



Solid Waste Landfills Office of Land Quality

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www.idem.IN.gov

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Description:

- Modern solid waste landfills are designed and constructed to strict standards to protect the environment. Current landfill regulations provide for responsible management of solid waste and a safer alternative to the outdated and illegal practices of open dumping and open burning.
- Municipal solid waste landfills may receive household waste, construction/demolition waste, industrial process waste, and pollution control waste. MSWLFs must not accept hazardous waste.
- Other types of landfills include restricted waste sites, which may accept only the specific waste designated in their facility permits based on a waste classification system, and construction/demolition sites, which may accept only the debris from construction or demolition projects.
- Landfills may be publicly or privately owned. Owners and operators of solid waste landfills must first receive local zoning approval to site a landfill. Landfill owners and operators must then receive a solid waste facility permit from IDEM, as well as any required local land use permits, before constructing and operating a landfill.
- Landfills must use synthetic liners and/or soil liners to isolate the waste from nearby ground water, air, and soil. The design requirements for a landfill liner system depend on the type of landfill and site-specific conditions.
- Depending on the landfill type, landfill operators must do one or more of the following: monitor and manage gas emissions, regularly test ground water adjacent to the site, collect leachate for treatment, and compact and cover waste on a daily basis.
- Once a landfill is closed, landfill operators must continue post-closure care for at least 30 years, including ground water monitoring, and maintenance of the site's final cover to ensure proper containment of the waste.

Environmental Impacts:

- Modern landfills are designed with liners, leachate collections systems, leak detection systems, and methane collection systems to prevent contamination of nearby soil, ground water, and air.
- As rainwater filters through a landfill, chemicals in the waste dissolve in the water, a process called leaching. The landfill liner system contains the resulting liquid, called leachate. Leachate is collected and removed through a system of perforated pipes. Some landfills pump leachate back onto the waste to help promote waste compaction and decomposition. Landfills send excess leachate to a wastewater treatment plant by truck or through a sanitary sewer system. Collecting and properly disposing of leachate is an important aspect of modern landfills that prevents soil and ground water contamination.
- Because landfills cover the waste with soil or other approved alternative cover materials every day, the waste decomposes without oxygen and produces methane and carbon dioxide. To prevent methane from migrating underground into nearby buildings or being released into the atmosphere, a series of pipes are installed to safely collect and either flare the gas or use it to generate electricity.

IDEM's Role:

- IDEM is responsible for protecting human health and the environment while providing for safe industrial, agricultural, commercial, and governmental operations vital to a prosperous economy.
- IDEM's Office of Land Quality (OLQ) is responsible for reviewing solid waste facility permit applications, determining whether they are in compliance with solid waste regulations, and issuing final decisions for new facilities, as well as modifications, and expansions at existing facilities. IDEM's OLQ regulates landfill facilities and waste types in Indiana and works with solid waste management districts on local waste management and recycling programs.

- IDEM's Solid Waste and Industrial Waste Compliance Sections inspect both active and closed solid waste facilities.
- In addition to permitting activities, geologists evaluate sampling protocols for ground water monitoring devices and review ground water quality data that landfill operators submit as specified in their permits.

Citizen's Role:

Citizens can take a number of actions to reduce and effectively manage solid waste and prevent pollution, including:

- Properly dispose of waste. Where curbside collection is not an option, take trash to a permitted solid waste processing facility or landfill for proper disposal. Never dump it a field or ravine.
- Work to generate less waste. IDEM provides a tool for measuring your impact, as well as tips for generating less waste, on its website at www.IN.gov/idem/recycle/2355.htm.
- Recycle at home and at work. To learn which materials can be recycled, visit IDEM's Recycle Indiana website at www.IN.gov/idem/recycle/2345.htm. To learn where to recycle, including local drop-offs and collection services, contact your local solid waste management district; IDEM provides a listing at www.IN.gov/idem/reycycle/2439.htm.
- "E-cycle." Take unwanted, broken and obsolete electronic devices to a registered e-waste collector or recycler. Examples include televisions, computers, fax machines, DVD players, camcorders/cameras, DVRs, GPS devices, and more. Recycling helps prevent environmental contamination from the heavy metals they contain. Manufacturers can reuse the steel, glass, plastic, copper, gold, tin, silicon and aluminum from recycled electronics, which conserves natural resources and prevents pollution. For more information, including a complete list of electronics that can be recycled, visit www.IN.gov/idem/recycle/2352.htm.

Additional Information:

- For more information on solid waste and landfill permitting, visit IDEM's website at <http://www.in.gov/idem/4222.htm>.
- For more information solid waste and landfill compliance, reporting, and services, visit IDEM's website at <http://www.in.gov/idem/4998.htm>.
- For more information on solid waste management in the United States, visit the U.S. EPA's website at <http://www.epa.gov/wastes/nonhaz/municipal/>.
- For more information on methane collection and use as an energy source in the United States, visit U.S. EPA's website at <http://www.epa.gov/lmop/faq/lfg.html>.
- For landfill questions and concerns, feel free to call IDEM's Office of Land Quality at (317) 234-6950 or toll free at (800) 451-6027.