



Construction and Demolition Debris

Construction and demolition (C&D) debris is the waste generated from the construction, remodeling, repair and deconstruction of homes, buildings, roads, bridges as well as drainage and sewage systems.

C&D debris often consists of bulky materials. C&D debris may include bricks, concrete, wood, asphalt (from shingles and roads), glass, metal, plastic, plumbing fixtures and gypsum (the main material of drywall) and roofing as well as debris associated with land clearing and natural disasters.

C&D debris is a serious solid waste management issue.

C&D debris is a significant part of the total solid waste generated in South Carolina. In fiscal year 2008 (FY08), more than 2.9 million tons of C&D debris was generated in the state – about 23 percent of the total amount of solid waste generated in South Carolina. Of that amount, nearly 1.9 million tons were disposed of in permitted (as of FY08) C&D debris and land-clearing debris landfills in South Carolina. The remainder of the C&D debris was recycled (more than 860,000 tons), incinerated or disposed of in a municipal solid waste (MSW) landfill. With the state's economy growing and the amount of overall construction taking place, the amount of C&D debris generated is expected increase.

Much of the material found in illegal dumps across the state is C&D debris. Some builders and contractors cut costs by illegally dumping, thus under-bidding those who legally dispose of their C&D debris at permitted landfills.

Illegal dumping is compounded by the fact that some C&D debris is hazardous material and may harm human health and the environment. Wood, for example, is commonly treated with chemicals to protect it against weather, insects and fire. Any materials painted prior to 1978 may have lead-based paint – another serious human health

and environmental hazard. Roofing shingles and some insulation manufactured before 1975 may contain asbestos.

Proper C&D Debris Management

Management options for C&D debris include reuse, recycling, incineration and disposal in either a C&D debris or MSW landfill.

Most of the C&D debris generated in South Carolina is disposed of in a C&D debris or MSW landfill. It is important to note that, by law, C&D debris disposed of in a C&D debris landfill must be non-hazardous and not contaminated. Contaminated refers to any waste that has been in contact with petroleum products, solvents, pesticides, herbicides, preservatives, lead-based paint and certain types of asbestos. Also excluded from disposal is C&D debris that has been contaminated with polychlorinated biphenyls (PCBs). PCBs are oily liquids or solids that were used as coolants and lubricants in transformers and other electrical equipment prior to 1977. Any C&D debris that is contaminated must be disposed of in a MSW landfill.

There are many kinds of waste that cannot be disposed of in C&D debris landfills. These include: contaminated and hazardous waste (see above); household garbage; lead-based paint; mercury lamps; liquid waste; railroad ties; paints cans; caulk tubes; and utility poles.

C&D debris often can be recycled.

The last management option for C&D debris should be landfill disposal. The preferred ways to manage C&D debris – like any other waste – are to reduce the amount generated to begin with and, if possible, recycle.

Homebuilders and contractors, for example, can reduce C&D debris by carefully estimating the

amount of materials needed for construction. Materials that are not needed can be reused on another project or made available to others for reuse. In South Carolina, for example, Habitat for Humanity Resale Stores accept various building materials. For more information, visit www.habitat.org/cd/env/restore.aspx. It is important to remember that materials such as cardboard, metal, aluminum and plastic should be separated from C&D debris and recycled.

Other materials can be taken to a C&D debris processing facility to be recycled. For example, some C&D debris processors crush concrete, cement blocks and bricks into aggregate and sell it. Tree stumps and wood waste can be ground and sold as boiler fuel.

There are other options. Call DHEC's Office of Solid Waste Reduction and Recycling at **1-800-768-7348** for more information.

Common Community Concerns About C&D Debris Landfills

Residents are always concerned when any landfill – including a C&D debris landfill – is being proposed for their community. Some of the most frequent concerns that residents have regarding a proposed C&D debris landfill include: the types of wastes that will be disposed of in the landfill; risk to ground water; increased truck traffic, dust, odor, noise and litter; as well as potential fire.

It is important to remember that C&D debris that is disposed of in a C&D debris landfill, by law, must be non-hazardous, non-contaminated waste. Odor normally is not an issue. C&D debris landfills cannot accept household garbage – which is often associated with odor. C&D debris landfills must be covered monthly with six inches of soil to prevent risk of fire and blowing litter.

In addition, it is important to note that the reuse or recycling of C&D debris – including bricks, lumber, shingles, gypsum wallboard (drywall), concrete blocks, cardboard and metals – saves landfill space and reduces the need to build new C&D debris landfills.

DHEC's Division of Mining and Solid Waste Management has two technical assistance sheets on C&D debris landfills. The fact sheets answer frequently asked questions and explain the process of how C&D debris landfill sites are permitted. Call the Office at **1-800-768-7348** or visit www.scdhec.gov/environment/lwm/recycle/info_for_you.htm for these technical assistance sheets.

DID YOU KNOW? During FY08, the S.C. Department of Health and Environmental Control's Office of Solid Waste Reduction and Recycling (Office) partnered with The Sustainability Institute (based in Charleston) to produce the S.C. Green Building Directory (Directory). The on-line Directory (www.scgreenbuildingdirectory.org) provides information on C&D debris recycling, recycled-content building products as well as green building techniques. The Directory – which is funded primarily by the Office with additional support from the S.C. Energy Office and the S.C. Department of Commerce – allows users to easily access information on green building products and services offered by more than 200 companies.



Office of Solid Waste
Reduction & Recycling
1-800-768-7348 ● 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. Please send written correspondence to: DHEC's Office of Solid Waste Reduction and Recycling, 2600 Bull Street, Columbia, SC 29201.