April 2021

PowerPoint - What are Hazardous Wastes?

Center for Urban Resilience

Follow this and additional works at: https://digitalcommons.lmu.edu/urbanecolab-module04

Part of the Ecology and Evolutionary Biology Commons, Environmental Education Commons, Sustainability Commons, and the Urban Studies and Planning Commons

Repository Citation
https://digitalcommons.lmu.edu/urbanecolab-module04/19

This Lesson 4: Not All Waste is Created Equal is brought to you for free and open access by the Urban EcoLab at Digital Commons @ Loyola Marymount University and Loyola Law School. It has been accepted for inclusion in Module 04: Hazardous Waste by an authorized administrator of Digital Commons@Loyola Marymount University and Loyola Law School. For more information, please contact digitalcommons@lmu.edu.
What are Hazardous Wastes?

Why are they so harmful to humans and the environment?
Our wastes can be harmful for two reasons:

- There is simply too much of it.

- It is harmful because certain chemicals contained in the waste can harm living things even in very small doses.
What is Hazardous Waste?

According to the US EPA:

• “Hazardous waste is a waste with properties that make it dangerous or potentially harmful to human health or the environment.”

• “Hazardous wastes can be liquids, solids, contained gases, or sludges.”

• “They can be the by-products of manufacturing processes or simply discarded commercial products, like cleaning fluids or pesticides.”
What is a Hazardous Waste?

The EPA has 4 criteria that classify waste as Hazardous:

- Flammable
- Corrosive
- Reactive
- Toxic
Examples of Hazardous Waste

- Organic Compounds
- Household Wastes
- Heavy Metals
Synthetic Organic Compounds

• Non-biodegradable- Synthetic organic compounds and petroleum derived compounds resist decomposition by bacteria, fungus and insects

• Many synthetic compounds are toxic because they can be absorbed by the skin and act as mutagens, carcinogens, teratogens and endocrine disrupters
Organic Compounds:

Examples:
- Plastics
- Rubber Tires
- Wood Preservatives
- Pesticides
- Solvents
Household Wastes

- Household hazardous wastes result from materials commonly used in and around the home that contain one or more of the EPA hazardous waste material criteria.

- US cities generate 1.6 million tons of household hazardous waste annually.
Household Wastes

Examples:

- Cleaning products
  - Oven cleaners, toilet cleaners, bleach, and ammonia
- Paint based products
  - Paint thinners, stains, wood preservatives
- Gardening and pest control products
  - Pesticides and rodenticides
- General Products
  - Batteries, glues
- Automotive products
  - Gasoline, motor oil, solvents, brake fluid, antifreeze
- E-Waste
  - Cellphones, personal computers, i-pods, laptops
Heavy Metals

- Heavy metals occur naturally in the environment as constituents of the earth's crust.

- Anthropogenic activities (mining, agricultural activities, waste disposals, fuel combustions) can rearrange metal distribution patterns resulting in site specific elevated concentrations.

- Because they are chemically similar to beneficial metals such as calcium, zinc and iron, heavy metals replace them in many important proteins in the body causing a wide range of problems.
Heavy Metals

- Heavy Metals are used widely in electronics and the fabrication of metals

Examples:
- Lead
- Mercury
- Chromium
- Copper
- Tin
Hazardous Waste

- Many materials can be considered hazardous depending on the criteria it meets.

- Anything can be toxic depending on how much is present and in what concentration.

- Even substances necessary for life like oxygen or water can be toxic if there is too much of it.
COUNTERTHINK

SO HOW BAD IS THE HEAVY METALS CONTAMINATION IN THESE WATERS?

LET'S JUST SAY WE'VE STARTED FISHING WITH MAGNETS.

CONCEPT-MIKE ADAMS  ART-DAN BERGER  WWW.NEWSTARGET.COM