



# Landfills: Frequently Asked Questions

A landfill is a large outdoor site specifically designed for the disposal of waste. Now, not all landfills are the same. There are different kinds of landfills that accept different kinds of waste including industrial waste, hazardous waste, construction and demolition debris as well as municipal solid waste (MSW). But when you think of a landfill, you probably are thinking of the landfill that accepts your household trash or garbage. In South Carolina, that's known as a Class 3 landfill.

Want to learn more? Here are some typically asked questions about Class 3 landfills.

- **Why do we need any landfills?** Waste reduction, reuse and recycling divert large parts of our waste from landfills, but not all of it. That waste must be managed safely to protect human health and the environment.
- **What is MSW?** Different states have different definitions, but MSW is commonly defined as household trash or garbage. This includes paper, cans, bottles and food scraps. Class 3 landfills are designed to accept these types of waste – much of which should be recycled – along with other specific kinds of waste. In South Carolina, Class 3 landfills cannot accept hazardous waste, lead-acid (car and truck) batteries, yard trimmings, tires (whole), used motor oil and large appliances. For South Carolina's definition of MSW, see the "FYI: Garbage 101" fact sheet.
- **How is MSW managed in South Carolina?** Waste is properly managed two ways. We recycle it or dispose of it in a Class 3 landfill.
- **How much garbage is disposed of in Class 3 landfills?** Americans generated about 250 million tons of MSW in 2010 (the latest numbers available) according to the U.S. Environmental Protection Agency (EPA). Of that amount, 54 percent or 136 million tons was disposed of in landfills. The rest was recycled or composted (34 percent or 85 million tons) or incinerated (12 percent or about 29 million tons).
- **How much does it cost to dispose of waste at a Class 3 landfill?** Landfill operators charge a fee on a per ton basis. The fee is called a tipping fee and is charged to the waste hauler who empties or "tips" garbage out of the truck. The average tipping fee in South Carolina was \$36 per ton according to the "S.C. Solid Waste Management Annual Report for FY11."
- **How do we pay for waste management?** It depends. Many people pay for waste management – including recycling services – through their property taxes. Other residents pay their fees through monthly or annual fees billed by their local government. Some have to pay waste haulers directly. Still, others take their garbage and recyclables to drop-off centers that are, of course, funded by local governments through taxes or fees.
- **How many Class 3 landfills are there?** Nationwide, the number of active landfills has shrunk from nearly 8,000 in 1988 to 1,908 in 2010 according to the EPA. In South Carolina, there were 24 permitted Class 3 landfills operating in FY11.
- **Who owns Class 3 landfills?** Nationally, about two-thirds are owned by local governments while about one-third are privately owned. In South Carolina, local governments own 10 while another 14 are privately owned.
- **What laws or regulations must be followed at Class 3 landfills?** Class 3 landfills are well-engineered facilities that must meet strict EPA and S.C. Department of Health and Environmental Control (DHEC) regulations on their location, design, operation and closing. In South Carolina, all Class 3 landfills must be approved (receive a permit) by DHEC.

South Carolinians generated about 4.2 million tons of MSW in fiscal year (FY) 2011 (July 1, 2010 to June

30, 2011). Of that amount, 72 percent (about 3 million tons) was disposed of in the state's Class 3 landfills. The remainder – 28 percent (1,172,768 tons) – of the state's MSW was recycled.

In addition, local zoning and land-use ordinances may limit Class 3 landfill site selection. For more

information on the federal and state regulations on Class 3 landfills, see the “FYI: How Landfills Work” fact sheet.

- **Why do Class 3 landfills have liners?** Liners in Class 3 landfills are designed and placed to stop the potential pollution of groundwater. Hazardous household materials such as cleaners and pesticides and other waste could contaminate groundwater if the liners were not in place.
- **Do Class 3 landfills smell?** Federal and state regulations require MSW to be covered daily with soil or another type of cover to control or reduce odor. Landfill operators also can control or reduce odors by only disposing of waste in a small working face (area). For more information, see the “FYI: How Landfills Work” fact sheet.
- **Who picks landfill locations?** If it is a public landfill, a local government will select a potential site. If it is a private company, it will select a potential site and approach the local government. In both cases, residents will have a chance to comment at public meetings. Once a potential site is selected, the local government or private company will apply to DHEC for a permit. There are numerous local, state and federal requirements that must be met to be given a permit including meeting all local zoning requirements, being consistent with the county solid waste management plan and meeting a demonstration of need criteria. Local zoning and land-use ordinances may limit Class 3 landfill site selection. Any landfill, including Class 3 landfills, are difficult to locate simply because the public frequently opposes new construction. People remember the poor practices of the past and are concerned about their health and environment as well as property values, noise, odor and traffic if a landfill is being considered in their community.
- **What happens when Class 3 landfills close?** First, before a Class 3 landfill is approved (given a permit from DHEC), a landfill owner is required to have funding to not only properly close but also to monitor

and fix any environmental problems that could occur. When a Class 3 landfill is closed, it is capped with a layer of clay, a plastic liner and a layer of soil (bottom to top of the cap). The cap is seeded to grow grass. The Class 3 landfill will be monitored for 30 years. For more information, see the “FYI: How Landfills Work” fact sheet.

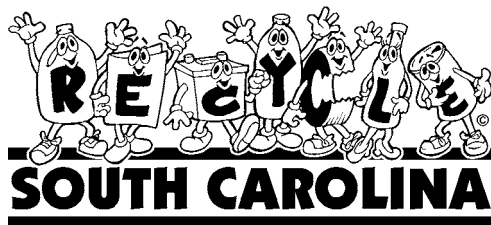
## The Myth of Biodegradation

Most of us assume that when we throw something away, it will eventually break down or decompose in the landfill. You know, a return to nature kind of thing. Well, not necessarily. It depends on what was thrown away – and a lot of other things.

One of the most recognized research efforts on decomposition – also called biodegradation – has been the work done as part of the Garbage Project at the University of Arizona. Researchers mined local landfills to learn about modern civilization. Among their findings – garbage does not break down in landfills.

The Garbage Project discovered that landfills are a much more static structure and that biodegradation takes a lot longer than previously thought. Air and water are necessary for biodegradation. Under normal landfill conditions – that is when the garbage is covered by dirt and the landfill is relatively dry – the only garbage that truly decomposes are certain types of food scraps and yard trimmings (banned from Class 3 landfills in South Carolina) and even that takes a long time. Hot dogs and pastries, buried as long as 15 years ago, were still recognizable. Grass clippings were still green. Newspapers, long thought to be easily biodegradable, were found in landfills virtually intact after being buried for decades. The bottom line is this: throwing something away is a lifetime decision in more ways than one.

**DISCLAIMER:** The definitions in this fact sheet do not constitute DHEC’s official use of terms for regulatory purposes. Specific legal definitions of some words may be found in various South Carolina laws and regulations.



Office of Solid Waste  
Reduction & Recycling  
1-800-768-7348 ● [www.scdhec.gov/recycle](http://www.scdhec.gov/recycle)

DHEC’s Office of Solid Waste Reduction and Recycling FYIs provide general information on environmental topics. Readers are encouraged to reproduce this material. For more information about solid waste issues, please call **1-800-768-7348** or visit our Web site at [www.scdhec.gov/recycle](http://www.scdhec.gov/recycle). Please send written correspondence to: DHEC’s Office of Solid Waste Reduction and Recycling, 2600 Bull Street, Columbia, SC 29201.