



Recycling 102

In Recycling 101, you learned what recycling is, why you should recycle and how recycling works.

Well, how are we doing in South Carolina? What are the state's recycling and waste reduction goals? What are the recycling numbers? What's the recycling rate?

Those should be easy questions to answer, right? Well, nothing is easy. Not even the measuring and reporting of the recycling rate and numbers. Here are two things to remember. First, there are all kinds of waste. Second, no matter how many kinds of waste there are, there is a total amount of waste generated.

South Carolina – like all states – measures many kinds of waste. But the state's official recycling rate is based only on municipal solid waste (MSW) and is calculated as shown below.

$$\text{MSW recycled} \div \text{MSW generated}$$

MSW generated is the total of MSW disposed of plus MSW recycled.

What is MSW? MSW has many definitions throughout the nation. In South Carolina, however, MSW is defined as the combined residential, commercial, institutional/non-profit and industrial packaging/office waste generated. This includes paper, cans, bottles, food scraps, yard trimmings, packaging and other items.

What are South Carolina's recycling and waste reduction goals?

The S.C. Solid Waste Policy and Management Act of 1991 (Act) originally set a statewide recycling goal of 25 percent and a goal of reducing the amount of waste disposed of at MSW landfills and incinerators by 30 percent. Both rates were calculated by weight. Both goals were measured from the **total** amount of waste generated – not just MSW. Both goals were set using fiscal year (FY) 1993 numbers as a baseline and were to be met by FY97. Both goals were met.

The Act was amended in October 2000 to reflect new recycling and waste reduction goals. The recycling goal

was changed to 35 percent of the MSW stream and was to be met by FY05. The waste reduction goal was changed to reduce the amount of MSW disposed of to 3.5 pounds per person per day (p/p/d) – also to be met by FY05. The state has not reached either goal.

What is South Carolina's current MSW recycling rate?

The amount of MSW generated in FY11 (July 1, 2010 – June 30, 2011) was about 4.2 million tons according to the S.C. Solid Waste Management Annual Report for FY11. Of this amount, 1,172,768 tons of MSW were recycled, resulting in a MSW recycling rate of 28 percent for the state. Overall, South Carolinians recycled on average 1.4 p/p/d of MSW.

How does South Carolina compare nationally? The amount of MSW generated nationwide was 250 million tons in 2010 (the latest numbers available) according to the U.S. Environmental Protection Agency (EPA). Of that amount, 85 million tons (34 percent) were recycled. Americans recycled on average 1.5 p/p/d.

Where do the 'numbers' come from to determine the state's recycling rate?

The Act requires county governments to report annually to the S.C. Department of Health and Environmental Control (DHEC) the amount of MSW recycled within their county. DHEC also receives reports from permitted landfills, transfer stations and incinerators on the amount of waste disposed of at those facilities.

Used Oil Recycling

Used oil also is a part of MSW and is included in the state's measured recycling rate. South Carolina has one of the nation's top and most comprehensive used oil recycling programs targeting do-it-yourself (DIY) oil changers. In 2010 (the latest year figures were available), DIYers recycled 984,437 gallons of used oil.

Overall, DIYers have recycled more than 17 million gallons of used oil since 1990.

Total Solid Waste Recycled

While South Carolina narrowly defines what can be included in its measured recycling rate, it also is worth noting the total amount of solid waste kept out of S.C. landfills. Nearly 4.9 million tons, or 39 percent of the total solid waste (TSW) generated, was recycled in FY11. This was about 2 million tons more than in FY10. Of the nearly 4.9 million tons of TSW recycled, the majority was process or manufacturing waste – scraps or by-products – that are put back into the manufacturing process or taken off site for recycling. Either way, the impact of keeping such material out of landfills is tremendous.

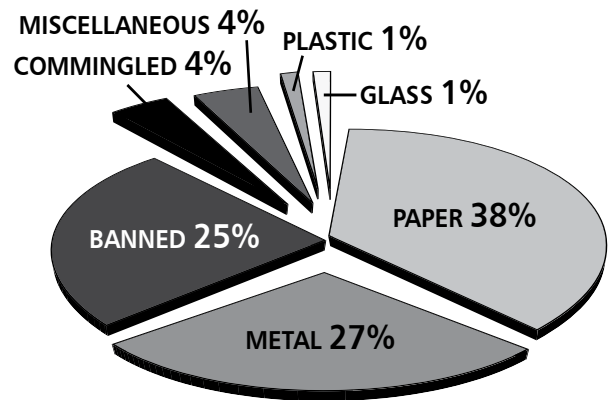
The benefits extend beyond the environment and also include economic gains for the industry. It is often cheaper for industry to recycle than to dispose of materials, thereby impacting the bottom line. This extends the life of landfills and lessens the demand for new ones.

What was RECYCLED in South Carolina?*	
FY11 – Measured in Tons – MSW Only	
COMMODITY	AMOUNT COLLECTED
Glass	12,801 tons
Metal	315,078 tons
Paper	440,363 tons
Plastic	17,673 tons
Banned Items ¹	294,895 tons
Miscellaneous Items ²	44,525 tons
Commingled Recyclables	47,432 tons
TOTAL	1,172,768 TONS

1. Banned items are appliances, lead-acid batteries, whole tires, used motor oil (from do-it-yourself oil changers) and yard trimmings.

2. Miscellaneous items include: antifreeze; consumer electronics; cooking oil; fluorescent bulbs; food scraps (post-consumer only); hazardous household materials; inkjet and toner cartridges; mattresses; paint; rechargeable batteries; textiles; used motor oil filters; wood packaging; other wood (such as furniture and cabinets); and other non-packaging products.

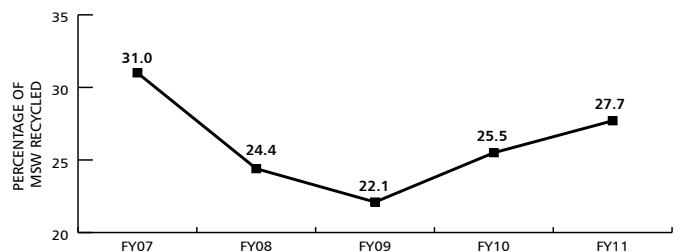
MSW Recyclables Collected by Percentage*



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*COMMODITIES MEASURED BY WEIGHT

South Carolina's MSW Recycling Rate, FY07 to FY11*



* SOURCE: S.C. Solid Waste Management Annual Report for FY11



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.