



Extension Extra

ExEx 1023
Updated April 2002
Agriculture and
Biosystems
Engineering

COLLEGE OF AGRICULTURE & BIOLOGICAL SCIENCES / SOUTH DAKOTA STATE UNIVERSITY / USDA

Is there Hazardous Waste in your home?

*Chuck Ullery, Extension water and natural resources specialist,
Ruth Howard, Big Sioux Aquifer Demonstration Project,
SDSU Agricultural Engineering Department*

The words "Hazardous Waste" conger up images of nuclear power plants with mushroom clouds overhead or hospital garbage cans overflowing with syringes, bloody bandages, and chemical vials of unknown origin.

However, in every American home there are items that fall under the Hazardous Waste category and their disposal requires special handling to prevent them from polluting our water supply and other natural resources.

Many household products contain chemicals that, when discarded, contribute to contamination. It has been estimated that in an average city of 100,000 residents, 3.75 tons of toilet bowl cleaner, 13.75 tons of liquid household cleaners, and 3.44 tons of motor oil are discarded into city drains each month. In areas where there is no sanitary sewer system, those chemicals are discarded into septic tanks or dumped in the back yard.

While disposal of these products poses a threat to the environment, most people who incorrectly dispose of them are not aware that many common household products may contain hazardous chemicals.

Household hazardous products can usually be found in one of four categories:

Toxic—may cause injury or death upon ingestion, inhalation, or skin absorption. This category includes oven cleaners, toilet bowl cleaners, ammonia-based cleaners, drain cleaners, disinfectants, bleaches, some rug and upholstery cleaners, furniture polish, and mothballs. Common automotive products including anti-freeze, transmission and brake fluids, motor oil, and battery acids also fall into this category. Paints, varnish, wood preservatives, paint thinners, and paint removers are included. Common garden pesticides and herbicides, ant and roach sprays, and rat poisons are toxic.

Flammable—can be ignited under almost all temperature conditions. This category includes paints, stains, varnishes, wood preservers, paint thinners, furniture polish, and some automotive products including brake or transmission fluid and gasoline and diesel fuel.

Corrosive—a chemical or its vapors that can cause deterioration or irreversible alteration in body tissues at the site of contact and deteriorate or wear away the surface of a material. Corrosive household products include acids like battery acid, oven cleaners, toilet bowl cleaners, disinfectants, rug and upholstery cleaners, and household bleach.

Irritants—cause soreness or inflammation of the skin, eyes, mucous membranes, or respiratory system. Irritants include household ammonia-based cleaners, abrasive cleaners or powders, and toilet bowl cleaners.

Products that contain hazardous chemicals should be used and stored carefully. When using the products be sure to carefully read and follow label directions. Use the product only in the manner directed by the manufacturer and in the recommended strength. Don't mix chemical substances unless recommended or approved by the manufacturer. Always keep areas of use well ventilated. Prevent splashing chemicals on other surfaces. Buy only as much as you can use to avoid storing these products. Or buy less toxic alternate products whenever possible.

If you must store hazardous chemicals, do it carefully. Be sure the lids are tight. Store in the original containers with labels firmly in place. If the original container is leaking or is damaged, place the original container in a larger container and label it appropriately.

When you want to dispose of hazardous products call your local sanitary landfill for recommendations. Take advantage of community wide collection programs to get rid of unwanted and unnecessary hazardous materials.

Do you know your trash?

How much do you know about the solid waste you generate? Do you know where it goes? Do you know how much is generated each year? Take this miniquiz and compare your answers to the ones on the right. You may be surprised by some of the answers.

Questions

- Nature recycles a glass bottle in :
 - 100 years
 - 500 years
 - 1000 years
 - 1 million years
- For every \$11 spent on groceries, about \$ ____ is spent on packaging.
 - \$1
 - \$2
 - \$3
 - \$4
- Nearly half the people in South Dakota don't know where the garbage hauled from their household is taken.
 True
 False
- The production of a ton of paper from recycled waste saves ____ trees?
 - 5 trees
 - 17 trees
 - 28 trees
 - 35 trees
- It is estimated that ____ % of the country's landfills will be closed by 1999.
 - 10%
 - 25%
 - 45%
 - 85%
- In 1992, about 17% of household solid waste was made up of:
 - glass
 - plastics
 - food
 - magazines/newspapers
- The use of plastic beverage containers in the U.S. increased from 15 million in 1967 to ____ in 1992?
 - 50 million
 - 200 million
 - 4.5 billion
 - 12.5 billion
- In 1987, ____ tons of waste paper were exported from the United States.
 - 2 million
 - 4 million
 - 6 million
 - 9 million

Answers

- (d) It takes one million years for a glass bottle to naturally decompose. Aluminum takes 400 years and tin 100 years. Reusing and recycling can help decrease solid waste put into landfills.
- (a) Packaging costs about \$1 for every \$11 spent on groceries. Buying in bulk quantities is one way you can save money as well as help to conserve the environment. Manufacturers say, however, that most packaging is necessary to protect the product from shoplifters, not for protection from damage in shipping.
- True. Nearly half of the state's citizens don not know the destination for their household waste. In the U.S., 80% or more of the household waste generated goes to landfills, about 10% is incinerated, and about 10% is recycled.
- (b) The production of a ton of paper from recycled waste saves 17 trees, uses 4200 fewer kilowatts of electricity and 7000 fewer gallons of water, and reduces the volume of waste to be landfilled or incinerated by approximately three cubic yards.
- (c) According to the U.S. Environmental Protection Agency (EPA), 45% of the country's landfills will be closed by 1999. Landfills are closing because they are filling up and/or are unable to meet state and federal standards.
- (c) Food accounted for about 17% of the U.S. households solid waste generated in 1992. Composting this material generates high quality garden fertilizer and reduces space necessary in landfills.
- (d) About 12.5 billion plastic beverage containers were used in the U.S. in 1992. Plastics account for about 7% of solid waste.
- (b) Four million tons of waste paper were exported in 1987, primarily to the Far East, to be recycled and returned as boxes and cartons containing TV's, stereos, etc. The largest single export through New York Harbor in 1987 was waste paper.

This publication and others can be accessed electronically from the SDSU College of Agriculture & Biological Sciences publications page, which is at <http://agbiopubs.sdstate.edu/articles/ExEx1023.pdf>



Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the USDA. Larry Tidemann, Director of Extension, Associate Dean, College of Agriculture & Biological Sciences, South Dakota State University, Brookings. SDSU is an Affirmative Action/Equal Opportunity Employer (Male/Female) and offers all benefits, services, and educational and employment opportunities without regard for ancestry, age, race, citizenship, color, creed, religion, gender, disability, national origin, sexual preference, or Vietnam Era veteran status.