Massachusetts Department of ENVIRONMENTAL PROTECTION

f a c t s h e e t

Best Management Practices for Automotive Recyclers
Waste Tires

Did You Know:

- About one scrap tire per person in the United States is generated every year.[1]
- Over six million tires are disposed of in the Commonwealth of Massachusetts each year.
- A pile of whole or shredded tires in Massachusetts is considered to be a "dumping ground" and requires a site assignment from the local Board of Health and a permit from the Massachusetts Department of Environmental Protection.[2]
- Tires that are chipped or shredded can be used for a variety of other purposes when approved by the MassDEP.

Why are waste tire piles a problem?

Stockpiles of waste tires can cause safety and health problems.

Although tires are difficult to ignite, once they are lit the fire is almost impossible to extinguish. Fumes from burning tires can affect nearby residents and firefighters in a variety of short- and long-term ways, ranging from irritation of the skin, eyes, and mucous membranes; central nervous system effects; depression; respiratory effects; and cancer.[3]

Fire also melts the rubber in tires and generates oil (called "pyrolytic oil") that can pollute the ground and surface water. Concentrations of metals (such as iron, zinc, tin and aluminum) in the ash residue from tire fires may be high, and they can contaminate surface and ground water if not properly handled. Therefore, these residues are often classified as hazardous wastes. Cleanup of tire fire sites is frequently difficult and expensive.[4] Rainwater collected inside tires provides a breeding ground for mosquitoes, which transmit illnesses, including West Nile virus and encephalitis.

What are the options for managing waste tires?

A relatively small percentage of the tires received at an automotive recycler can be reused or retreaded. The vast majority of the tires are waste tires and need to be either recycled or disposed. Recycling is the preferred option. Waste tires can be used as fuel ('tire-derived fuel') as well as in a variety of civil engineering applications in landfills and highways, and at playgrounds, horse arenas, and running tracks. Generally in Massachusetts, waste tires are shredded before they are recycled. Shredding reduces the volume of tires, eliminates the compaction problem at landfills and eliminates mosquito-breeding locations.

Disposal of tires can be costly. Whole tires presents problems for landfill operations because they do not compact well and may work their way to the surface of the landfill over time. MassDEP has banned the disposal of whole tires in landfills (visit http://www.mass.gov/eea/agencies/massdep/recycle/solid/massachusetts-waste-disposal-bans.html to learn more about Massachusetts waste bans).

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[1] Air Emissions From Scrap Tire Combustion, EPA-600/R-97-115, October 1997
[2] MGL C.111 s. 150A 310 CMR 16.00 and 19. 017
[3] Air Emissions From Scrap Tire Combustion, EPA-600/R-97-115, October 1997
[4] Commonwealth of Massachusetts, Interim Policy on Tire Disposal and Stockpiling, June 4, 1987

It costs money to handle and transport waste tires, even if the receiver takes them for free. Some automotive recyclers have collected large quantities of tires, believing that they will one day find a lucrative market for them. Although recycling markets for waste tires are improving, the number of waste tires stockpiled in this country, plus the number being generated each year, still exceeds the market demand. Stockpiling is not a disposal option and speculative accumulation of tires is more likely to result in costs than profits. To avoid creating a pile of waste tires that MassDEP could consider to be a "dumping ground", you need to be able to demonstrate that at least 75% of the tires you accumulate are recycled or reused in each calendar year, and are properly managed.

Best Management Practices

- Do not accept loose waste tires. Take only tires that are mounted on vehicles and the spare tire that comes with the vehicle.
- Reusable tires may be sold or sent to a tire recapping operation.
- **NEVER** burn or bury tires.
- Ship tires off-site as soon as you accumulate a full load (approximately 1000 to 1500 tires or a semi-trailer load) and keep a record of your shipments. Make sure you send them to a facility that can document it has all necessary approvals to accept them.
- Store tires in an enclosed trailer to keep them dry and ready for prompt shipping without additional handling.
- If tires must be stored outdoors, cover the pile with a tarp to help minimize the collection of water and avoid attracting vermin.
- Store tires in a sunny location to allow evaporation of standing water and to kill heat-intolerant mosquito larvae.
- Check with the local fire officials and configure outdoor waste tire stockpiles according to their instructions.
- Tire piles that are larger than 2500 cubic feet require permits from the local fire official pursuant to 527 CMR 10.03(5).
- If storing tires in a building, the storage facility should comply with the National Fire Protection Association's Standards for Storage of Rubber Tires, NFPA 230, 2003 edition and the Mass State Building Code 780 CMR 3.0. For further information, see the NFPA catalogue (http://www.nfpa.org/catalog/search.asp?action=search&query=230) and Massachusetts State Building Code (http://www.mass.gov/bbrs/newcode.htm).
- Cover loads of tires before transporting them over highways.

For more information:

- Visit the MassDEP Web site: http://www.mass.gov/eea/agencies/massdep/recycle/
- Visit other web sites with useful information.
  - > Automotive Recyclers Association: http://www.ecarcenter.org
  - > U.S. Environmental Protection Agency (EPA): http://www.epa.gov/ne/topics/waste/scraptires/index.html
  - > (sponsored by the US Environmental Protection Agency), and
  - > Massachusetts Department of Fire Services: Regulates the storage of combustible or flammable materials at 527 CMR 10.00 (http://www.mass.gov/eopss/agencies/dfs/dfs2/osfm/fire-prev/527-cmr-index.html)

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Executive Office of Environmental Affairs

Department of Environmental Protection

Produced by the Bureau of Waste Prevention, May 2006.
Printed on recycled paper.

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