STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

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GOVERNOR

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DIRECTOR

VIA E-MAIL

TO: Senate Natural Resources and Environmental Affairs Committee Members
House Great Lakes and Environment Committee Members

FROM: Jim Sygo, Interim Director

DATE: January 8, 2010

SUBJECT: Report on the Effectiveness of Part 169 in Encouraging the Reuse and Safe Storage of Scrap Tires

Part 169, Scrap Tires, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, requires that not later than three years after the December 29, 2006, effective date of the amendatory act that added Section 16911, the Department of Environmental Quality (DEQ) prepare a report on the effectiveness of Part 169 in encouraging the reuse of scrap tires and ensuring the safe storage of scrap tires. The report is attached for your review.

If you need further information, please contact George W. Bruchmann, Chief, Waste and Hazardous Materials Division, at 517-373-9523, or you may contact me at 517-373-7917.

Attachment
cc/att: Nathaniel Lake, Governor's Office
JoAnn Merrick, Chief of Staff, DEQ
Carol Linteau, Legislative Director, DEQ

# 2009
# TRIENNIAL REPORT

This triennial report is prepared for the standing committees in the Senate and the House of Representatives, as required by Part 169, Scrap Tires, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.

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December 29, 2009

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**December 29, 2009**

## EXECUTIVE SUMMARY

Section 16911(2) of Part 169, Scrap Tires, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), requires:

> Not later than 3 years after the effective date of the 2006 amendatory act that added this section [December 29, 2006], and every third year thereafter, the department shall prepare a report on the effectiveness of this part in encouraging the reuse of scrap tires and ensuring the safe storage of scrap tires. The report shall include recommendations for such changes to this part, including any further description of the use of money described in section 16908(2)(c) and (3), as the department finds necessary and appropriate. The department shall submit the report to the standing committees of the senate and house of representatives with primary responsibility for issues pertaining to natural resources and the environment.

This report was prepared by the Michigan Department of Environmental Quality (MDEQ), Waste and Hazardous Materials Division (WHMD), that oversees the Scrap Tire Program (Program), including grant, registration, compliance, and enforcement activities.

Overall, the Program has been very successful. Throughout the state, stockpiles of scrap tires have decreased, compliance rates have increased, and markets for scrap tires have increased. Behind the Program's success to date are: (1) continuing an appropriately funded Scrap Tire Cleanup Grant Program to address abandoned scrap tires and those collected prior to 1991 when Part 169 was enacted and (2) consistent enforcement of Part 169, which helps to ensure a level playing field for those voluntarily meeting Part 169 requirements. It should be noted that although markets for scrap tire material have continued to increase on their own with minimal governmental subsidies, the ongoing need for state funding for cleanup grants, compliance, and enforcement is clear.

As part of an ongoing effort to continuously improve the Program, the MDEQ has sought input from key stakeholders. In 2005 the MDEQ formed the Scrap Tire Work Group, an *ad hoc* group of stakeholders, to assist with developing recommendations for statutory amendments and other regulatory or policy changes concerning Part 169. The stakeholders identified proposed administrative and legislative changes to the Program including the creation of an ongoing Scrap Tire Advisory Committee (STAC). Part 169 was amended to address a number of the identified changes and to require the MDEQ Director to officially appoint members to the STAC. The STAC meets periodically and serves as a forum for both the MDEQ and stakeholders to identify and address challenges and opportunities in the Program as they arise.

## INTRODUCTION AND BACKGROUND

### *THE SCRAP TIRE PROBLEM*

Over 290 million scrap tires are generated each year in the United States.[1] Michigan contributes approximately ten million scrap tires annually to that waste stream. This is based on the May 2009 Rubber Manufacturers Association (RMA) Scrap Tire Market Report that, once again, validated the estimate of one tire per person per year as the number of scrap tires generated annually in the United States. However, the recent global economic downturn has resulted in a decrease in the total number of miles traveled and a resultant decrease in the new replacement tire market. Both of these factors suggest a decrease in the rate of scrap tire generation.[2] In the past, millions of these scrap tires were abandoned or illegally stockpiled each year on vacant lands and inner city back alleys. These illegal accumulations resulted in public health, environmental, and aesthetic problems for many communities, particularly from fires and mosquitoes.

Because most tire stockpiles contain mixtures of various tire sizes, amounts are normally expressed in terms of the passenger tire equivalent (PTE), which is equal to 20 pounds. For instance, a medium truck tire weighs approximately 100 pounds (5 PTEs) and occupies a volume equivalent to four to five passenger tires in a given stockpile. Because most abatement (cleanup) activities and other considerations are based on weight, the equivalency more accurately reflects future tire use, processing, and disposal.

Unregulated management of scrap tires in Michigan before 1991 led to an estimated 30 million tires located in stockpiles in Michigan by 1991, and more than 7.5 million additional scrap tires were being generated annually at that time. Tire retailers were seeking the lowest price for disposal of their scrap tires, and without regulation, tires were being stored in anticipation of the tires having a future value. The operating costs of these facilities were greater than the amount being charged to "dispose" of the scrap tires. With no funds for proper disposal or recycling, greater than 75 percent of the scrap tires were dumped or stored in unmanaged stockpiles.

Some experts no longer consider the question of "if" an improperly managed stockpile will catch fire but "when" it will.[3] As a general rule, it is five to ten times more expensive to remediate a tire fire site than to simply remove the tires before they catch fire. For this reason, in 2003, the United States Environmental Protection Agency (EPA) established a group of individuals representing various stakeholders to formulate a strategy for addressing scrap tires. The group established a recommended goal for mitigation of 55 percent of known stockpiled scrap tires by 2008.

The November 2006 RMA Scrap Tire Market Report ranked Michigan as tied with Ohio for being the third most improved state in the number of tires consumed by markets and

[1] Per EPA Web site information at the end of 2003: www3.epa.gov.
[2] Scrap Tire Markets in the United States, 9th Biennial Report, May 2009, RMA.
[3] EPA Scrap Tire Cleanup Guidebook, A Resource for Solid Waste Managers Across the United States, January 2006.

reduction of historical stockpiles, on absolute and per capita bases.[4] According to the May 2009 RMA Scrap Tire Market Report, there were about 128 million scrap tires remaining in stockpiles throughout the United States at the end of 2007. This is a reduction of over 87 percent since 1990, when the number of tires in stockpiles was estimated at 188 million. This reduction in stockpiles since 1990 is a major accomplishment of which the industry should be proud and exceeds the EPA stakeholders' 55 percent goal.[5] The remaining stockpiles are concentrated in seven states: Alabama, Arizona, Colorado, Massachusetts, Michigan, New York, and Texas. Alabama, Michigan, and New York have ongoing abatement programs. By the end of 2009, RMA estimated that over 85 percent of the remaining stockpiled tires would be in five states, Colorado, New York, Texas, Arizona, and Massachusetts.[6] Figure 1, page 7, shows the known regulated outdoor scrap tire collection sites in Michigan as of November 2009.

Aerial view of scrap tire shred pile before scrap tire cleanup grant awarded.

[4] Scrap Tire Markets in the United States, 2005 Edition, November 2006, RMA.
[5] It is noteworthy that the EPA provides no funding to support removal of abandoned scrap tires.
[6] Scrap Tire Markets in the United States, 9th Biennial Report, May 2009, RMA.

View of scrap tire shred pile after cleanup is completed.

Even given the great strides that have been made in cleaning up stockpiled scrap tires, issues remain with the illegal disposal of scrap tires. There are still problems in the larger urban areas of the state with scrap tires being dumped on vacant properties. This has been a particular challenge with the downturn in the economy and the rise in foreclosed properties. During tough economic times, residents are reluctant to pay for proper disposal. Likewise, the economic struggle has led to an increase in the demand by consumers for used tires that still have tread life. Demand for these tires has been great enough to result in criminal activity as tires are illegally taken from the storage areas of tire dealers and vehicle repair facilities by unscrupulous persons looking for used tires to sell. This demand has also led to a surge in used tire dealers. Tracking these retailers and ensuring their compliance with Part 169 has been challenging as they come and go frequently, move locations, and often do not notify the MDEQ of their change in status. It is unclear what is happening to the tires that have accumulated at these stores. The MDEQ intends to increase staff inspections at these types of stores in an effort to ensure compliance.

The demand for used tires has also led to some people wanting to come into a retailer or garage and sort through the scrap tires in order to pick out those with sufficient tread life to be sold in the used tire market. The problem with these “cherry-pickers” is that they are often not registered scrap tire haulers and are, therefore, not manifesting the tires. Several registered, compliant haulers rely on the resale of some of the scrap tires as “used tires.” The MDEQ has to rely on industry members informing MDEQ staff if someone is doing this and is not a registered hauler and/or not meeting the manifest requirements.

The economic downturn has also led to the closure of the only large whole tire fuel user in the State of Michigan. Holcim US, Inc. (Holcim), closed its cement manufacturing facility in Dundee on April 15, 2009. This facility used on average 2 million PTEs. Holcim processed all of the tires they had on-site before the closure. There was initially some concern regarding the fuel cost associated with transporting the scrap tires that would have been handled by Holcim to other processors. While other existing processors and end-users had sufficient capacity to absorb the tires, it was anticipated that the price of disposal for those

tires would increase as a result of higher transportation costs to truck the tires farther. To date, this appears not to have affected the tires, and they have been absorbed by current processors and end-users.

There has been an increased interest with the economic downturn in finding new, beneficial reuses for materials that were once just disposed of in landfills. It should be noted that whole motor vehicle tires have been prohibited from disposal in Michigan landfills since March 2004. While portions of tires (e.g., quartered tires, tire shreds) can still be disposed of in a landfill, the challenge continues to promote other management options, such as the use of scrap tires as raw materials for products or to produce energy. Several meetings of the Michigan Transportation Recycling Partnership, which consists of representatives from the Michigan Department of Transportation (MDOT), MDEQ, and Michigan Technological University, have taken place to discuss the beneficial reuse of seven common materials, one of which is scrap tires.

The Industrial Resources Council, a coalition of nonprofit industry associations, including the RMA, could potentially bring a presentation to Michigan in collaboration with the Green Highways Initiative. The presentation would include promoting the use of scrap tires as well as many other possible road materials. The presentation would be directed to all levels of local government including counties, cities, and townships.

The EPA, Region 5, is also trying to target each state for beneficial reuse training, with Michigan being one of the last states to be targeted. These two trainings could be combined to provide for the maximum benefit to those interested in this topic. The involvement of the MDOT would be critical to this discussion. The focus on scrap tire use in this context would likely not be on rubber modified asphalt, but on tire-derived aggregate for use as lightweight fill or weed control. However, the tire industry has expressed a desire to see increased use of rubber modified asphalt in Michigan. Rubber modified asphalt has been used in a number of small test projects in the state, but testing has yet to be completed. The MDEQ will consider encouraging applicants for Scrap Tire Market Development Grant funds to test the sites where rubber modified asphalt was used. There may be a shift in this arena at the federal level as the United States Congress is telling the state of California that they must use rubberized asphalt and other recyclables on their highways. It may become a requirement in the future to receive federal funds. There is also a federal program for Greening Highways. This is a paradigm shift as new considerations come into play: what needs to be done, costs, and how it should be done. The EPA recognizes six materials for green highways: tires, foundry sand, construction/demolition waste, coal ash, steel slag, and pulp/paper sludges.

Aerial view of tire piles before scrap tire cleanup grant awarded.

Aerial view of site after scrap tire cleanup grant completed.

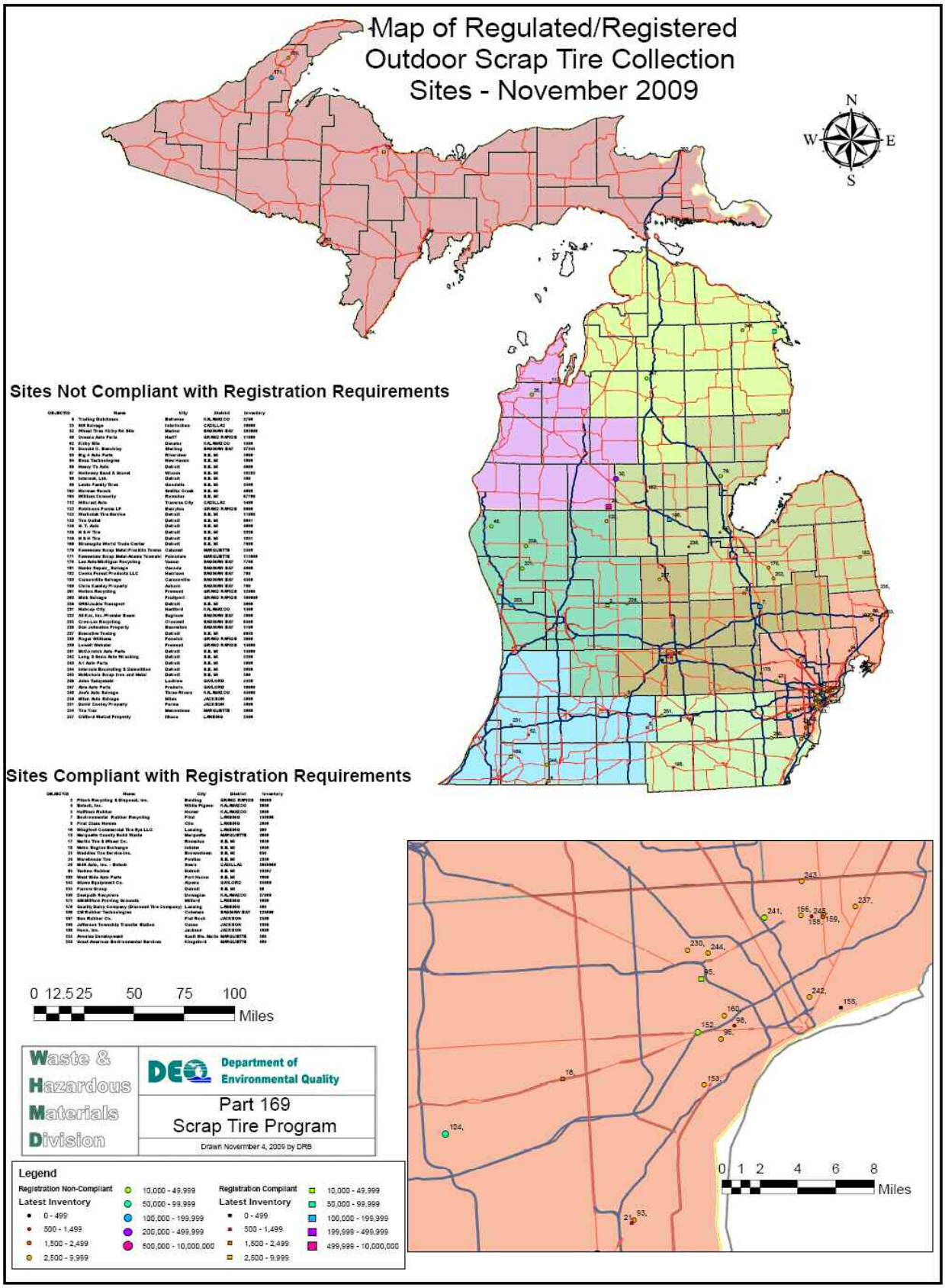



Figure 1: Map of Regulated/Registered Outdoor Scrap Tire Collection Sites (http://www.michigan.gov/documents/deq/deq-whm-stsw-GL-ScrapTirePiles-brochure-5-14-2004_441642_7.pdf)

## *MICHIGAN'S RESPONSE TO THE SCRAP TIRE PROBLEM*

Michigan's policy response to the scrap tire problem in the state is two-pronged: encourage market development and require proper management of tires. This approach was embodied in the Scrap Tire Regulatory Act, 1991 PA 133, which was recodified in 1994 as Part 169. The purpose of Part 169 is to help reduce illegal scrap tire accumulations and the public health and environmental concerns associated with these solid waste piles. Under this approach, the MDEQ's goals were to:

- Create regulatory incentives (such as a bonding exemption for sites that are in compliance for one year) to recycle tires and financial disincentives (such as higher bonding requirements and penalties for noncompliance) to improperly store or dump tires;

- Assist in the development of viable end uses and markets for scrap tires;

- Require acceptable management of scrap tires through registration and manifesting requirements for transporters and require proper storage (registration of sites, pile restrictions, mosquito control, and bonding requirements for storage according to the number of tires);

- Conduct site, hauler, and retailer inspections to assess management of scrap tires;

- Conduct appropriate enforcement with criminal and civil culpability for violations and prosecution of violations; and

- Allow private enterprise to establish costs.

Part 169 was substantially amended in July 2002. Amendments were made to the definitions, scrap tire hauler registration exemptions, bonding provisions, manifest requirements, grant provisions, and penalty provisions. The MDEQ did not fully support all of the July 2002 amendments to Part 169 because some were contrary to the goals of the Program and would present unique challenges from a regulatory perspective. As a result, Part 169 was again amended, effective December 29, 2006, based on the recommendations of the Scrap Tire Work Group (described later in this report on page 18). These amendments were developed in conjunction with, and support by, the MDEQ. These amendments made substantial improvements to the statute in support of Program goals. These amendments included:

- **Reduce regulatory burdens and encourage productive use of scrap tires by:**

    - Facilitating processing of scrap tires into high value materials by creating a new category of scrap tires designated a "commodity." Material qualifying as a commodity is largely exempted from regulation as a scrap tire.

    - Clarifying who meets the exemption from bonding and storage requirements as an "end user" by improving the definition of end-user. Also, clarifying the "scrap

tire processor" definition and eliminating the definition of "scrap tire recycler," which has caused confusion for the industry.

- Simplifying the definition of scrap tire hauler and exempting retreaders and persons hauling only commodities from hauler registration requirements.

- Simplifying the manifest requirements through allowing for the use of a consolidated load manifest for commercial businesses that service their own truck fleets or for retail establishments or scrap tire haulers picking up small numbers of scrap tires from multiple locations in the same load.

- Expanding funding eligibility to allow for research and development, capital expenditures, and other expanded areas under the Scrap Tire Market Development Grant Program.

- Specifying that tires can go to locations that have legally accumulated scrap tires below the regulatory threshold and clarifying whom a person can contract with for removal of scrap tires.

- **Encourage proper management of scrap tires by:**

  - Requiring that a collection site be in compliance with storage requirements to qualify for site registration.

  - Improving storage of tires at scrap tire collection sites by specifying that tires may only be stored in areas identified for that purpose on a map provided with the site registration application map and approved by the MDEQ.

  - Clarifying that shreds cannot be placed between piles. An exception is provided for commodities used to create a storage pad for, or access roads to, other commodities. The use of shredded tires between piles increases the fire danger present at collection sites and makes fighting a fire at a collection site more difficult. The open spaces between the tire piles are there to serve as fire lanes to segregate the tires into piles such that fire would not be as likely to spread between the piles.

  - Providing to the local fire chief the authority to determine that collection site access roads do not meet the Part 169 requirement to be accessible at all times to emergency vehicles.

  - Limiting the growth of unbonded collection sites. Previously, a scrap tire collection site could grow by 10 percent every year even though it was not bonded, provided it met certain storage requirements. However, the number of tires should not be increasing on a properly managed collection site since scrap tires that are brought in should be processed, if necessary, and leave the site for a market soon thereafter.

- Facilitating the proper use of portable shredding operations to clean up scrap tire piles by ensuring a tie to a properly registered collection site.

- **Support the public interest by:**

  - Providing the state with limited lien authority when state funds are used to clean up tire piles created illegally after the predecessor to Part 169 was enacted in 1991. This prevents the unjust enrichment of property owners from the public funds used to eliminate a problem that the landowner created and profited from.

  - Adding explicit inspection authority for the MDEQ to conduct inspections at reasonable times to enforce and administer Part 169.

- **Provide for the long-term success of the Program by:**

  - Extending the sunset on Program funding from 2007 to 2012. The Program is funded through a fee established in the Motor Vehicle Code, 1949 PA 300, as amended (MVC), of $1.50 for each motor vehicle title transfer. Continuing Program funding was needed to allow the MDEQ to meet the 2009 statutory deadline for cleanup of the pre-1991 scrap tires and continue efforts to clean up post-1991 scrap tires that pose a danger to public health, safety, welfare, or the environment. Continuation of funding also supports ongoing grants to develop markets for scrap tires and helps to ensure the proper disposal of the 10 million scrap tires generated annually in Michigan.

  - Adding a requirement for the MDEQ to report every three years on the effectiveness of Part 169 in encouraging reuse and ensuring safe storage of scrap tires.

  - Adding a requirement for the MDEQ Director to appoint the STAC to advise the MDEQ on the required report, the relevance of national standards or specifications for commodities, and other issues.

## *THE CHANGING REGULATORY LANDSCAPE*

Over the past several years, the industry has noted a number of issues that reflect changes in the regulatory landscape for scrap tires throughout the United States. Many of these have to do with changing views on waste materials, viewing what were once considered wastes as valuable resources, and the nation's efforts to become self-sufficient in the energy arena.

### *Biomass Tax Credits*

At the federal level, recent changes proposed to the United States Internal Revenue Service (IRS) energy production tax credit rules regarding biomass may have a significant impact on Michigan's ability to sustain long-term markets for tire-derived fuel (TDF). Facilities using TDF prefer fuel from scrap tires because it provides a higher heating value and burns more efficiently than other types of fuel. Some facilities also rely on the use of TDF to reduce

nitrogen oxides.[7] A major factor limiting consistent and even increased levels of TDF use is the cost and quality of the fuel blended with TDF.

Enactment of the federal Energy Policy Act in August 2005 led to the USA Biomass Power Producers Alliance seeking clarification of several ambiguous points in the tax credit for existing and new open loop biomass plants. Title 26 of the Internal Revenue Code (IRC), Section 45, allows taxpayers a credit for electricity produced from qualified energy resources, including any solid, nonhazardous, cellulose waste material or certain waste material that is segregated from other waste materials (this definition was expanded in the Energy Policy Act of 2005). Businesses that qualify for certain target federal income tax credits commonly broker them to other taxpayers who could better use them. One clarification sought was how the combustion of "nonqualifying" fuels would be treated in the calculation of the tax credit. A large majority of existing biomass plants use some percentage of nonqualifying fuel, typically only a few percent of the total. TDF is apparently a nonqualified energy resource.

In early 2006 several "biomass" facilities were preparing to sell the 26 IRC, Section 45, credits to other taxpayers and wanted to strengthen their tax position in the credits. These facilities requested a private letter ruling from the IRS to clarify how the combustion of nonqualifying fuels is treated in the calculation of the credit. Although a private letter ruling is generally only binding on the taxpayer who received the ruling, it does evidence the IRS's thinking on the matter. A "biomass" combustion facility that was using TDF as a supplemental fuel may stop using the TDF when the private letter ruling is issued for fear that they would lose the credits.

The RMA submitted a "white paper" to the IRS explaining the factual and legal background of the use of TDF at biomass facilities. The white paper sought to have the IRS address the issue by issuing a comprehensive IRS notice (instead of by private ruling), which would interpret 26 IRC, Section 45, as not prohibiting an otherwise qualified taxpayer from utilizing the tax credit for a biomass facility that also uses TDF.

Several of the power plants in Michigan that burn TDF have stopped or are contemplating stopping use of TDF as a result of the biomass energy tax credit issue. This stems from the fact that the IRS has not promulgated production tax credit rules in writing regarding biomass fuel alternatives such as TDF. The IRS has, however, verbally communicated to some of the TDF users that blended fuels would not be eligible for this tax credit. This has the potential to impact the use of over four million tires at just the two power plants the MDEQ is aware of that intend to stop burning tires and get the tax credit and has the potential to impact other facilities, further reducing the number of tires consumed. This situation would undermine TDF facilities as viable long-term markets. Burning TDF at sustainable levels is important to maintaining scrap tire consumption in Michigan.

One goal of Michigan's Program has been to develop long-term sustainable markets in Michigan for Michigan tires. There is a need for Michigan to have market and processing capacity for the scrap tires generated within the state. Michigan currently has remaining stockpiles of scrap tires that must also be addressed. Adequate scrap tire processing capacity and markets in Michigan remain a primary objective. The MDEQ requested that the

[7] Scrap Tire Markets in the United States, 9th Biennial Report, May 2009, RMA.

IRS reconsider its proposed interpretation regarding the eligibility of blended fuels using TDF to receive the biomass energy tax credit in April 2006.

On September 26, 2006, the IRS released an interim guidance notice (2006-88) regarding the tax credit under 26 IRC, Section 45, pending issuance of a treasury regulation ("Interim Guidance"). The Interim Guidance states: "Electricity produced from open-loop biomass [facilities] that is cofired with fuels other than fossil fuels may qualify for the § 45 credit." The Interim Guidance allowed facilities combusting biomass along with other fuels to take the tax credit on a sliding scale, depending on what percentage of biomass they use. The IRS did not define "other fuels" and the industry did not want to assume TDF was included in the term "other fuels," and the industry through the RMA, sought confirmation that TDF was included as "other fuels" in this guidance. As of the writing of this report, RMA has not indicated that they have received a response from the IRS concerning this issue.

At the state level, several bills have been introduced under the 21st Century Energy Plan. Under the Clean, Renewable, and Efficient Energy Act, 2008 PA 295, TDF does not qualify as biomass. Facilities using both it and biomass have to discount the TDF material. TDF will be discounted as a nonbiomass renewable source (similar to what the IRS has agreed to on production tax credits at the national level). There should not be any additional impact on TDF as a result of energy policy decisions in Michigan.

*EPA Positive Statement on TDF*

In 2005 the EPA posted its position statement on TDF on its Web site.[8] The statement included: The EPA supports the highest and best practical use of scrap tires in accordance with the waste management hierarchy, in order of preference: reduce, reuse, recycle, waste-to-energy, and disposal in an appropriate facility. Disposal of scrap tires in tire piles is not an acceptable management practice because of the risks posed by tire fires, and because of the use of tire piles as a habitat by disease vectors such as mosquitoes. The use of scrap tires as TDF is one of several viable alternatives to prevent newly-generated scrap tires from inappropriate disposal in tire piles and for reducing or eliminating existing tire stockpiles. The EPA testing has shown that TDF has a higher British thermal unit (BTU) than coal. Based on over 15 years of experience with more than 80 individual facilities, the EPA recognizes that the use of TDF is a viable alternative to the use of fossil fuels, and supports the responsible use of TDF in Portland cement kilns and other industrial facilities, provided the candidate facilities have developed a TDF storage and handling plan, and have secured a permit for all programs and are in compliance with all requirements of this permit.[9]

*EPA Notice Concerning Revisions to the Definition of Solid Waste and the Implications for TDF*

The EPA is looking at the definition of solid waste and its impact on air quality. The MDEQ provided comments on the proposal on February 2, 2009. Michigan promotes the beneficial use of site- or source-separated materials, including the burning of certain materials for energy recovery. The MDEQ expressed concern that future federal regulations defining solid waste under the federal Resource Conservation and Recovery Act for purposes of

[8] Scrap Tire Markets in the United States, 9th Biennial Report, May 2009, RMA.
[9] See EPA TDF Web site www3.epa.gov.

nonhazardous waste regulation for purposes of regulation of air emissions from combustion under the federal Clean Air Act could have substantial unintended consequences. On the one hand, if the result of new regulations is more stringent air emissions standards on the use of nonhazardous secondary materials as fuel, this form of utilization may decline due to increased costs, especially in states like Michigan where landfill disposal costs are relatively inexpensive. On the other hand, new regulations that exempt certain nonhazardous secondary materials from the definition of solid waste may undercut existing state beneficial use programs.

The issue concerning scrap tires comes down to whether they are seen as a waste material or a fuel. At the federal level, this may come down to the definition of "abandonment." However, cleanup tires and abandoned tires are the same material as "live" or newly-generated scrap tires, and they have the same value. This definition should be looked at on a case-by-case basis. The RMA has also submitted comments on this issue. TDF came out as fuel for current generation tires, and the RMA made the case that stockpiles go through the same process as the current generation tires and should also be considered as fuel. There is an equal chance on which way the decision will go. The RMA estimated that the EPA decision on this issue should become public in six months to 1½ years. The proposed rule change could potentially have effects on the beneficial reuse program and the use of materials for waste-to-energy in Michigan.

*Alternative Treatment Technologies for Energy Production*

Proposals for alternative technologies related to energy production are on the rise due to the state and federal emphasis on energy independence for the United States. These alternative technologies include pyrolysis (the use of heat in the absence of oxygen to decompose a material), gasification, microwave, plasma arc, and other alternative technologies. These processes do work in the laboratory or on a small scale but have not been proven to be economically viable on a commercial scale anywhere in the United States at the present time. RMA stated in the May 2009 RMA Scrap Tire Market Report that it is not aware of any commercially viable tire pyrolysis facilities operating in the United States.

*Studies Regarding the Environmental Health and Safety of Using Tire Material*

Studies performed by the states are very useful on the national level when looking at environmental health and safety of using tire material in different applications. One example of this is a report published by California that studied the health impacts of using ground tires as playground cover. The report showed no impact. Efforts should be made to clear up misconceptions that can surround the use of tire material in products. Generally, each state needs to do this on their own and can do so by reviewing existing literature and coming up with and publishing their findings. If there are problems or industry concerns specific to Michigan, Scrap Tire Market Development Grant funds could potentially be set aside for that use.

*Use of Scrap Tires and Tire Sidewall Rings to Secure Animal Feed*

Covering silage in bunker storage is a common agricultural management practice. The cover, secured by tires or tire sidewalls, helps preserve forage quality and minimizes silage leachate (seepage) and runoff. The tires or tire sidewalls used for this purpose also need

proper management to reduce risks from pests, fires, and pollution. A single tire can support the breeding of thousands of mosquitoes every year. These mosquitoes can carry and transmit diseases like West Nile Virus and encephalitis. Farmers can reduce pest problems by converting from whole tires to tire sidewalls that do not hold stagnant water. If farmers use whole tires to secure stored feed, they are limited to 3,000 tires, unless they obtain MDEQ approval for the use of a larger number of whole tires. It has come to the MDEQ's attention that there may be a large number of farms that are using more than the amount of whole tires allowed by Part 169. There is no limit on the number of tire sidewalls for feed storage. While many farms use tire sidewall rings/slabs, which are exempted under the definition of commodity, this exemption is not completely clear in statute. The MDEQ worked with the Michigan Farm Bureau, Michigan Department of Agriculture staff, and the STAC to clarify the use of scrap tires and sidewall rings for this purpose through development of a question and answer document. For those farms that wish to continue to use whole tires, the MDEQ suggests that the tires be drilled in four locations to promote water drainage. The drilled holes (minimum one-inch diameter) should be located where the tread meets the sidewall, with two holes near each sidewall. This procedure allows the tire to drain regardless of which way it is placed on stored feed. Whole tires and tire sidewalls on the farm should be stored properly. While Part 169 sets the requirements for the storage of more than 3,000 whole scrap tires used at feed storage locations, the MDEQ recommends that these storage requirements also be used for storing less than 3,000 scrap tires and tire sidewalls used for feed storage. If a farm needs more than 3,000 whole scrap tires for the purpose of securing stored feed, they would need to explain why and would need to seek an approval from the MDEQ through the Designation of Inertness process under Part 115, Solid Waste Management, of the NREPA, and meet certain storage requirements and mosquito control requirements. The STAC also discussed the merits of including a grant program for helping encourage farms to get rid of whole tires and move to sidewall rings to secure feed.

*Ontario Used Tire Program*

Ontario is the last province in Canada to create a Tire Stewardship Program. Ontario estimated that is has 2.5 million scrap tires in stockpiles and that the number would have been larger without processors from surrounding areas (New York, Michigan, and Quebec) absorbing the excess tires that Ontario could not process through the 14 processors in the province. The objective of this Tire Stewardship Program is to build legitimate processor capacity and markets other than TDF in Ontario and ensure sufficient feedstock for the markets. The intent is to keep the tires and material in Ontario via expanded producer responsibility. This includes legislation to shift the responsibility from the government to the producer and to shift the cost. It does not allow for the fees to be used for disposal of tires in a landfill until all other options have been exhausted. Initially, there is a $5 per tire fee collected at the point of wholesale sale of the tire. This fee will be looked at and adjusted on an annual basis as, per statute, the steward of the tire cannot be charged more than the cost of taking care of the end-of-life product. Consumers cannot be charged any additional fees. Haulers do not charge the retailer; rather the fees are collected by the Ontario Tire Stewardship, an oversight group. The Stewardship pays for processing, resulting in incentives or subsidies, that may impact cross-border markets. However, the Ontario program does not allow the tires to be used as TDF. It is unclear at this time if they will allow tires to go to TDF in other provinces or in the United States. There are questions as to what impacts this Tire Stewardship Program will have on the surrounding United States ground rubber markets. One concern is that the subsidy for crumb rubber will lead to a glut in the

United States market as Ontario producers could make and ship crumb cheaper than it could be made in the United States. Another concern is for the long-term effectiveness of subsidies on market sustainability in Ontario. The Stewardship intends to fully implement the Tire Stewardship Program by April 2010. Ontario has a goal to clean up its stockpiles by the third year of having the Tire Stewardship Program in place and to review the Tire Stewardship Program on an annual basis.

***SCRAP TIRE PROGRAM***

Part 169 creates a Program consisting of financial incentives (Scrap Tire Cleanup and Market Development Grants), registration of scrap tire haulers and collection sites, financial assurance, and compliance (inspection and enforcement) activities. The objectives of the Program are:

- Ensuring the proper and environmentally protective management of scrap tires through disposal or reuse;

- Ensuring that adequate bond funds are available and posted by the collection sites to bring collection sites into compliance and conduct cleanup activities if necessary;

- Providing grants for the removal of certain scrap tires from scrap tire piles located throughout the state;

- Providing grants for increasing markets for scrap tires;

- Providing grants for the development of new or increased uses for scrap tires; and

- Promoting market development to ensure proper outlets for scrap tires are available.

The Program is funded by a tire disposal surcharge of $1.50 on each motor vehicle certificate of title issued and is collected by the Secretary of State pursuant to Section 806 of the MVC. The administrative costs to the Secretary of State associated with collection of the fees, approximately $70,000 per year, are covered by the fees. The balance of the fees is deposited into the Scrap Tire Regulatory Fund established pursuant to Section 16908 of Part 169. Amendments to the MVC in December 2006 extended the sunset for the Program funding to December 31, 2012. The tire disposal surcharge fee was increased from $.50 to $1.50 in July 2002 and currently remains at $1.50. The fee generates revenue of $3.5-$4 million per year. These fees provide funding for Scrap Tire Cleanup and Market Development Grants and administration of the Program.

Part 169 provides for 11 full-time equivalent positions (FTEs) working in the Program. The MDEQ currently splits these 11 FTEs among ten staff in the eight District Offices carrying out inspection, compliance, and registration activities; three staff in the Lansing central office issuing registrations, overseeing scrap tire grants, and providing overall Program coordination; one staff person coordinating enforcement actions; and staff in the MDEQ, Office of Criminal Investigations (OCI), conducting criminal investigations.

## *COMPLIANCE AND ENFORCEMENT*

Each year, the MDEQ discovers additional regulated collection sites and develops more accurate figures on scrap tire stockpile inventories. Most of the newly-identified sites are not active and often not in a visible location. Therefore, as expected, the documented number of scrap tires stockpiled at identified noncompliant sites has increased since 1991. Tires were also accumulated in buildings and trailers in order to avoid the larger outdoor tire storage area collection site bonding requirements. Many of these sites are not immediately visible as tire stockpiles. The number of tires reported as being removed may also change over time due to improved tracking and data quality methods.

In 2004, 127 collection sites containing 11.9 million scrap tires were found by the MDEQ to be in noncompliance. Of these, approximately 6 million were accumulated prior to 1991. In November 2009 there were 72 collection sites in noncompliance containing an estimated 664,000 scrap tires. Approximately 388,000 of these were accumulated prior to 1991. Part 169 draws several distinctions between tires accumulated prior to 1991--when indiscriminate storage of scrap tires became illegal under the predecessor to Part 169--and tires accumulated after that date. These distinctions are discussed in this report.

Scrap tire stockpile abatement is a technical, economic, and political challenge. Obtaining and maintaining a landowner's cooperation facilitates cleanup operations. If the property owner will not cooperate, a court order must be obtained to enter the property and remove the scrap tires. This takes a significant amount of time and MDEQ and Michigan Department of Attorney General (MDAG) resources. Scrap tire stockpiles do not have a positive net value, as abating stockpiles costs more than can be derived from product revenue. Many of these pre- and post-1991 accumulations are not in compliance with Part 169, are without financial assurance, and are abandoned by the operator, becoming public liabilities, so taxpayers will ultimately end up taking the financial responsibility for dealing with these piles.

Michigan's current scrap tire industry consists of the following:

- 365 registered scrap tire haulers
- 543 collection sites that are in compliance, including 42 registered scrap tire collection sites[10]
- 72 collection sites that are not in compliance
- 8 registered scrap tire processors
- 9 certified end-users

The MDEQ annually conducts over 300 inspections of these facilities, including annual inspections of each collection site that applies for registration.

[10] Some collection sites are not required to be registered.

On average, the MDEQ holds 40 financial instruments for the necessary financial assurance for scrap tire collection sites. Scrap tire collection sites are required to bond outdoor tire storage areas at $25,000 per quarter acre or a fraction thereof and $2 per square foot of tire storage area in a building. Collection sites with fewer than 2,500 tires need to maintain only a $2,500 bond. Qualifying commodity storage areas up to a total of one acre are not required to be bonded, and collection sites that remain in compliance with the applicable requirements of Part 169 for at least one year are not required to be bonded.

The MDEQ can address noncompliance with Part 169 requirements through administrative, civil, and criminal enforcement activities. Criminal enforcement is used when a person or company refuses to comply with the law or intentionally commits a violation. Criminal sanctions include probation, community service, jail, fines, court costs, and restitution for damages. These sanctions do not directly require the removal of illegal tires. Therefore, either administrative or civil enforcement tools are used to require the cleanup of large illegal tire piles.

Administrative enforcement consists of a series of steps. The first is a letter informing a person how his or her activities fail to meet legal requirements. This letter provides a period of time, typically about 30 days, to correct the violations without penalty or further ramifications. The MDEQ may send subsequent letters reiterating the need to correct violations and providing more time before the MDEQ will consider penalties necessary. If the violations are not corrected after a reasonable period of time, the matter becomes more serious, and the MDEQ takes the position that not only must violations be corrected, but a financial penalty is also appropriate. The MDEQ offers to negotiate an agreement that will describe what steps will be taken to correct violations, the penalties to be paid, and how the agreement will be enforced. If this offer is refused or an agreement cannot be reached, the MDEQ may ask the MDAG to file civil litigation seeking a judicial order to compel compliance with the law and payment of financial penalties. The MDEQ may also seek a judicial order authorizing the MDEQ access to the site in order to clean up tires with public funds.

The later stages of this process are very time-consuming and expensive. Therefore, the MDEQ very much prefers to work with regulated parties to obtain compliance during the early stages.

If scrap tires at a site are not managed in compliance with Part 169, the MDEQ contends that then violations of Part 115 exist and civil action may be taken under Part 115.
Section 11506(1) of Part 115 defines “solid waste” and excludes certain materials from the definition. Excluded under Section 11506(1)(l) of Part 115 are “other wastes regulated by statute.” Rule 110 of the administrative rules promulgated pursuant to Part 115 lists those “other wastes regulated by statute” and exempts them from regulation as solid waste under Part 115. Specifically, Rule 110(e) states that tires managed in compliance with the provisions of Part 169 are excluded from the definition of “solid waste” and that such wastes are exempt from regulation under Part 115. However, since the scrap tires at the site are not managed in compliance with Part 169, the scrap tires do not meet the conditions of the exemption and the exclusion from the definition of solid waste and, therefore, are fully regulated as a solid waste and the site constitutes an unpermitted and unlicensed disposal area under regulation by Part 115. Recent court decisions have questioned the clarity of the application of Part 115 to scrap tire sites. The MDEQ intends to pursue legislative changes clarifying the interface and link between Part 115 and Part 169.

### *SCRAP TIRE WORK GROUP*

As part of an ongoing effort to continuously improve the Program, the MDEQ has sought input from key stakeholders. The Scrap Tire Work Group was an *ad hoc* group of stakeholders formed by the MDEQ in 2005 to assist with the development of recommendations for statutory amendments and other regulatory or policy changes to improve the Program. The Scrap Tire Work Group consisted of retailers, retreaders, scrap tire processors, scrap tire haulers, scrap tire collection site owners, end-users, as well as representatives from the Michigan Association of Counties, the Michigan Townships Association, the Michigan Municipal League, and staff of the MDEQ (WHMD, Air Quality Division, and OCI) and MDOT. The Scrap Tire Work Group met on April 27, 2005; May 25, 2005; June 23, 2005; and August 11, 2005.

The Scrap Tire Work Group's initial focus was on the grant programs and their effectiveness, and most of the discussion was focused on enforcement of Part 169 and improvement of the regulatory requirements. During discussion of the grant programs, it was felt that more discussion was necessary and that the MDEQ should look at the goals of the grant program and work backwards from there. If the goal is to increase the removal of stockpiled scrap tires, the economics of doing so needs to be investigated. It is important that grant funding be spent in the most efficient and effective way possible.

The MDEQ drafted recommendations based on these Scrap Tire Work Group discussions and then shared them with a broader group of stakeholders, including registered scrap tire collection sites, haulers, designated solid waste planning agencies, WHMD Program staff, and WHMD District Supervisors.

The Scrap Tire Work Group process identified proposed administrative and legislative changes to the Program and resulted in the WHMD providing over 23 issues and recommendations for amending Part 169 and the MVC (for removal of the surcharge sunset). One recommendation was the creation of an ongoing STAC.

### *SCRAP TIRE ADVISORY COMMITTEE*

The STAC grew out of the Scrap Tire Work Group as noted above. The Scrap Tire Work Group process highlighted the benefits of having a forum for the MDEQ and stakeholders to exchange information. The STAC was formed to foster continued interaction between the MDEQ and stakeholders. In December 2006 Part 169 was amended to require the MDEQ Director to appoint members to the STAC, and the group became more formally recognized. The STAC is available to advise the MDEQ on implementation of Part 169 and for both the MDEQ and stakeholders to identify and address challenges and opportunities in the Program as they arise. In addition to such other issues the MDEQ requests the STAC to consider, the STAC is directed to advise the MDEQ on the report required every three years on the effectiveness of Part 169 and on the relevance of national standards or specifications for commodity determinations.

The purpose of the STAC is to provide an open forum for discussion of issues and trends in the scrap tire industry and to facilitate improvements to the Program administered under Part 169. The MDEQ is committed to working with stakeholders to continuously improve the Program.

The first meeting of the STAC was held on May 11, 2006. Meetings are generally held on a quarterly or as-needed basis. Meeting summaries are posted on the STAC Web site.[11]

To date, the STAC has:

- Been used as a forum for keeping industry apprised of changes in the Program, grants, proposed legislation, and enacted legislation, such as December 29, 2006, amendments.
- Discussed Scrap Tire Cleanup and Market Development Grants and funding--what funding should cover, funding amounts, time line, etc.
- Discussed tire disposal options and education of the public on where tires can be disposed (i.e., taken to retailers or county recyclers or can be cut and disposed in a landfill) since whole tires cannot go to landfills for disposal. This information was added to the Program Web page.
- Discussed grants for county cleanup days and the need to tie such funding to other behavior modification/training in order to promote proper disposal of scrap tires.
- Discussed the development and effectiveness of the consolidated load manifest.
- Discussed municipality/nonprofit hauler registrations for doing community cleanups.
- Discussed whether bonds should be required for scrap tire haulers.
- Discussed various innovative projects (e.g., container gardens made from tires for growing potatoes for chips) and the need to partner with others to make such projects work.
- Discussed the use of steel wheel weights rather than lead for balancing tires.
- Discussed and reviewed proposed legislation.
- Discussed and reviewed legislative report outline.
- Discussed development of new markets and ways of increasing end-use of tires.
- Provided help on getting actual data on markets/use.
- Discussed PTE weight value to be used.
- Discussed proposed $7.50 solid waste surcharge bill concerns--particularly the effect on the use of tires for alternate daily cover at landfills.
- Discussed promoting the use of rubber modified asphalt in Michigan.

[11] See http://www.michigan.gov/deq/0,1607,7-135-3312_4123-143641--,00.html.

- Discussed what it means to visibly display a scrap tire hauler registration number on vehicles used to haul scrap tires.
- Discussed used tire retailers and "cherry-picking" of used tires and effect on industry.
- Discussed RMA tire survey for RMA's market report.
- Discussed the effect of the slow economy on the tire industry.
- Discussed the biomass tax credit issue and effect on TDF use.
- Discussed the EPA *Federal Register* notice concerning revisions to the definition of solid waste.
- Discussed the use of scrap tires and tire sidewall rings at feed storage locations and helped to develop guidance through creation of the question and answer document.

## RESULTS

Overall, the Program has been very successful. Throughout the state:

- Stockpiles of scrap tires have decreased,
- Compliance rates have increased, and
- Markets for scrap tires have increased.

The following activities and factors have contributed to this success:

### *SCRAP TIRE CLEANUP GRANTS*

Much of the reduction in illegal stockpiles is due to Scrap Tire Cleanup Grants. Since the Legislature first appropriated funding in 1993, more than $27.2 million in public funds have cleaned up approximately 31.1 million PTEs, restoring the environmental quality and economic value of more than 1,000 sites across the state (see Figure 2, page 22). The average cost of removal of tires under the grant program has been $0.88 per PTE. Approximately $2.5 million is allocated for cleanup grants in fiscal year (FY) 2010. Based on the eligible applications received to date, it is estimated that at least another 1 million PTEs will be removed during the FY 2010 grant cycle.

The 1991 enactment date of Part 169 is important in administration of the Scrap Tire Cleanup Grants. Until the 2002 amendments to Part 169, only tires accumulated prior to that date or "abandoned"[12] tires were eligible for cleanup funds. In 2002 the Legislature expanded eligibility to post-1991 tires, but established a priority for the removal of all pre-1991 tires and other tires that pose an imminent threat to public health and the environment.

[12] Part 169 defines "abandoned" as scrap tires where the property owner is not partially or wholly responsible for the accumulation of the tires.

The MDEQ believes that tires collected after 1991 should be treated differently for the purpose of public funding than pre-1991 tires. Removing scrap tires can turn property that is a liability into one that can be sold for value. When public funds remove illegal tires to address a public health and environmental risk, a person responsible for the illegally accumulated tires should not profit from the resulting increase in market value. Therefore, a lien against the property is imposed as a condition of a grant to clean up post-1991 tires. This helps to protect the State of Michigan's interest by potentially recouping some of the grant funds spent on cleanup and prevents the unjust enrichment of liable parties. The MDEQ has placed liens on 21 properties that were cleaned up with grant funds. The owners of two properties paid back to the State of Michigan the entire amount of the grant funds used, and the liens on these properties were subsequently released. The funds that were repaid were placed in the Scrap Tire Regulatory Fund, where they will be available to complete additional cleanups. All existing financial assurance for sites is required to be utilized before grant funds can be expended for cleanup of that site.

While the cleanup grants have been very successful in addressing the historical and other large stockpiles of scrap tires, some issues remain that need to be addressed in order to get to the remaining smaller accumulations of tires. These include efforts by the MDEQ to:

- Work with the soil conservation service and farms on cleanups of farm property;
- Work with urban areas and cities on abandoned tires and dumping--both on cleaning up and enforcement to prevent further dumping;
- Work with local health departments to address cleanup of existing small accumulations, possibly pooling those located in an area; and
- Work with local communities on cleanup days; do pilots in select cities/areas with limited amount of tires (1 truckload/1,000 PTEs); and limit the number residents can bring in.

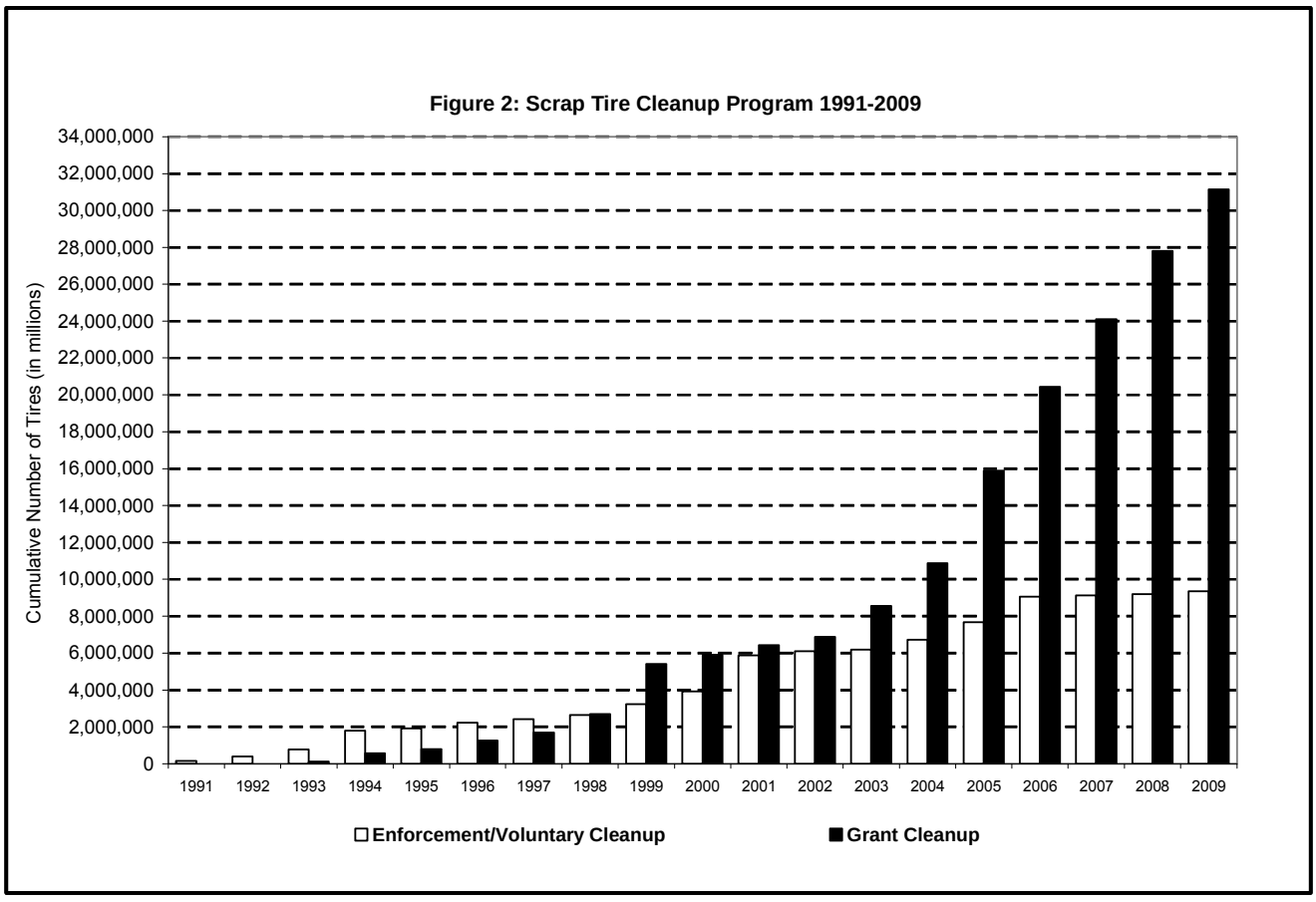
Additionally, the MDEQ should:

- Continue to work with the Michigan Department of Natural Resources on forest land dumping issues;
- Continue to work on sites where property is bought/inherited that contain tires; and
- Continue to work on cleaning up old salvage yards.

### *REGISTRATION, COMPLIANCE, AND ENFORCEMENT*

The registration, compliance, and enforcement activities conducted under Part 169 have also been effective in addressing illegally stored tires. As a direct result of these activities, approximately 9.4 million illegal tires have been removed from uncontrolled stockpiles. This is coupled with increased compliance with management requirements at operating collection sites and at least some environmental or public health improvements at most sites throughout the state.

In 2001 the MDEQ estimated approximately 26 million tires were being illegally stored in Michigan. The current estimate is approximately 664,000--with 388,000 pre-1991 tires plus 276,000 post-1991 tires located at collection sites posing an imminent threat to public health, safety, welfare, or the environment.




***MARKET DEVELOPMENT***

The tire processing industry and product markets have a finite capacity to use the 10 million tires per year that Michigan currently generates in addition to historically stockpiled tires. Done properly, stockpile cleanups can help to develop new markets or add supply volumes to existing markets. Done improperly, cleanups can negatively impact existing markets and the businesses of processors.

As a result of the Scrap Tire Cleanup Grants and MDEQ efforts to ensure compliance with Part 169 storage requirements, a large and continuing supply of scrap tires has become available for use in the marketplace. This supply has increased Michigan scrap tire market capacity from less than 3 million to over 18.5 million scrap tires per year giving Michigan capacity sufficient to handle newly-generated scrap tires and the cleanup of stockpiled scrap tires. While this number is slightly less than the 20 million tires capacity noted in the 2006 Report to the Legislature on the Effectiveness of the Scrap Tire Market Development Grants, the MDEQ believes better data collection methods has led to counting only the actual use of scrap tires rather than just the permitted capacity of these markets. Per RMA, markets

remain regional in nature, and Illinois and Michigan have strong and major clusters of markets that pull tires from the surrounding regions.[13]

Increased utilization of scrap tires nationally can be attributed to four factors: continued increased cost of energy; expansion of the mulch market; strong demand for playground cover; and continued growth of the use of ground rubber as infill for synthetic sports surfacing. Each of these markets continues to face challenges.[14]

The primary uses of scrap tires in Michigan include TDF that is used in the generation of electricity; landfill usage (daily cover, liner protection, and gas collection); septic drain fields; sidewall rings; the reuse and retreading market for truck tire casings; and other products such as mulch, playground material, crumb, and smaller chips. Based on the WHMD's best estimate of the current usage and capacity of existing and potential scrap tire material end-users (see Figure 3, page 25), approximately 9.3 million scrap tires per year are burned as TDF permitted under Part 55, Air Pollution Control, of the NREPA, and 150,000 scrap tires are retreaded or reused each year. Scrap tire chips also have been used as lightweight aggregate for construction activities at landfills (approximately 607,000 tires per year), septic drain fields (330,000 tires per year), and other products (approximately 4.6 million scrap tires per year for these uses). Rubberized asphalt for parking lots and roads is only a minimal use of scrap tires in the state. Over 2.9 million PTEs generated in Michigan go to out-of-state markets, including TDF, playground surfacing, retreading, and processors. These numbers are estimates based on issued permits or in the application process and on staff's knowledge of usage based on market contacts. Table 1, page 25, shows scrap tire usage by market sector for 2007 and 2008. The number of tons used increased from a total of 167,629 tons (16,267,954 PTEs) in FY 2007 to 185,007 tons (18,500,670 PTEs) in FY 2008.

TDF is expected to remain strong for the next two years due to the continued increase in fuel prices and the improvements in quality of TDF along with more reliable delivery of the quality product.[15] Some TDF users and potential users continue to view TDF as merely a waste product and are not willing to pay a price sufficient to sustain a processor to produce a consistently high quality two-inch minus fuel chip.[16] The ASTM International standard for TDF means end-users and potential end-users have an industry-accepted standard against which to compare all tire chips and a single sampling and testing protocol to use.[17] Ground rubber can be used in new rubber products, playgrounds, sports surfacing, and rubber modified asphalt, with sport surfacing being the most dynamic segment.[18] Nationally, there has been less demand for large-scale loose-fill rubber and increased demand for pour-in-place systems and increased sales of smaller sized loose fill material for use in the residential (retail) markets.[19] Ground rubber can be used in rubber modified asphalt as part of the asphalt rubber binder, as a seal coat, cap seal spray or as joint and crack sealant, or as an aggregate substitution.[20] RMA expects modest growth in the ground rubber market segment over the next few years, with little additional material being directed to rubber modified

[13] Scrap Tire Markets in the United States, 9th Biennial Report, May 2009, RMA.
[14] Ibid.
[15] Ibid.
[16] Ibid.
[17] Ibid.
[18] Ibid.
[19] Ibid.
[20] Ibid.

asphalt. Tire shreds are also used in civil engineering applications such as road and landfill construction, septic systems, vibration and sound control, and for lightweight backfill.[21] This market segment is expected to decrease due to increased competition for use of this material in TDF.[22] No market data is available on the used tire market.

It should be noted that nationally, stable markets have inhibited the reemergence of scrap tire stockpiles once existing stockpiles have been abated.[23] Annually generated tires are not likely to replace abatement tires in low-value added markets such as landfill alternate daily cover.[24] However, TDF users maintained the same level of TDF use after the flow of abatement tires ended, likely due to competitive pricing versus other fuel sources.[25] The probability is that annually generated tires will have long-term markets and this should be the goal of all state programs.[26]

Michigan has achieved this market expansion with only limited direct government subsidies. Wisconsin, which encouraged markets though significant governmental subsidies, experienced a substantial decline in markets and an increase in illegal accumulations when the subsidies in that state ended. History has taught us that using state scrap tire funds to subsidize scrap tire processing has yielded less than desirable results.[27]

In FY 2009, nine end-users certified to the MDEQ that they used at least 75 percent of the scrap tire material delivered to their site. Eight are TDF users, and the ninth uses tire chips for landfill daily cover over the refuse. See Attachment 1, Scrap Tire End-Use; Estimated Usage and Capacity memo, dated November 3, 2009, for a breakdown of use by individual end-user for 2008.

[21] Scrap Tire Markets in the United States, 9th Biennial Report, May 2009, RMA.
[22] Ibid.
[23] Ibid.
[24] Ibid.
[25] Ibid.
[26] Ibid.
[27] Ibid.

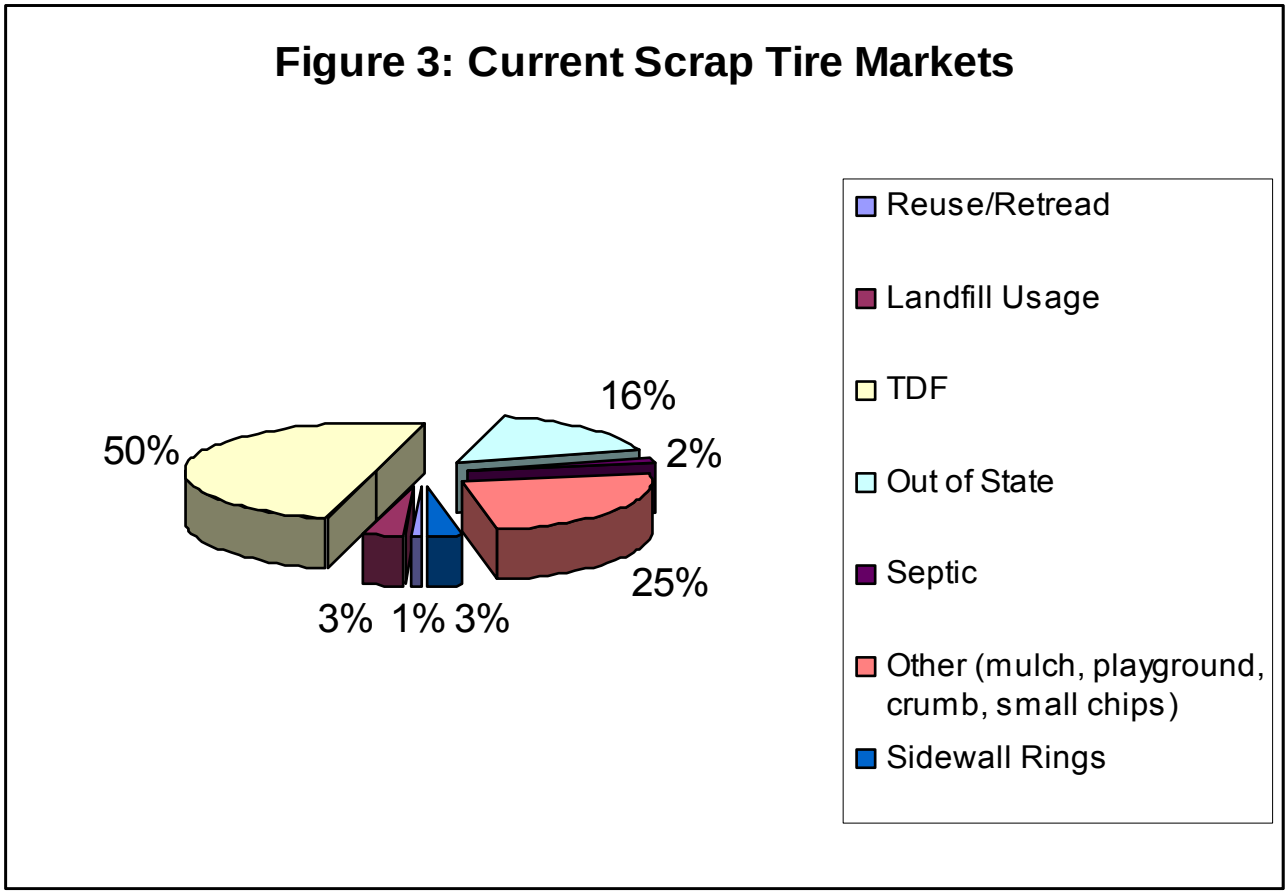



**Table 1: Scrap Tire Usage 2007 and 2008**

| | 2008 | | 2007 | |
|---|---|---|---|---|
| **Totals** | **Tons** | **PTEs** | **Tons** | **PTEs** |
| Reuse/Retread | 1,506.21 | 150,621 | 18.55 | 1,855 |
| Landfill Usage | 6,066.59 | 606,659 | 6,800.72 | 680,072 |
| TDF | 92,995.95 | 9,299,595 | 88,115.10 | 8,811,510 |
| Out of State | 29,655.00 | 2,965,500 | 36,308.05 | 3,135,854 |
| Septic | 3,300.00 | 330,000 | 5,400.00 | 540,000 |
| Other | 45,981.95 | 4,598,195 | 26,320.93 | 2,632,093 |
| Sidewall Rings | 5,501.00 | 550,100 | 4,665.70 | 466,570 |
| ***Total*** | 185,007.00 | 18,500,670 | 167,629.00 | 16,267,954 |

***SCRAP TIRE MARKET DEVELOPMENT GRANTS***

The Scrap Tire Market Development Grant Program is designed to supplement the Scrap Tire Cleanup Grant Program to promote proper use of scrap tire material in Michigan. The development of additional markets and uses for scrap tires will further accelerate the cleanup of stockpiled scrap tires.

The Scrap Tire Market Development Grant Program was established in FY 2004 but was not initially successful. Only one grant was issued under the initial iteration and was completed in August 2006. Only two other incomplete applications were received. This lack of interest was due in part to the statutory requirement that grant-funded activities had to use tires cleaned up from stockpiles. These tires may not be suitable for all uses because of the physical and chemical breakdown of the tires during long-term storage and contamination by dirt, water, and other materials. In addition, Part 169 only allowed funding for 50 percent of the purchase price of the scrap tires to be reimbursed. The cost of scrap tires is relatively inexpensive in comparison to equipment, research and development, and testing costs associated with market development activities. Potential applicants also indicated that the application process was difficult and, thus, costly in comparison to the small amount of funding available through the grant.

Changes to the Scrap Tire Market Development Grant Program were determined to be needed and were incorporated in the December 2006 amendments to Part 169. Part 169 now authorizes the MDEQ to issue reimbursement grants for the following:

- Not more than $500,000 each year for grants to reimburse the cost of purchasing scrap tires to support the development of increased markets for scrap tires.
    - Only the cost of purchasing scrap tires from Michigan scrap tire processors or other generators of scrap tires in Michigan is eligible for reimbursement. A scrap tire is defined as a tire that is no longer being used for its original intended purpose including, but not limited to, a used tire, a reusable tire casing, or portions of a tire.
    - Cost reimbursement grants are available for 50 percent of the cost of purchasing scrap tires. Reimbursement cannot exceed $50 per ton.
- Cost reimbursement grants are available for up to 50 percent of the cost of purchasing equipment, or for research and development, to provide for a new or increased use for scrap tires.

To be considered for funding, applicants must first submit a complete Letter of Interest (LOI) by the applicable deadline. Approved applicants will then be invited to submit a full application. Incomplete applications are not eligible for funding.

LOIs and full applications for funding are reviewed and prioritized by a review committee based on the evaluation criteria included in the application package. The review committee consists of WHMD staff. In the initial evaluation, staff determines whether the LOI and narrative descriptions are complete and meet the requirements of Part 169. After the initial review of each LOI is complete, staff makes recommendations of applicants who are invited to submit a full application. Applicants who are invited to submit a full application must submit a complete application to the MDEQ postmarked no later than the due date. No discussion between WHMD staff and applicants is allowed to take place regarding the application during the evaluation process or review period.

After staff completes their initial review of each full application, they develop a written evaluation. Based on this evaluation, an initial staff recommendation of applicants approved for funding is created. A final WHMD staff funding recommendation will then be developed for each application. The final prioritized listing will be approved by the WHMD Chief. The recommendations will be presented to the MDEQ Director, who then makes final funding recommendations. The grants that are over $25,000 must be reviewed by the State Administrative Board (SAB). Once those have been approved by the SAB, the list of awarded grants will be announced in a press release and made available on the MDEQ's Web site. Applicants are notified in writing of the decision regarding their applications. Evaluation information concerning an application is available upon request. If eligible, unsuccessful applicants may reapply in future grant cycles subject to legislative appropriation of funds.

The funding of scrap tire market development projects must be prioritized due to the limited amount of funding available under Part 169. These grants are anticipated to be extremely competitive. Evaluation criteria have been developed and are set forth in the application package to allow the WHMD to identify those proposals that most completely demonstrate the applicant's ability to successfully implement a scrap tire market development project. All eligible applications are independently evaluated based on how well they address the evaluation criteria for their project.

Each LOI and full application are evaluated by WHMD staff using criteria as follows: (NOTE: The descriptions following are brief and designed to provide a general explanation of the criteria that will be considered and the typical components of those criteria. The order of the listed criteria is not intended to indicate relative weight placed on individual criteria.)

- The amount of scrap tires, in PTEs or tons, to be used in developing the project/product using Michigan tires.

- The project must demonstrate a new or increased use of scrap tires. Projects will be evaluated based on the total number of tires used compared to the cost of the project or the cost per tire.

- The project must be feasible and market oriented.

- The project must demonstrate viable markets for the proposed product. For example, a signed contract or letter of expression of interest from a user of the product.

- Research and development grant applicants must provide data or other documentation to show that the project is for new research and how the project will expand the market for scrap tires in Michigan. Salaries of individuals are not eligible for grant funding.

- The applicant must demonstrate commitment to project by providing a complete business plan and by providing the amount the applicant has invested in the project.

- The applicant's overall compliance with Michigan environmental laws, rules, and regulations.

Priority is given to:

- Applications requesting capital expenditures for equipment over research and development.

- Projects that demonstrate the technology is transferable and could produce a broad benefit.

- Projects that utilize scrap tires rather than a commodity.

    - A commodity is defined as crumb rubber, tire chips, a ring or slab cut from a tire for use as a weight, or a product die cut or punched from a tire. These products are categorized in statute as a "commodity" because they already have markets and uses associated with them.

- Projects that demonstrate long-term sustainability.

- Applicants who are part of an established business as opposed to applicants who request funds for start-up costs.

- Applicants who are expanding a current product line as opposed to creating a completely new untried product.

- Financial capability and financial viability of the project.

- The value of the end use of the scrap tires (e.g., the scrap tires will be used to make a product as opposed to using the scrap tires as alternative daily cover in a landfill).

Since the improved Scrap Tire Market Development Grant went into effect in FY 2008, one project for equipment for an expanded crumb line at an existing processor has been funded and is scheduled to be completed February 1, 2010. The grant contract for operation of this project goes through September 30, 2016. Although 12 LOIs were received in FY 2009 and six of these were invited to submit full applications, the MDEQ only received three full applications that were not complete and deemed ineligible for funding. Up to $500,000 from the Scrap Tire Regulatory Fund is available for the Scrap Tire Market Development Grants for FY 2010. The LOIs for FY 2010 have been reviewed. Of the six LOIs received, four applicants have been invited to submit full applications by January 8, 2010.

***SCRAP TIRE END-USER GRANTS***

The Scrap Tire End-User Grant Program was started in FY 2004. Approximately 3-5 scrap tire end-user grant applications were received each year, and approximately three grants were awarded each year. The scrap tire end-user grants resulted in only a slight increase in the number of tires used each year. Because the grant did little to increase the numbers of tires used, this grant program was eliminated under the 2006 amendments to Part 169. Facilities are often limited in the amount of TDF they can burn because of limits on emissions

in air permits. However, use of tires by other facilities for fuel is expected to increase with the increased cost of other fuel sources. Some tire industry stakeholders would like to see these grants reinstituted.

***PROCESSING CAPACITY***

Michigan has the capacity to process the scrap tires generated annually in the state. Each processor reports the number of tires processed to the MDEQ on their annual registration application. The MDEQ takes this information directly from these applications and, occasionally, a processor does not report an amount. Therefore, these numbers cannot necessarily be taken as showing any trends in the actual processing capacity of the state. However, the MDEQ is confident that there is no actual downward trend in the ability of the state to process the tires it annually generates. Michigan operations reported processing 10,004,846 scrap tires in 2004 and 13,775,927 scrap tires in 2005. They reported processing 8,063,935 PTEs in 2006, 8,986,645 PTEs in 2007, and 10,321,954,885 PTEs in 2008. The number of processors has also increased to eight.

Processing Scrap Tires

### *OTHER MDEQ EFFORTS*

The MDEQ has also helped to decrease the number of scrap tires generated by providing information on proper tire maintenance--including proper tire inflation, rotation, and driving habits--through posters, press releases, and the MDEQ Web site.[28] Extending tire life decreases the number of scrap tires generated.

Whole scrap tires have been banned from Michigan landfills since 2004. The MDEQ has made efforts to educate residents through posters, press releases, and the MDEQ Web site concerning proper disposal options.[29] Residents can dispose of used tires by taking them to any registered collection site, taking them back to most tire retailers, or taking them to a tire recycler. Some counties, cities, and townships offer tire drop-off locations periodically throughout the year. Residents should check with their local unit of government to find out if this service is offered.

The MDEQ has also made efforts to educate citizens through press releases and the MDEQ Web site concerning the fees paid for tire disposal. Fees to dispose of tires vary by location. The national average is approximately $1 per passenger car tire. The MDEQ suggests consumers contact a collection site or tire retailer to inquire about the disposal fee before bringing in tires. This fee paid to dispose of scrap tires is not set by the State of Michigan and does not come back to the State of Michigan. The Program is funded by a $1.50 vehicle title certificate fee collected by the Secretary of State.

Finally, the MDEQ has made efforts to educate residents through an information sheet and the MDEQ Web site about hauling scrap tires. Michigan law allows a person to legally transport up to seven of their own tires. Transporting more than seven tires, or transporting tires that did not originate from the person's own household, requires either registration as a scrap tire hauler or that a registered scrap tire hauler be hired to haul the scrap tires. There is no fee to register as a scrap tire hauler.

[28] See http://www.michigan.gov/documents/deq/deq-whm-stsw-CheckYourTirePressurePoster_441639_7.pdf and http://www.michigan.gov/documents/deq/deq-whm-stsw-Tire-Tips-Fact-Sheet_441640_7.pdf.
[29] See http://www.michigan.gov/deq/0,1607,7-135-3312_4122-182826--,00.html.

Aerial view of tire piles before scrap tire cleanup grant awarded.

Aerial view of site after scrap tire cleanup grant completed.

## CONTINUING NEEDS

Though great progress has been made by the Program, needs remain for:

- Maintaining a reliable funding level to enforce state regulations and avoid the potential for reappearance of scrap tire stockpiles (extend the MVC sunset beyond December 31, 2012).

- Cleaning up remaining tire stockpiles (664,000 PTEs).

- Cleaning up remaining small scrap tire accumulations.

- Managing ongoing scrap tire generation (10 million annually).

- Administering and enforcing Program requirements to prevent new stockpile formation and tire dumping.

- Developing and supporting markets for scrap tires.

- Collecting data on end-users, markets, and actual numbers of tires used.

Effective scrap tire programs require reliable funding. Part 169 required the MDEQ to ensure that all abandoned scrap tires accumulated at collection sites prior to January 1, 1991, were cleaned up by September 30, 2009. The MDEQ has made significant progress toward this goal. Only about one percent of these pre-1991 tires remain. In addition, there were at least 5 million scrap tires accumulated after 1991 that pose an imminent threat to public health, safety, welfare, or the environment that were addressed by the deadline.

The industry holds that the average cost of scrap tire cleanup is $1 per PTE. While the Program has, overall, been able to do cleanups on average for less, this $1 per PTE is the amount that is used in the grant program as the maximum that will be reimbursed. At current revenue and expenditure levels for the Scrap Tire Regulatory Fund (see Attachment 2, Annual Report on Utilization of Revenues of the Scrap Tire Regulatory Fund, dated May 15, 2009), it is likely that the remaining 388,000 pre-1991 scrap tires could be cleaned up by the MVC sunset date of December 31, 2012, along with the 276,000 post-1991 tires. However, beyond removal of existing stockpiles, ongoing monitoring and enforcement activities are needed to prevent creation of new, unmanaged stockpiles. Since whole motor vehicle tires are prohibited from disposal in landfills, the 10 million scrap tires Michigan generates annually should be directed to proper uses such as the production of energy or use as raw materials for products. Unfortunately, there continue to be scrap tire generators, haulers, and collection site operators who illegally dump scrap tires and speculatively accumulate tires without regard for Part 169 or their future liability. Continued administration and enforcement of Part 169 is necessary to ensure that market prices for the beneficial uses of scrap tires are not undercut by the lower costs of unmanaged storage resulting in creation of new illegal scrap tire piles throughout the state. As scrap tire stockpiles are being cleaned up, discussions of shifting funding to other Program priorities, such as market development, are appropriate.

The MDEQ currently estimates scrap tire markets based on indirect information, such as consumption limits in air permits, information reported in registration applications, and staff's contacts with individual markets. In order to more fully understand the management of scrap tires and make good policy decisions to address changes like those experienced in the TDF market, Michigan needs to continue to develop a more accurate means of collecting data on end-users, markets, and actual numbers of tires used.

The RMA May 2009 Scrap Tire Market Report states that the scrap tire industry and regulatory agencies collectively must maintain focus on markets, which while strong, are constantly in flux. Stockpile abatement must continue and requires vigilance, resources, and advocacy. Governmental programs, even those that are successful must maintain emphasis on three core functions: market development, stockpile abatement, and enforcement of

regulations. While it may be tempting to declare victory and sunset successful state programs, to do so only invites new problems.[30]

## NEXT STEPS/LOOKING FORWARD

The MDEQ will work with the STAC to:

1. Continue to develop a more effective Scrap Tire Market Development Grant Program;

2. Promote the use of rubber modified asphalt and other engineered uses of scrap tires;

3. Address consumer issues concerning the use of tire material in sports surfaces and playgrounds;

4. Limit the growth of unbonded sites;

5. Address remaining smaller tire accumulations and dumping;

6. Address community and farm cleanups through the grant program;

7. Develop a grant program for helping encourage farms to dispose of whole tires and use sidewall rings for feed storage;

8. Discuss potential legislative changes to stagger hauler registration expirations to allow staff the ability to inspect all sites and develop indoor storage regulations;

9. Propose changes to Part 169 to make clear the Part 169/Part 115 interface, add back in a definition of commercial scrap tire hauler, and clarify what constitutes visible display of a scrap tire hauler registration number on a vehicle transporting scrap tires; and

10. Extend the surcharge sunset in the MVC.

[30] Scrap Tire Markets in the United States, 9th Biennial Report, May 2009, RMA.

The STAC will also hold further discussions on those controversial issues that were not resolved during the initial Work Group process, and that have not yet been resolved, including:

1. Whether to require generator record-keeping;

2. Should the MDEQ improve capability to use performance bonds for a site;

3. Consider vehicle forfeitures for violations involving those vehicles;

4. Consider increased/improved penalty provisions;

5. Should the MDEQ have rule-making authority;

6. Consider changing the feed storage location exemption;

7. Consider changing the Scrap Tire Market Development Grant Program to address remaining tire accumulations; and

8. Consider promoting the use of rubber modified asphalt and other engineered uses of tires.

Photo of location where a scrap tire has been removed.

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

TO: George W. Bruchmann, Chief, Waste and Hazardous Materials Division

FROM: Steven R. Sliver, Chief, Storage Tank and Solid Waste Section
Waste and Hazardous Materials Division

DATE: November 3, 2009

SUBJECT: Scrap Tire End-Use; Estimated Usage and Capacity

The attached table represents Waste and Hazardous Materials Division (WHMD) staff's best estimate of the current usage and capacity of existing and potential scrap tire material end-users. Information provided is based on current permits issued, reported use in calendar year 2008, and staff's knowledge of usage based on market contacts.

This table was updated from a previous table dated September 26, 2008. A comparison of the 2007 and 2008 table (Table 1, Page 4) shows usage of scrap tires continues to grow with another increase in usage from 2007 to 2008. The use of Tire Derived Fuel (TDF) continues to grow with approximately 4,400 additional tons burned in 2008 even though one of the power companies, Holcim US, Inc., in Dundee is no longer burning TDF.

Additionally, reused and retreaded tires saw a very large increase. "Reused" tires were not included on any of the previous reports. Finally, the increase of processors making tire chips and crumb has led to nearly double the amount of tons used in "other uses."

Attachment
cc: Rhonda Oyer Zimmerman, WHMD
Karen Shaler, WHMD
Becky Beauregard/Julie Vallier, WHMD

# Current Usage and Capacity of Existing and Potential Scrap Tire End Users (Table 1)

| End Use | Annual permitted capacity (in tons) | Last report data (2008) in tons | Last report data (2008) PTE* | Notes |
|---|---|---|---|---|
| ***Reuse/Retreading*** | | | | |
| CM Rubber Technologies<br>Coleman, MI<br>*grade tires* | | 9.8 | 980 | taken from Collection Site Registration |
| Entech, Inc.<br>White Pigeon, MI<br>*used tires* | | 308 | 30,800 | taken from Collection Site Registration |
| Huffman Rubber<br>Homer, MI<br>*used tires* | | 135.5 | 13,550 | taken from Collection Site Registration |
| Olson Tire<br>Mt. Pleasant, MI<br>*retread* | | 148.58 | 14,858 | |
| Silver Lining Tire Recycling<br>Wyandotte, MI<br>*used tires* | | 904.3 | 90,433 | taken from Collection Site Registration |
| ***Total*** | | ***1,506.210*** | ***150,621.000*** | |

| ***Landfill Usage (daily cover, liner protection, leachate/gas collection)*** | | | | |
|---|---|---|---|---|
| **Landfill** | | **Last report data (2008) in tons** | **Last report data (2008) PTE*** | **Notes** |
| Granger: Wood and Grand River Landfills; Lansing, MI<br>lechate/gas collection systems | | 5969.00 | 596,900 | |
| Marquette County Solid Waste Management Authority<br>certified end user- daily cover | | 97.59 | 9,759 | |
| Westside Recycling and Disposal (Waste Management)<br>alternate daily cover | | | | approved in liscence but has not used tires |
| Venice Park Recycling and Disposal, Lennon, MI | | | | approved in liscence but has not used tires |
| K & W Landfill, Ontonagon, MI | | | | approved in liscence but has not used tires |
| Dafter Sanitary Landfill, Chippewa County | | | | approved in liscence but has not used tires |
| Michigan Environs, Inc., Menominee, MI | | | | approved in liscence but has not used tires |
| ***Total*** | | ***6,066.59*** | ***606,659.00*** | |

* Passenger Tire Equivalent (PTE) based on 1 PTE = 20 lbs, 2000 lbs = 1 Ton

# Current Usage and Capacity of Existing and Potential Scrap Tire End Users (Table 1)

| *Tire Derived Fuel (TDF)* | | | | |
|---|---|---|---|---|
| **Facility Information** | **Annual permitted capacity (in tons)** | **Last report data (2008) in tons** | **PTE*** | **Notes** |
| American Resource Recovery<br>Permit No. 9-94<br>Issued 7/27/1994 | 5 million/year capacity (not currently burning TDF) | 0 | 0 | 0 |
| Hillman Power, Hillman<br>Permit No 687-86G<br>Issued 3/13/2002<br>SRN N1266<br>ROP 199600190 | 20,000 | 5,367 | 536,700 | not likely to increase capacity due to SO2 emissions |
| Viking Energy, McBain<br>Permit No. 261-86G<br>Issued 10/1999<br>SRN N1160<br>ROP 199600329 | 16,060 | 14,458 | 1,445,800 | permit increase in 2001/2002- close to permit allowance shouldn't change |
| Viking Energy, Lincoln<br>Permit No. 290-86C<br>Issued 1/1997<br>SRN N0890<br>ROP 199600397 | 16,060 | 13,093 | 1,309,300 | permit increase in 2001/2002- close to permit allowance shouldn't change |
| Wyandotte Power, Wyandotte<br>Permit No. 253-98A<br>Issued 2/2000<br>SRN B2132<br>ROP 199600303<br>PTI 253-98D | 68,150 | 22,221 | 2,222,140 | recent increase in permit from 21,550 to 68,150 |
| TES (Tondu Energy), Filer<br>Permit No. 519-87F<br>Issued 8/11/2000<br>SRN N1685<br>ROP 199600181 | 35,040 | 12,447 | 1,244,740 | |
| Grayling Generating Station<br>Permit No. 882-89E<br>Issued 9/18/2001<br>SRN N2388<br>ROP 199600260 | 16,425 | 5,952 | 595,200 | |
| CWC Textron<br>SRN B1909<br>ROP 199600346a<br>PTI 259-06 | 2,100 | | | |
| Escanaba Paper Company<br>SRN A0884<br>ROP 199700059<br>PTI 259-06 | | 18,977 | 1,897,700 | |
| Menominee Acquisition Corporation | | 259.84 | 25,984 | not listed in AQD information |
| Lanse Warden Electric Co. | | 220.31 | 22,031 | not listed in AQD information |
| Verso Paper, Quinnesec Mill<br>SRN B7 192<br>MI-ROP-B7192-2007<br>PTI 52-05 Trial Burn | | | | 16,644 tons/year if approved at that rate |
| ***Total TDF*** | ***173,835*** | ***92,995.95*** | ***9,299,595*** | |

* Passenger Tire Equivalent (PTE) based on 1 PTE = 20 lbs, 2000 lbs = 1 Ton

# Current Usage and Capacity of Existing and Potential Scrap Tire End Users (Table 1)

## Out of State Users

| | Last report data (2008) in tons | PTE* | Notes |
|---|---|---|---|
| Auburndale Recycling, *Playground Surfacing TDF* | 488.44 | 48,844 | |
| Out of State Retreading (see attached table) | 5.99 | 599.00 | |
| Out of State Processors (see attached table) | 29,161 | 2,916,057.00 | from various out of state haulers |
| ***Total*** | ***29,655.00*** | ***2,965,500*** | |

## Septic Drain Fields

| | Last report data (2007) in tons | PTE* | Notes |
|---|---|---|---|
| Central Michigan Health District | 3,300.00 | 330,000 | approx 250 systems/year |
| ***Total*** | ***3,300.00*** | ***330,000.00*** | |

## Other Products

| | Last report data (2008) in tons | PTE* | Notes |
|---|---|---|---|
| CM Rubber Technologies Coleman, MI *Mulch/Playground/ crumb* | 3,156.70 | 315,670 | taken from Collection Site Registration |
| Deerpath Recyclers St. Joseph, MI *1/2, 1/4 chips, crumb, septic chips* | 5,972.00 | 597,200.00 | taken from Collection Site Registration |
| Entech, Inc. White Pigeon, MI *rubber rock chips* | 32,814.00 | 3,281,400.00 | taken from Collection Site Registration |
| Huffman Rubber Homer, MI *Aggregate* | 3,464.89 | 346,489.00 | taken from Collection Site Registration |
| Silver Lining Wyandotte, MI *crumb* | 574.36 | 57,436.00 | taken from Collection Site Registration |
| ***Total*** | ***45,981.95*** | ***4,598,195.00*** | |

## Sidewall Rings

| | | | |
|---|---|---|---|
| CM Rubber Technologies | 195.00 | 19,500 | taken from Collection Site Registration |
| Deerpath Recyclers | 171.00 | 17,100 | taken from Collection Site Registration |
| Entech | 5,135.00 | 513,500 | taken from Collection Site Registration |
| ***Total*** | ***5,501.00*** | ***550,100*** | |

* Passenger Tire Equivalent (PTE) based on 1 PTE = 20 lbs, 2000 lbs = 1 Ton

# Current Usage and Capacity of Existing and Potential Scrap Tire End Users (Table 1)

| | 2008 | | 2007 | |
|---|---|---|---|---|
| **Totals** | **Tons** | **PTE** | **Tons** | **PTE** |
| Reuse/Retread | 1,506.21 | 150,621 | 18.55 | 1,855 |
| Landfill Usage | 6,066.59 | 606,659 | 6,800.72 | 680,072 |
| TDF | 92,995.95 | 9,299,595 | 88,115.10 | 8,811,510 |
| Out of State | 29,655.00 | 2,965,500 | 36,308.05 | 3,135,854 |
| Septic | 3,300.00 | 330,000 | 5,400.00 | 540,000 |
| Other | 45,981.95 | 4,598,195 | 26,320.93 | 2,632,093 |
| Sidewall Rings | 5,501.00 | 550,100 | 4,665.70 | 466,570 |
| ***Total*** | 185,007 | 18,500,670 | 167,629 | 16,267,954 |

## *Glossary*

Out of State User = Tires were generated in Michigan and taken outside the state for use/disposal.

PTI = Permit to Install. The permit required for new or modified equipment or a change in the method of operation of existing equipment which causes certain increases in emissions.

ROP = Renewable Operating Permit. The format for these permit numbers is changing to the style under Verso paper and Holcim in the table: MI-ROP-SRN-YEAR. Old PTIs are voided and the conditions are placed into the ROP. New PTIs are also eventually rolled into the ROP for a major source of air emissions.

SRN = State Registration Number, which does not change for a site even when names or numbers change. It is the most certain way to identify correct information for a facility.

* Passenger Tire Equivalent (PTE) based on 1 PTE = 20 lbs, 2000 lbs = 1 Ton

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

JENNIFER M. GRANHOLM
GOVERNOR

STEVEN E. CHESTER
DIRECTOR

VIA E-MAIL

TO: Senate Natural Resources and Environmental Affairs Committee Members
House Great Lakes and Environment Committee Members

FROM: Steven E. Chester, Director

DATE: May 15, 2009

SUBJECT: Annual Report on Utilization of Revenues of the Scrap Tire Regulatory Fund (Fund)

In accordance with Section 16911(1) of Part 169, Scrap Tires, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, the Department of Environmental Quality (DEQ) is required to report annually to the Legislature on the utilization of revenues of the Fund. The attached table represents the status of the Fund.

The following is a breakdown of fiscal year (FY) 2008 appropriations and expenditures for the Regulatory Program and the Grant Program:

In FY 2008 the Legislature appropriated $6,083,700 from the Fund, including $1,583,700 for the Regulatory Program, $4,400,000 for Scrap Tire Cleanup and Market Development Grants, and $100,000 for Tire Fire Suppression Grants. During FY 2008, $1,342,500 was expended for the Regulatory Program and $4,222,600 was expended for Cleanup Grants. No funds were expended for Market Development Grants or Tire Fire Suppression Grants. A total of $464,800 was encumbered at the close of FY 2008 for Cleanup Grants that were awarded but not completed during FY 2008 and will be completed during FY 2009.

If you have any questions or need further information, please contact George Bruchmann, Chief, Waste and Hazardous Materials Division, at 517-373-9523, or you may contact me at 517-373-7917.

Attachment
cc/att: Nathaniel Lake, Governor's Office
Gary S. Olson, Director, Senate Fiscal Agency
Mitchell E. Bean, Director, House Fiscal Agency
Bob Emerson, Office of the State Budget
Jim Sygo, Deputy Director, DEQ
JoAnn Merrick, Chief of Staff, DEQ
Carol Linteau, Legislative Director, DEQ

**Status of Scrap Tire Regulatory Fund as of April 2009**
(Amounts in thousands)

| | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 |
|---|---|---|---|---|---|---|
| **Beginning Fund Balance:** | $ 4,746.3 | $ 3,629.8 | $ 3,105.5 | $ 2,990.7 | $ 1,874.6 | $ 689.6 |
| Appropriated for Operations: | 1,399.2 | 1,457.5 | 1,525.5 | 1,583.7 | 1,636.5 | 1,650.0 |
| Appropriated for Grants: | 5,250.0 | 4,500.0 | 4,500.0 | 4,500.0 | 4,500.0 | 3,700.0 |
| **Total Appropriations:** | **6,649.2** | **5,957.5** | **6,025.5** | **6,083.7** | **6,136.5** | **5,350.0** |
| **Expenditures:** | | | | | | |
| Regulatory Program Operations | 1,363.0 | 1,433.8 | 1,340.9 | 1,342.5 | 1,570.0 | 1,600.0 |
| Grants | 4,478.9 | 3,611.7 | 3,211.7 | 4,222.6 | 3,565.0 | 2,500.0 |
| **Total Expenditures:** | **5,841.9** | **5,045.5** | **4,552.6** | **5,565.1** | **5,135.0** | **4,100.0** |
| **Revenue (including interest):** | **4,725.4** | **4,521.2** | **4,437.8** | **4,449.0** | **3,950.0** | **3,950.0** |
| **Year-End Fund Balance:** | $ 3,629.8 | $ 3,105.5 | $ 2,990.7 | $ 1,874.6 | $ 689.6 | $ 539.6 |

Notes:
1) Figures in shaded areas represent estimated or projected amounts.

2) Expenditures in a given fiscal year may include expenditures from previous appropriations, due to encumbrances carried forward and expended in subsequent fiscal years. For example, projected FY 2009 expenditures include $464,800 of encumbered FY 2008 grants that were not completed during FY 2008 but should be completed during FY 2009.

3) Effective 10/1/2002, the tire disposal surcharge fee was increased from $0.50 to $1.50 per vehicle title issued.

4) In FY 2005 the number of vehicle titles issued began to decline, which has resulted in less annual revenue; and during the first quarter of FY 2009, revenue decreased sharply.

5) The tire disposal surcharge fee sunset is 12/31/2012.