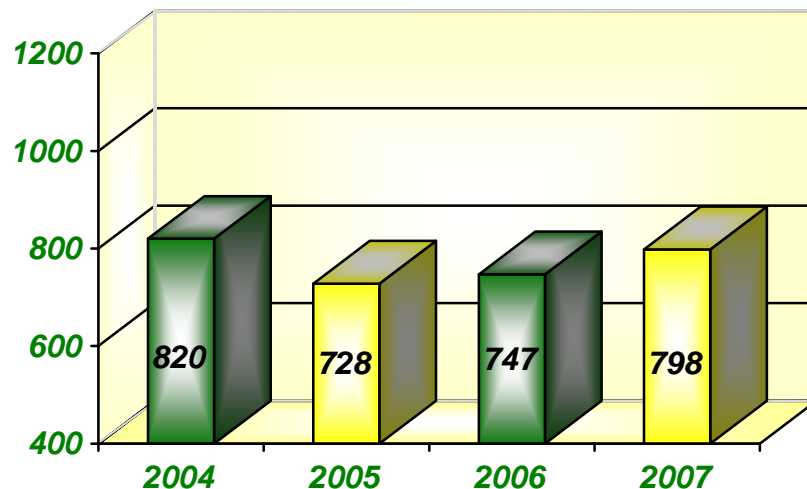
Strategies for Compliance and Enforcement Actions in FY 2007

- ❖ Continue to maintain the quality of compliance and enforcement activities and routinely perform site inspections and investigations.
- ❖ Maintain inspection, compliance assistance, and enforcement actions of scrap tire licensees to discourage illegal scrap tire stockpiles.
- ❖ Continue coordinating with the State Fire Marshal's Office to ensure that plans for tire recycling and storage facilities meet applicable fire prevention standards and have adequate provisions for fighting fires should they occur.
- ❖ Continue identification and cleanup of illegal scrap tire stockpiles.

Accomplishments in FY 2007

- ❖ A total of 798 scrap tire investigations and inspections were conducted.
- ❖ Scrap tire sites inspected included both licensed and unlicensed scrap tire facilities, as well as sites that have been designated for cleanup by the Department.
- ❖ There was an increase (6%) in the number of scrap tire inspections conducted in FY 2007 to 798 from 747 in FY 2006. The inspection coverage rate of 16% in FY 2007 remained the same as reported in FY 2006. All scrap tire stockpiles were among the sites that were inspected.
- ❖ In addition, the percentage of inspected facilities in significant compliance remained at 99% during FY2007 and a total of 57 significant violations were resolved. The number of compliance assistance actions rendered increased from 8 in FY2006 to 16 in FY 2007.

Figure 4
**Number of Inspections,
Audits, & Spot Checks**



- ❖ The Program continues to issue Notices of Violation to license holders who fail to submit required semi-annual reports and initiated a process of issuing administrative orders to those who did not respond to outstanding Notices of Violation. The Program issued 97 enforcement actions during FY 2007 including 82 Notice of Violations and 15 administrative orders with penalties, including 3 referrals to the Office of the Attorney General for possible criminal actions. The number of Notices of Violation issued in FY2007 represents a 48% decrease from the number issued in FY2006. This is a reflection of the Program’s success in increasing compliance from licensees during the reporting period, and in compliance assistance efforts.
- ❖ In FY 2007, 57 significant violations were resolved, as compared to 134 in FY 2006.
- ❖ Table VI displays the FY 2007 enforcement data as reported in the annual *MDE Enforcement Report*.

**Figure 5
Number of
Enforcement Actions**

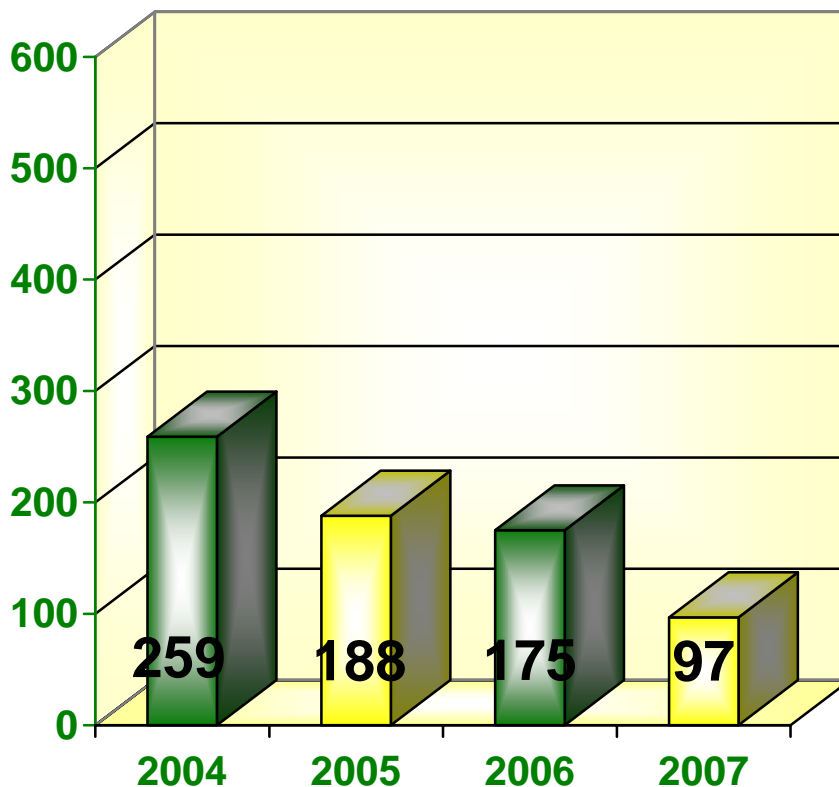


Table VI
Scrap Tire Compliance & Enforcement – FY 2007

	2007 Totals
PERMITTED SITES/FACILITIES	
Number of Permits/Licenses issued	287
Number of Permits/Licenses in effect at Fiscal Year End	3,156
OTHER REGULATED SITES/FACILITIES	
Stockpiles to be cleaned up	68
INSPECTIONS	
Number of Sites inspected	502
Number of Inspections, Audits, Spot Checks	798
COMPLIANCE PROFILE	
Number of Inspected Sites/Facilities with Significant Violations	5
% of Inspected Sites/Facilities with Significant Violations	1%
Inspection Coverage Rate*	16%
SIGNIFICANT VIOLATIONS	
Number of Significant Violations involving Environmental or Health Impact	0
Number of Significant Violations based on Technical/Preventative Deficiencies**	97
Number of Significant Violations carried over awaiting disposition from Previous Fiscal Year	106
Total	203
DISPOSITION OF SIGNIFICANT VIOLATIONS	
Resolved	57
Ongoing	146
ENFORCEMENT ACTIONS	
Number of Compliance Assistance rendered	16
Number of Show Cause, Remedial, Corrective Actions issued	0
Number of Stop Work Orders	0
Number of Injunctions obtained	0
Number of Penalty and Other Enforcement Actions	97
Number of Referrals to Attorney General for possible Criminal Action	2
PENALTIES	
Amount of Penalties collected:	\$8,100.00

*Coverage rate above is computed as the total number of sites inspected and dividing that by the total number of permits/licenses in effect plus the number of stockpiles to be cleaned up.

** All but 8 of these violations were a result of failure to submit required reports.

Used Tire Cleanup and Recycling Fund Fiscal Report

- ❖ Environment Article, Section 9-275, Annotated Code of Maryland, provides the Department with the responsibility for administering the Fund.
- ❖ The Fund is generated through the collection of an eighty cent tire recycling fee on the first sale of any new tire in the State.
- ❖ Table VII summarizes the scrap tire program expenditures for FY 2007.

Table VII
Maryland Used Tire Cleanup and Recycling Fund
FY 2007 Revenues and Expenditures

Fund Balance (7/1/2006):	\$5,711,261.33
Add Open Prior Year Encumbrances:	\$4,845,114.30
Adjusted Beginning Balance:	\$10,556,375.63
<u>FY2007 Revenues</u>	
Gross Used Tire Fees Revenues:	\$4,539,476.65
Adjustment for Comptroller's Fees:	(\$ 81,120.51)
Cost Recovery (Cash and Accruals):	\$ 12,724.20
Escrow Collected:	<u>\$ 0.00</u>
Total Revenue for FY2006	<u>\$4,471,080.34</u>
<u>FY2007 Expenditures</u>	
MDE Program Expenditures:	(\$1,019,249.10)
Stockpile Cleanups:	(\$ 7,370.00)
MDE Indirect Costs:	(\$ 422,733.97)
MES Projects and Administration:	(\$ 931,167.95)
Outstanding Encumbrance Payments:	<u>(\$1,101,069.48)</u>
Total FY2006 Expenditures:	<u>(\$3,481,590.50)</u>
Outstanding Encumbrances:	<u>(\$6,704,714.10)</u>
Fund Balance (6/30/2006):	<u>\$4,841,151.37</u>