



## Hazardous Waste

According to federal and Indiana statutes the term "hazardous waste" means a solid waste, or combination of solid waste that, because of its quantity, concentration, or physical, chemical or infectious characteristics may:

- cause or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or
- pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

Hazardous wastes come in many forms. They can be liquid, solids, semisolid, or contained gases. They can be manufacturing process byproducts, sludges or spent materials or simply discarded products. Whatever their form, proper management is essential to protect human health and the environment. In 1976 congress passed the [Resource Conservation and Recovery Act \(RCRA\)](#). Subtitle C of this act directed the [United States Environmental Protection Agency \(U.S. EPA\)](#) to develop comprehensive, cradle to grave management standards for hazardous waste.

Under the broad statutory definition, the universe of potential hazardous waste is extremely large and diverse. As a result, Congress directed the U.S. EPA to develop regulations to specifically define the universe of hazardous waste for regulatory purposes under RCRA. The U.S. EPA developed four defining characteristics of hazardous waste and four lists of specific hazardous wastes. If a waste meets the definition of solid waste, and has not been excluded by rule from the definition of hazardous waste, it is considered a hazardous waste if:

- It is included on one of the four lists of hazardous waste found in the regulations (i.e., listed waste), or;
- It exhibits one of the four defined hazardous waste characteristics of ignitability, corrosivity, reactivity, toxicity (i.e., characteristic waste).

These lists and definitions are found in the federal regulations at 40 CFR Part 261. These definitions and lists are also adopted by reference in Indiana's hazardous waste rules at 329 IAC 3.1-6.

### Listed Waste

Some wastes are identified in the rules as hazardous waste by simply listing them. A waste is listed because it has been shown to be harmful to human health and the environment when not properly managed. The regulations list over 400 hazardous wastes. These lists are organized into three categories:

- Source-specific wastes
  - ◊ This list includes certain waste from specific industries such as petroleum refining, pesticide manufacturing, or iron and steel.
- Non-specific source waste
  - ◊ This list identifies waste commonly generated by a wide variety of manufacturing and industrial processes.
- Commercial chemical products
  - ◊ This list includes specific commercial chemical products that are hazardous waste when discarded unused.

### Characteristic Waste

A waste is hazardous if it exhibits one or more of the following characteristics:

- Ignitability
  - ◊ Ignitable waste can create fires under certain conditions.
- Corrosivity
  - ◊ Corrosive wastes are acids or bases that are capable of corroding metal storage tanks or containers which may result in release of the material, or may injure persons who come in contact with it.
- Reactivity
  - ◊ Reactive wastes are unstable under normal conditions. They can cause explosions, or release toxic fumes, gases, or vapors when mixed with water.
- Toxicity
  - ◊ Toxic wastes are harmful or fatal when ingested or absorbed. When toxic wastes are disposed on land, contaminants may leach from the waste and pollute ground water or surface waters. Toxicity characteristic wastes are identified by concentration levels of contaminants that may be harmful to human health or the environment. This characteristic only identifies wastes which contain certain specified contaminants. Other toxic wastes are identified by listing them in the regulations.

### IDEM's Hazardous Waste Management Program

IDEM has been authorized by the U.S. EPA to implement the majority of the federal RCRA Subtitle C hazardous waste management program in Indiana. Indiana's hazardous waste management rules are codified at 329 IAC 3.1. Indiana has adopted most of the federal hazardous waste management standards codified federally at 40 CFR Parts 260-270, and 273. Exceptions and additions to the federal rules are specifically noted in the state's hazardous waste management rules.


Some waste commonly considered hazardous, such as PCB's, infectious waste, and asbestos, are regulated under rules specifically tailored to those waste rather than the hazardous waste rules referenced above. Used oils may be regulated under the hazardous waste rules when disposed, but are subject to another set of rules when recycled.

The Indiana Department of Natural Resources and the Indiana Department of Health also have rules that cover certain types of waste that are hazardous if improperly managed. For example, the management of infectious waste at medical institutions is under the jurisdiction of the Indiana Department of Health. Certain mining and oil exploration waste is under the jurisdiction of the Indiana Department of Natural Resources. IDEM works closely with these other state agencies to coordinate our activities.

### Hazardous Waste Management Options

The best management option for hazardous waste is to eliminate or minimize the generation of hazardous waste to begin with. Where hazardous waste generation cannot be avoided, recycling is preferred to treatment and disposal. OLQ and the IDEM's Office of Pollution Prevention and Technical Assistance work together to further these goals of pollution prevention, waste minimization, and recycling.

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Newsletter Spotlight

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Questions or comments? E-mail us at [kvansoest@safetyresources.com](mailto:kvansoest@safetyresources.com) or call 800.641.5990