

HAZARDOUS WASTE MANAGEMENT IN THE UNITED STATES

In the United States, there are two major hazardous waste problems that have become the responsibility of the U.S. Environmental Protection Agency (EPA). One deals with past contamination and is addressed in the U.S. law called the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), commonly referred to as "Superfund."

The second deals with the management of the hazardous waste that is being generated today. This waste is covered under the Resource Conservation and Recovery Act (RCRA, pronounced "reckra") which is the subject of this fact sheet.



WHAT IS HAZARDOUS WASTE?

Examples of hazardous wastes include acids, solvents, heavy metals and a wide range of organic chemicals. EPA lists a waste as "hazardous" if it will burn, explode, corrode metal, or is toxic. A toxic waste is a hazardous waste that is very dangerous to human health.

If a hazardous waste is listed as toxic, EPA has even tougher disposal rules for it. For example, many toxic wastes have been banned from burial in hazardous waste landfills and must be subjected to other technologies such as solidification/stabilization, vitrification, encapsulation, etc.

WHAT IS RCRA?

The Resource Conservation and Recovery Act is the United States' most important hazardous waste law. The U.S. Congress wrote the law in 1976 to make sure hazardous waste is handled safely and disposed of properly. RCRA was strengthened in 1984 with the passage of the Hazardous and Solid Waste Act, which amended the original law.

Besides management of hazardous waste, RCRA also regulates the operation of hazardous waste incinerators, landfills and treatment plants. RCRA requires EPA to impose stiff fines on hazardous waste facilities if they violate permit rules.

Pollutants defined as hazardous wastes under RCRA that are discharged in wastewater are not regulated by RCRA. These types of pollutants are regulated under the Clean Water Act and subsequent amendments.

Pollutants that are discharged by air emissions are generally regulated by the Clean Air Act and subsequent amendments.

WHERE DOES "RCRA WASTE" GO?

When Congress strengthened RCRA in 1984, it said that landfills or waste ponds should be "the least favored" method to dispose of RCRA wastes. Some types of hazardous wastes still may be put in landfills if they are pre-treated to make them less toxic. Opponents of landfilling, especially people who live near the landfills, worry that wastes will leak out of barrels and special enclosures (or "cells") and end up in the groundwater. This has already happened at older, unregulated landfills.

Another method of land disposal for hazardous wastes is deep-well injection. With this method, hazardous wastes are pumped deep into underground rock formations. EPA requires facilities disposing of hazardous wastes this way to prove that the wastes will not leave the injection site for the next 10,000 years. Opponents of "deep-welling" warn that there are no guarantees for predictions like that. Deep-well injection is now banned in some states.

Some technical and policy people believe that the best disposal method for hazardous waste is incineration, and the disposal industry says new technologies allow it to destroy 99.99% or more of the waste it burns. Opponents of this method say that incineration results in dangerous air pollution. And even incineration results in land disposal because the ash that is generated usually ends up being sent to a landfill.

WHAT YOU CAN DO

The generation of hazardous waste is a price we pay for living in the modern industrial world. The U.S. Con-

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gress and EPA have worked hard to stop hazardous waste dumping. Still, nearly two million tons of hazardous waste is disposed of every year by a variety of waste management and treatment technologies. But that number would be even larger if it included all the hazardous wastes that individuals get rid of from their homes every day.

These wastes, called "household hazardous wastes" find their way into sewers, groundwater, and nearby rivers and lakes simply because many people have no idea how potentially hazardous these common household products may be. Even if all our factories shut down tomorrow, there would still be tons of hazardous wastes poisoning the environment, unless individuals stop pouring them down the drain, on the ground, or sending them to landfills.

For example, used batteries (car and household), floor care products, furniture polish, lighter fluid, moth balls, car wax, and even nail polish remover are all considered household hazardous wastes. These wastes and their containers should be saved for a community hazardous waste collection day, or be taken to a licensed hazardous waste contractor.

Here are a few other tips to help keep household hazardous wastes in check:

- * Buy only as much **pesticides** as you need, and follow label directions for use, storage and disposal. Outdoor pesticides should not be applied during periods when high winds or rain are forecasted.
- * **Leather and textiles** have heavy metals, dyes, and solvents in them. If possible, give your old clothes to charity instead of a trash collector.
- * **Paints** have heavy metals, pigments, solvents and organic residues. Never pour them down the drain or on the ground. Store them for recycling or a hazardous waste collection.
- * Never pour **used motor oil** down the drain, on the ground, or send it to a landfill. Instead, take it to a service station or other outlet which accepts it for recycling.
- * **Plastics** contain organic chlorinated chemicals. Try to recycle as many of your plastics as possible.
- * Encourage your community to start a **household hazardous waste collection program**.

FOR MORE INFORMATION

about hazardous waste, read A&WMA's fact sheets on hazardous waste, municipal waste and recycling and the information book on pollution prevention.

This Environmental Fact Sheet is one of a series produced by the Air & Waste Management Association. The Association also produces educational materials for schools and the general public. For more information, phone (412) 232-3444.