



U.S. Environmental Protection Agency

Municipal Solid Waste

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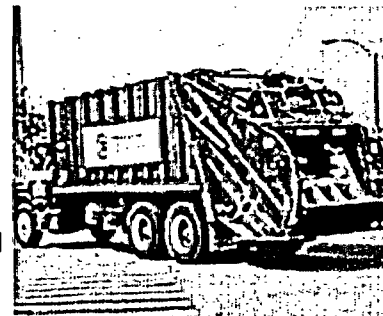
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MSW Disposal

Landfilling

Although source reduction, reuse, recycling, and composting can divert large portions of municipal solid waste (MSW) from disposal, some waste still must be placed in landfills. Modern landfills are well-engineered facilities that are located, designed, operated, monitored, closed, cared for after closure, cleaned up when necessary, and financed to insure compliance with federal regulations. The federal regulations were established to protect human health and the environment. In addition, these new landfills can collect potentially harmful landfill gas emissions and convert the gas into energy.



Federal Landfill Standards

- [Clarification of April 6, 2004 Memo on Recommended Interim Practices for Disposal of Potentially Contaminated Chronic Wasting Disease Carcasses and Wastes - November 12, 2004 \[PDF File, 93 KB, About PDF\]](#)
- [Recommended Interim Practices for Disposal of Potentially Contaminated Chronic Wasting Disease Carcasses and Wastes - April 6, 2004 \[PDF File, 14 KB\]](#)
- [Landfill Publications](#)
- [Landfill Methane Outreach Program](#)
- [Landfill Regulations](#)
- [Landfill Air Emission Regulations and Air Models](#)
- **Location restrictions** ensure that landfills are built in suitable geological areas away from faults, wetlands, flood plains, or other restricted areas.
- **Liners** are geomembrane or plastic sheets reinforced with two feet of clay on the bottom and sides of landfills.
- **Operating practices** such as compacting and covering waste frequently with several inches of soil help reduce odor; control litter, insects, and rodents; and protect public health.
- **Groundwater monitoring** requires testing groundwater wells to determine whether waste materials have escaped from the landfill.
- **Closure and postclosure care** include covering landfills and providing long-term care of closed landfills.
- **Corrective action** controls and cleans up landfill releases and achieves groundwater protection standards.
- **Financial assurance** provides funding for environmental protection during and after landfill closure (i.e., closure and postclosure care).

Combustion and Incineration

To reduce waste volume, local governments or private operators can implement a controlled burning process called combustion or incineration. In addition to

minimizing volume, combustors, when properly equipped, can convert water into steam to fuel heating systems or generate electricity.

Benefits of Combustion

Burning MSW can generate energy while reducing the amount of waste by up to 90 percent in volume and 75 percent in weight.

A variety of pollution control technologies reduce the toxic materials emitted in combustion smoke. Among these are scrubbers—a device that uses a liquid spray to neutralize acid gases in smoke—and filters, which remove tiny ash particles from the smoke. Burning waste at extremely high temperatures also destroys harmful chemical compounds and disease-causing bacteria. Regular testing ensures that residual ash is nonhazardous before being

landfilled.

- [Combustion and Incineration Regulations](#) [EXIT disclaimer](#)

EPA's [Office of Air and Radiation](#) is primarily responsible for regulating combustors and incinerators because air emissions from combustion pose the greatest environmental concern.

Household Hazardous Waste

Common household items such as paints, cleaners, oils, batteries, and pesticides contain hazardous components. Leftover portions of these products are called household hazardous waste. These products, if mishandled, can be dangerous to your health and the environment.

- [More About Household Hazardous Waste](#)

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