

MSW Recycling by Commodity

The S.C. Solid Waste Policy and Management Act of 1991 – S.C. Code of Laws § 44-96-60 – requires the S.C. Department of Health and Environmental Control (DHEC) to report detailed information on the amount of material recycled by commodity and county.

This section highlights the commodities that comprise municipal solid waste (MSW) as defined by South Carolina: glass, metal, paper, plastic, banned items, miscellaneous items and commingled recyclables.

Glass, metal, paper and plastic are considered traditional commodities and serve as the foundation of local government recycling programs. Banned items represent six specific items – appliances, electronics scrap, lead-acid batteries (e.g., car, truck, boat), used motor oil, whole tires and yard trimmings. Appliances, lead-acid batteries, used motor oil and whole waste tires are prohibited by law from disposal in any landfill.

A Note About Commingled Collection

There is a nationwide movement towards the use of commingled collection programs (one cart or container for all recyclables). One aspect of this movement is replacing traditional curbside recycling bins with larger, wheeled containers and placing containers at recycling drop-off centers for the collection of commingled recyclables. South Carolina is no exception to this movement – there is at least one single-stream program in 23 of the state's 46 counties.

There are several reasons for the growth of single-stream collection. This type of program is easy to understand and popular with the public and, as a result, leads to increased participation. Single-stream collection also allows for more material types and larger volumes of material to be recycled. This, in turn, may lead to increased revenue from the sale of the material. Overall, local government programs often see increased collection efficiency and lower collection costs.

The largest drawback to commingled collection is an increase in contamination of the collected material that is sent to processors and end markets. The contamination – unwanted material – reduces the market value of the material or may result in the collected material being disposed of instead of recycled.

At the very least, this contamination results in a lower quality of material being sent to processors,



that, in turn, must remove the contaminants and pay for their disposal. This results in lower prices being paid to local governments and others for the material.

Commingled collection also makes it difficult, if not impossible, to track recycled material by commodity (e.g., glass, metal, paper, plastic). This material, however, is counted as MSW and included in the state's MSW recycling rate.

In FY12, 81,810 tons of commingled material was recycled. This accounts for 6.7 percent of all MSW that was recycled and is a 72 percent increase from the 47,432 tons of commingled material that was recycled in FY11. Given this, it is important to note that when looking at statewide or county-by-county numbers and/or trends of individual commodities, the amount of material reported for each individual commodity does not include commingled material.

At the beginning of fiscal year (FY) 2012 (July 1, 2011 to June 30, 2012), S.C. residents could no longer dispose of desktop, laptop, notebook and tablet computers as well as computer monitors, printers and televisions in any landfill.

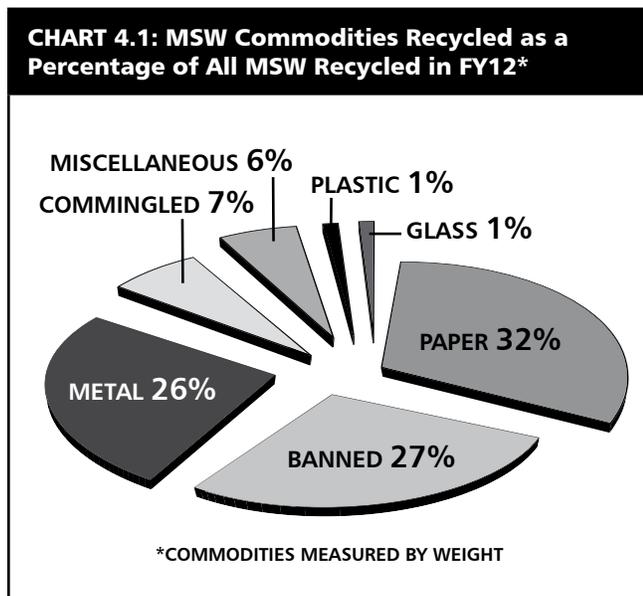
Yard trimmings are banned from disposal in Class 3 landfills, but can be disposed of in Class 1 or Class 2 landfills.

Miscellaneous recyclables are numerous and varied (e.g., fluorescent bulbs, food scraps, mattresses). Levels of collection differ in local government programs throughout South Carolina.

Commingled recyclables consist of a variety of recyclables collected together and not reported by individual material type. (See page 18 for more information.)

The amount of each commodity collected is used to calculate the state's MSW recycling rate. Of the seven commodities that comprise MSW, five (metal, plastic, banned items, miscellaneous items and commingled recyclables) had an increase in recycling tonnages from the previous FY.

Overall, the amount of MSW collected for recycling grew 5 percent (56,332 tons) to 1,229,100 tons in FY12. Paper was the top commodity recycled, comprising 32 percent of all of the MSW recycled in South Carolina. See Chart 4.1 for a complete breakdown by commodity.



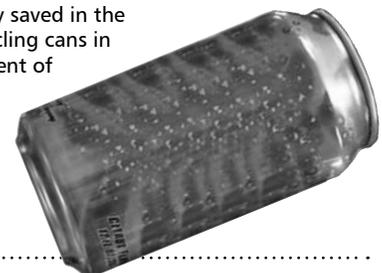
NOTES: The information provided about each commodity comes from multiple sources and is the most recent available. Sources include the U.S. Environmental Protection Agency, the Institute of Scrap Recycling Industries, Inc. and local governments.

Commodity: GLASS

- The amount of glass recycled decreased from 12,801 tons in FY11 to 10,647 tons in FY12, a drop of 2,154 tons or nearly 17 percent.
- Nearly 72 percent of the glass recovered is from residential programs while slightly more than 26 percent is from the commercial sector.
- Greenville and Horry counties accounted for more than 46 percent of the glass recycled in the state.
- Glass remains a somewhat difficult commodity to recycle primarily due to its low market value, weight of the material, distance to market and the abrasive effect on the recycling equipment of processors.
- The market value of glass varies by color. The average revenue reported by local governments for clear glass was \$21 per ton followed by brown (\$16 per ton) and green (\$10.50 per ton) in FY12. The average revenue earned for mixed glass was \$15 per ton in FY12.
- Glass bottles and jars are 100 percent recyclable and can be recycled endlessly without any loss in purity or quality.
- For every ton of glass recycled, more than a ton of raw material is saved including 1,300 pounds of sand, 410 pounds of soda ash, 380 pounds of limestone and 160 pounds of feldspar.

Commodity: METAL

- The amount of metal recycled increased from 315,078 tons in FY11 to 323,821 tons in FY12 – an improvement of nearly 3 percent. This is the third consecutive year that the amount of metal recycled increased.
- The amount of ferrous (containing iron) metal recycled increased about 4 percent from 254,325 tons in FY11 to 263,273 in FY12. In addition, the amount of non-ferrous metal recycled increased 90 percent from 8,957 tons in FY11 to 17,035 tons in FY12.
- Overall, more than 86 percent of the metal recovered is from the commercial recycling sector.
- The average revenue per ton reported by local governments was \$1,261 for aluminum, \$247 for scrap metal, \$232 for steel and \$214 for mixed metal in FY12.
- It takes 95 percent less energy to produce an aluminum can from recycled material than raw material. The amount of energy saved in the United States by recycling cans in 2010 was the equivalent of 17 million barrels of crude oil.
- Aluminum cans have up to 68 percent recycled content.



Commodity: PAPER

- The total amount of paper recycled decreased about 10 percent – from 440,363 tons in FY11 to about 395,775 tons in FY12.
- Cardboard continued to be the top category comprising 282,271 tons (71 percent) of all paper collected.
- The amount of magazines and office paper recycled increased from the previous FY. Each of the other categories fell with mixed paper dropping the most from 96,226 tons in FY11 to 63,364 tons in FY12.
- About two-thirds of all paper recovered is from the commercial/institutional sector.
- The average revenue reported by local governments for cardboard was \$105 per ton, office paper was \$139 per ton, mixed paper was \$97 per ton and newspaper was \$80 per ton in FY12.
- Recycling one ton of paper saves enough energy to power the average American home for six months.

Commodity: PLASTIC

- The types of plastic recycled in FY12 include high-density polyethylene (HDPE), low-density polyethylene (LDPE), polyethylene terephthalate (PET), polypropylene (PP) and polystyrene (PS). See Table 4.5 for a breakdown by type.
- The amount of plastic recycled increased about 3 percent, from 17,673 tons in FY11 to 18,212 tons in FY12.
- In South Carolina, the amount of PET recycled climbed from 1,240 tons in FY11 to 1,917 tons in FY12 – an increase of about 55 percent.
- Obstacles for local governments to collect more plastic continue to be the low weight and value of the material as well as the cost of and distance to market.
- The average revenue per ton reported by local governments was \$420 for PET, \$220 for commingled PET and HDPE, \$260 for HDPE and \$140 for mixed plastic in FY12.
- The primary market for recycled PET bottles is fiber for carpet and textiles. The primary market for HDPE bottles is bottles.
- Plastic bottle caps can be recycled as well. Generally, caps are made out of HDPE or PP – both of which have high market demand.
- Using recycled plastic instead of raw material saves 80-90 percent of the energy to make new products.

NOTES: It is important to note that zeros do not mean a specific material was not collected. Instead the amount may have been placed in a broader category such as mixed glass, metal, paper, plastic or commingled recyclables. In other cases, data may not be available for a particular sector [i.e., residential, commercial/institutional, industrial (office/packaging)] because material is combined among sectors during collection. In addition, a zero could signify that a specific material (e.g., glass) may have been collected, but not sent to a recycler during the FY.

Additionally, the commodity tables reflect data from local government programs as well as other sources (e.g., commercial, institutional, industrial).

Commodity: BANNED ITEMS

- Banned items include appliances (e.g., refrigerators, stoves, air conditioners, water heaters, washers, dryers), electronics scrap, lead-acid batteries, used motor oil, whole tires and yard trimmings. While each of these items are discussed here, a detailed summary of the state's used motor oil recycling program that targets do-it-yourself (DIY) oil changers is in Section 5.
- There are advanced recycling fees on all banned items except yard trimmings and electronics. Consumers pay the fee at the point of purchase. The fees – managed in the Solid Waste Trust Fund – provide the revenue for South Carolina's overall solid waste management program (e.g., compliance, enforcement, technical assistance, education, planning, reporting) as well as grant programs to local governments, colleges/universities and schools.
- The overall amount of banned items recycled increased from 294,895 tons in FY11 to 328,791 tons in FY12, an increase of 33,896 tons (more than 11 percent).
- The amount of appliances, DIY used motor oil and lead-acid batteries recycled dropped while electronics scrap, tires and yard trimmings increased. Yard trimmings improved the most – from 222,691 tons in FY11 to 245,136 tons in FY12 – a 10 percent increase.

Commodity: MISCELLANEOUS ITEMS

- Miscellaneous items are materials that are not part of any other commodity category. These items vary widely and include antifreeze, cooking oil, fluorescent bulbs, food scraps, rechargeable batteries and mattresses. One item – hazardous material – is highlighted on page 27.
- The amount of miscellaneous items recycled increased from 44,525 tons in FY11 to 70,045 tons in FY12 – an increase of more than 57 percent.
- Nearly 96 percent of the miscellaneous items recovered were from commercial/institutional and industrial (office/packaging) sources.
- Cooking oil, fluorescent bulbs, inkjet and toner cartridges, mattresses, rechargeable batteries, textiles, wood packaging and other items all increased from FY11 to FY12. Antifreeze, food scraps, hazardous material, paint and used oil filters all decreased.

Commodity: COMMINGLED RECYCLABLES

- The amount of commingled recyclables recovered increased from 47,432 tons in FY11 to 81,810 tons in FY12 – an increase of 72 percent. Most of this increase is attributed to residential recycling.
- Commingled recyclables account for nearly 7 percent of the MSW recycled in FY12.
- On average, each South Carolinian recycled about 35 pounds of commingled recyclables in FY12.
- Charleston and Richland counties recycled 42,600 tons of commingled recyclables, accounting for 52 percent of the total collected.
- The average revenue reported by local governments for commingled recyclables was \$24 per ton in FY12.

TABLE 4.2: Glass Recycling by County in Tons

COUNTY	BROWN	CLEAR	GREEN	MIXED	TOTAL
Abbeville	0.00	0.00	0.00	0.00	0.00
Aiken	0.00	0.00	0.00	0.00	0.00
Allendale	0.32	0.00	0.33	1.55	2.20
Anderson	0.00	0.08	0.60	313.46	314.14
Bamberg	0.00	0.00	0.00	0.00	0.00
Barnwell	0.00	0.00	0.00	30.00	30.00
Beaufort	199.26	498.16	298.90	3.58	999.90
Berkeley	0.00	0.00	0.00	2.00	2.00
Calhoun	0.00	0.00	0.00	0.00	0.00
Charleston	0.00	0.00	0.00	15.45	15.45
Cherokee	17.70	27.00	12.00	0.00	56.70
Chester	0.00	0.00	0.00	63.02	63.02
Chesterfield	0.00	0.00	0.00	0.00	0.00
Clarendon	0.00	0.00	0.00	52.44	52.44
Colleton	0.00	0.78	0.00	0.00	0.78
Darlington	0.00	0.00	0.00	0.00	0.00
Dillon	0.00	0.00	0.00	0.00	0.00
Dorchester	1.00	1.00	1.00	0.10	3.10
Edgefield	0.00	0.00	0.00	0.00	0.00
Fairfield	0.00	0.00	0.00	11.03	11.03
Florence	0.00	0.00	0.00	0.00	0.00
Georgetown	43.95	51.83	43.28	0.00	139.06
Greenville	1,124.00	0.00	0.00	1,891.40	3,015.40
Greenwood	20.71	0.00	0.00	0.00	20.71
Hampton	71.25	0.00	0.00	0.00	71.25
Horry	0.00	0.41	0.35	1,893.23	1,893.99
Jasper	0.00	0.00	0.00	42.23	42.23
Kershaw	0.00	0.00	0.00	189.38	189.38
Lancaster	56.24	55.19	0.00	0.00	111.43
Laurens	15.72	20.89	0.00	0.50	37.11
Lee	0.00	0.00	0.00	0.00	0.00
Lexington	143.99	179.48	122.92	27.17	473.56
Marion	0.00	0.00	0.00	0.00	0.00
Marlboro	0.00	0.00	0.00	0.00	0.00
McCormick	0.00	0.00	0.00	0.00	0.00
Newberry	0.00	12.36	0.00	0.00	12.36
Oconee	95.74	94.97	170.71	0.00	361.42
Orangeburg	6.38	0.00	6.08	12.73	25.19
Pickens	156.80	249.35	103.69	25.36	535.20
Richland	98.78	215.32	322.52	185.46	822.08
Saluda	0.00	0.00	0.00	0.00	0.00
Spartanburg	0.00	0.00	0.00	0.97	0.97
Sumter	0.00	21.46	0.00	320.37	341.83
Union	0.00	27.02	0.00	8.69	35.71
Williamsburg	0.00	0.00	0.00	0.00	0.00
York	281.35	542.78	142.81	0.01	966.95
STATE TOTAL	2,333.19	1,998.08	1,225.19	5,090.13	10,646.59

NOTE: This table does not include any glass that was collected in commingled recycling programs.

On average,
4.6
pounds of glass were recycled per person in South Carolina during FY12.

Glass bottles and jars are
100%
recyclable and can be recycled endlessly.

More than
10.6
thousand tons of glass were recycled in the state during FY12.

S.C. local governments reported earning about
\$12,000
from glass in FY12.

Nearly
72%
of glass recovered in the state is from residential recycling programs.



On average,
more than

138

pounds of metal
were recycled
per person in
South Carolina
during FY12.

Metal made up

26%

of all MSW
recycled in the
state during
FY12.

About

324

thousand tons
of metal were
recycled in the
state during
FY12.

S.C. local
governments
reported
an average
revenue of

\$1,261

per ton for
aluminum in
FY12.

It takes

60%

less energy to
make steel
from recycled
material than
from iron ore.



TABLE 4.3: Metal Recycling by County in Tons

COUNTY	ALUMINUM CANS	FERROUS	NON-FERROUS	STEEL CANS	MIXED	TOTAL
Abbeville	3.74	0.00	0.00	5.50	254.31	263.55
Aiken	15.11	0.00	0.00	5.50	1,033.01	1,053.62
Allendale	0.00	0.00	0.00	5.50	11.06	16.56
Anderson	24.67	0.27	1,598.25	12.12	76.38	1,711.69
Bamberg	0.00	0.00	0.00	5.50	47.48	52.98
Barnwell	0.99	0.00	0.00	5.50	181.00	187.49
Beaufort	284.55	3,073.71	180.30	19.28	5,805.15	9,362.99
Berkeley	236.18	60.73	480.00	27.62	707.63	1,512.16
Calhoun	1.00	0.00	0.00	5.50	68.84	75.34
Charleston	52.86	35,200.00	119.00	5.50	740.15	36,117.51
Cherokee	4.77	0.00	0.00	23.86	152.25	180.88
Chester	4.08	7.74	0.00	10.89	203.60	226.31
Chesterfield	0.70	84.00	0.00	6.00	99.40	190.10
Clarendon	3.14	0.00	0.00	5.50	187.05	195.69
Colleton	5.73	0.00	0.00	5.50	218.39	229.62
Darlington	7.46	219.23	0.00	5.50	0.00	232.19
Dillon	0.09	0.26	3.12	5.50	155.78	164.75
Dorchester	4.18	13,638.07	25.00	5.50	2.00	13,674.75
Edgefield	10.36	138.74	0.00	5.50	0.00	154.60
Fairfield	2.75	0.00	0.00	5.50	181.23	189.48
Florence	16.29	13,623.24	21.04	15.02	117.09	13,792.68
Georgetown	4.12	0.00	0.00	5.50	1,168.65	1,178.27
Greenville	42.05	48,767.49	1,152.02	54.32	479.48	50,495.36
Greenwood	30.13	5,862.76	279.00	48.57	4,476.42	10,696.88
Hampton	0.10	48.66	0.00	5.50	845.45	899.71
Horry	393.37	4,303.12	873.70	348.25	10,123.60	16,042.04
Jasper	0.22	2.32	0.00	5.50	177.65	185.69
Kershaw	8.22	0.00	0.00	5.50	21.00	34.72
Lancaster	7.41	279.52	0.00	5.50	163.78	456.21
Laurens	7.44	6,244.44	545.24	5.50	0.10	6,802.72
Lee	3.80	0.00	0.00	9.30	183.00	196.10
Lexington	38.86	48,707.18	1,725.00	12.70	2,901.43	53,385.17
Marion	0.12	0.00	0.00	5.50	38.01	43.63
Marlboro	26.55	1,058.19	251.28	28.45	539.29	1,903.76
McCormick	4.07	0.00	0.00	5.50	63.07	72.64
Newberry	8.36	0.50	0.00	6.18	225.88	240.92
Oconee	16.73	595.86	0.00	5.50	309.63	927.72
Orangeburg	7.14	9,877.00	15.00	6.00	358.54	10,263.68
Pickens	130.68	6.13	980.76	5.50	383.50	1,506.57
Richland	54.32	39,015.86	3,157.19	127.58	507.69	42,862.64
Saluda	6.04	11.50	0.00	5.50	108.80	131.84
Spartanburg	7.33	27,256.00	2,326.34	5.50	3,588.15	33,183.32
Sumter	69.53	0.00	0.00	71.98	3,179.90	3,321.41
Union	125.39	3,180.87	1,462.41	5.50	164.83	4,939.00
Williamsburg	0.50	6.00	0.00	5.50	151.27	163.27
York	103.22	2,003.69	1,840.40	12.39	342.86	4,302.56
STATE TOTAL	1,774.35	263,273.08	17,035.05	994.51	40,743.78	323,820.77

NOTE: This table does not include any metal that was collected in commingled recycling programs.

TABLE 4.4: Paper Recycling by County in Tons

COUNTY	CARDBOARD	MAGAZINES	NEWSPAPER AND INSERTS	OFFICE PAPER	PAPERBOARD	PHONE BOOKS	MIXED	TOTAL
Abbeville	571.52	0.00	0.00	8.54	0.00	0.00	123.00	703.06
Aiken	4,404.37	0.00	33.39	21.10	0.00	0.00	1,400.07	5,858.93
Allendale	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.04
Anderson	7,064.60	0.05	23.33	443.94	0.00	0.00	1,304.25	8,836.17
Bamberg	101.20	0.00	0.00	0.00	0.00	0.00	0.04	101.24
Barnwell	666.51	0.00	0.00	0.49	0.00	0.00	170.64	837.64
Beaufort	10,583.62	0.00	1,114.12	824.77	0.00	0.00	824.42	13,346.93
Berkeley	5,010.30	0.60	0.10	27.09	0.00	0.00	1,056.72	6,094.81
Calhoun	228.15	0.00	0.00	19.20	0.00	0.00	0.04	247.39
Charleston	51,835.45	0.00	1,615.00	240.12	0.00	0.00	9,640.47	63,331.04
Cherokee	3,537.08	0.00	0.00	0.07	0.00	0.00	474.46	4,011.61
Chester	587.39	0.05	103.20	4.34	0.00	0.00	0.04	695.02
Chesterfield	1,007.24	0.00	0.00	1.74	0.00	0.00	0.04	1,009.02
Clarendon	754.32	0.00	0.00	0.74	0.00	0.00	0.04	755.10
Colleton	876.51	0.00	22.68	1.09	0.00	0.00	0.04	900.32
Darlington	3,193.49	37.85	325.41	33.65	0.00	0.00	24.21	3,614.61
Dillon	561.51	0.00	23.32	0.83	0.00	0.00	62.44	648.10
Dorchester	3,456.10	1.10	0.00	184.26	1.50	2.00	530.03	4,174.99
Edgefield	1,159.04	0.00	119.71	1.00	1.00	0.00	80.42	1,361.17
Fairfield	791.03	0.00	0.00	135.86	0.00	0.05	124.71	1,051.65
Florence	5,698.71	0.00	289.35	29.20	0.15	0.00	50.90	6,068.31
Georgetown	1,906.35	0.00	440.85	20.22	0.00	0.00	4.44	2,371.86
Greenville	30,818.20	0.00	0.00	14,942.47	0.00	0.00	25,717.46	71,478.13
Greenwood	8,650.63	0.55	375.95	220.80	0.00	0.15	1,219.50	10,467.58
Hampton	192.48	17.65	34.80	206.93	0.00	0.00	0.98	452.84
Horry	16,411.03	31.75	4,419.63	1,384.85	1.00	70.00	244.76	22,563.02
Jasper	837.31	0.00	39.14	0.00	0.00	0.00	1.04	877.49
Kershaw	4,598.93	0.55	180.00	8.70	0.00	0.00	24.59	4,812.77
Lancaster	4,782.11	0.00	187.08	172.03	0.00	4.32	38.12	5,183.66
Laurens	1,927.56	2.00	78.50	11.79	0.20	0.21	264.47	2,284.73
Lee	1,710.50	0.00	10.55	0.00	0.00	0.00	17.54	1,738.59
Lexington	10,380.10	2.44	75.49	856.34	0.00	29.00	916.88	12,260.25
Marion	2,439.69	0.00	0.00	1.07	0.00	0.00	4.06	2,444.82
Marlboro	656.00	0.00	9.80	0.00	0.00	0.00	57.64	723.44
McCormick	191.88	0.00	51.27	0.00	0.00	0.00	51.78	294.93
Newberry	2,882.43	0.00	0.00	9.86	0.00	0.00	359.07	3,251.36
Oconee	5,137.72	15.00	351.06	271.68	0.00	0.00	905.59	6,681.05
Orangeburg	2,489.81	0.10	130.52	47.75	2.00	0.10	8.54	2,678.82
Pickens	8,385.17	0.00	0.20	1,447.90	0.00	0.00	2,590.29	12,423.56
Richland	15,376.55	26.69	1,977.50	14,110.36	0.00	15.93	511.68	32,018.71
Saluda	929.85	0.00	65.34	0.00	0.00	0.00	107.95	1,103.14
Spartanburg	22,610.29	4.01	0.60	49.35	0.00	0.15	11,474.26	34,138.66
Sumter	3,051.26	0.00	103.79	84.33	0.00	0.00	1,357.49	4,596.87
Union	5,169.45	0.00	0.00	0.36	0.00	0.00	186.83	5,356.64
Williamsburg	392.19	0.00	12.57	5.50	0.00	0.10	0.04	410.40
York	28,255.07	401.89	978.62	277.07	157.44	12.65	1,431.89	31,514.63
STATE TOTAL	282,270.70	542.28	13,192.87	36,107.39	163.29	134.66	63,363.91	395,775.10

On average, more than

169 pounds of paper were recycled per person in South Carolina during FY12.

Paper made up **32%** of all MSW recycled in the state during FY12.

About **396** thousand tons of paper were recycled in the state during FY12.

S.C. local governments reported an average revenue of **\$105** per ton for cardboard in FY12.

Nationally, **85%** of all cardboard containers are recovered.

Recycling 1 ton of paper saves **7,000** gallons of water.



NOTE: This table does not include any paper that was collected in commingled recycling programs.

On average, nearly
7.8
pounds of plastic were recycled per person in South Carolina in FY12.

More than
26%
of plastic recycled was from residential collection programs in FY12.

About
1.5%
of all MSW recycled in the state was plastic in FY12.

S.C. local governments reported an average of
\$420
per ton for PET in FY12.



TABLE 4.5: Plastic Recycling by County in Tons

COUNTY	HDPE	LDPE	PET	PP	PS	COMMINGLED PET & HDPE	MIXED	TOTAL
Abbeville	0.00	3.50	19.39	0.00	0.00	0.41	0.34	23.64
Aiken	1.55	14.00	0.27	0.00	0.00	0.00	165.45	181.27
Allendale	0.00	0.00	0.00	0.00	0.00	1.11	0.00	1.11
Anderson	18.76	32.59	16.46	0.00	0.18	0.00	76.06	144.05
Bamberg	0.00	0.00	0.00	0.00	0.00	2.65	0.00	2.65
Barnwell	0.36	0.00	0.08	0.00	0.00	0.00	30.45	30.89
Beaufort	4.01	28.00	0.00	0.00	0.82	331.39	62.02	426.24
Berkeley	7.01	28.00	0.76	0.00	0.01	0.00	465.19	500.97
Calhoun	9.57	0.00	0.00	0.00	0.00	0.00	1.92	11.49
Charleston	80.43	315.21	35.09	0.00	0.22	0.00	398.21	829.16
Cherokee	0.22	3.50	0.06	0.00	0.00	23.18	56.63	83.59
Chester	0.22	3.50	0.09	0.00	0.00	0.00	51.70	55.51
Chesterfield	3.09	74.50	0.88	0.00	0.00	0.00	29.70	108.17
Clarendon	0.59	0.00	0.20	0.00	0.00	0.00	191.63	192.42
Colleton	0.83	14.80	0.00	0.00	0.00	0.23	72.98	88.84
Darlington	14.12	70.75	9.88	0.00	0.00	0.00	28.96	123.71
Dillon	0.79	0.00	740.22	0.00	0.00	0.00	15.59	756.60
Dorchester	0.60	10.50	1.19	0.00	0.00	0.10	58.25	70.64
Edgefield	0.00	0.00	0.00	0.00	0.00	24.51	6.54	31.05
Fairfield	0.28	3.50	0.68	0.00	0.00	38.19	8.21	50.86
Florence	15.67	7.23	27.31	0.00	1.54	0.39	87.92	140.06
Georgetown	45.96	3.50	62.44	0.00	0.00	0.00	30.79	142.69
Greenville	10.61	0.99	2.96	0.00	0.00	1,423.95	1,979.22	3,417.73
Greenwood	14.52	25.04	115.01	0.00	0.00	54.41	317.48	526.46
Hampton	24.09	3.50	0.00	0.00	0.00	1.43	2.65	31.67
Horry	363.27	151.31	573.74	28.65	3.38	1.12	287.47	1,408.94
Jasper	0.00	0.00	0.00	0.00	0.00	0.00	33.43	33.43
Kershaw	4.22	19.63	3.48	0.00	0.00	66.62	84.25	178.20
Lancaster	0.65	7.00	0.21	0.00	0.00	41.53	21.86	71.25
Laurens	2.18	7.00	0.12	0.00	0.00	3.62	47.39	60.31
Lee	1.66	0.00	0.00	0.00	0.00	6.80	2.65	11.11
Lexington	59.17	44.99	4.03	0.00	0.00	217.04	1,110.01	1,435.24
Marion	0.80	0.00	0.25	0.00	0.00	0.00	24.92	25.97
Marlboro	0.00	3.50	0.00	0.00	0.00	3.33	2.65	9.48
McCormick	0.00	0.00	0.00	0.00	0.00	9.21	9.19	18.40
Newberry	0.48	3.50	0.17	0.00	0.00	0.00	66.92	71.07
Oconee	0.45	12.40	4.21	0.00	0.01	0.00	101.38	118.45
Orangeburg	34.27	19.40	0.67	66.00	0.00	0.00	54.47	174.81
Pickens	58.25	14.46	39.46	0.00	0.01	0.00	149.91	262.09
Richland	42.68	27.44	3.81	0.00	0.00	547.42	455.84	1,077.19
Saluda	0.00	0.00	0.00	0.00	0.00	18.15	2.65	20.80
Spartanburg	3.37	39.99	2.64	0.00	0.00	0.00	3,999.54	4,045.54
Sumter	25.77	3.50	46.09	0.00	0.06	108.50	140.12	324.04
Union	10.59	10.09	17.21	0.00	0.00	0.00	4.58	42.47
Williamsburg	0.00	3.50	0.00	0.00	0.00	0.00	5.30	8.80
York	111.78	166.13	187.79	0.00	0.00	2.99	373.91	842.60
STATE TOTAL	972.87	1,176.45	1,916.85	94.65	6.23	2,928.28	11,116.33	18,211.66

NOTE: This table does not include any plastic that was collected in commingled recycling programs.

TABLE 4.6: Banned Items by County in Tons

COUNTY	APPLIANCES	DIY USED MOTOR OIL	ELECTRONICS SCRAP	LEAD-ACID BATTERIES	TIRES	YARD TRIMMINGS	TOTAL
Abbeville	0.08	21.00	84.87	3.59	277.65	0.00	387.19
Aiken	75.56	141.00	321.43	1,103.17	953.45	293.00	2,887.61
Allendale	0.00	7.00	19.55	0.53	120.12	0.00	147.20
Anderson	39.17	129.00	70.22	530.56	668.69	0.00	1,437.64
Bamberg	0.00	17.00	41.03	0.59	286.67	352.04	697.33
Barnwell	3.67	24.00	6.39	24.87	189.12	0.00	248.05
Beaufort	220.77	90.00	582.36	133.50	1,204.82	13,791.00	16,022.45
Berkeley	1,717.21	165.00	209.99	139.08	931.08	2,027.00	5,189.36
Calhoun	10.00	20.00	20.95	2.24	117.85	0.00	171.04
Charleston	1,587.74	147.00	464.87	2,189.77	3,203.49	53,113.00	60,705.87
Cherokee	152.25	21.00	53.54	49.73	871.50	710.90	1,858.92
Chester	0.00	29.00	28.31	12.09	197.92	144.00	411.32
Chesterfield	5.18	26.00	59.86	23.57	416.73	0.00	531.34
Clarendon	0.00	31.00	101.45	37.89	422.20	0.00	592.54
Colleton	6.25	38.00	118.80	62.25	554.50	0.02	779.82
Darlington	12.72	40.00	142.71	35.48	784.37	0.00	1,015.28
Dillon	0.00	26.00	6.47	22.10	154.47	810.00	1,019.04
Dorchester	523.95	108.00	154.44	57.18	873.89	1,035.62	2,753.08
Edgefield	34.76	42.00	39.06	7.02	248.12	0.00	370.96
Fairfield	0.00	28.00	102.02	11.03	490.79	600.00	1,231.84
Florence	1,273.14	80.00	202.45	94.18	1,222.75	7,736.50	10,609.02
Georgetown	0.00	62.00	99.79	62.81	771.60	4,050.63	5,046.83
Greenville	1,142.42	175.00	807.78	1,164.70	9,256.97	51,122.20	63,669.07
Greenwood	55.57	36.00	153.66	104.03	1,041.46	0.00	1,390.72
Hampton	27.49	20.00	54.77	10.10	366.64	1,524.67	2,003.67
Horry	421.98	195.00	975.08	1,696.58	4,296.65	41,032.09	48,617.38
Jasper	0.00	23.00	96.83	55.92	276.07	0.00	451.82
Kershaw	122.30	82.00	156.99	62.99	445.02	4,100.00	4,969.30
Lancaster	5.30	95.00	56.53	56.03	856.75	3,749.70	4,819.31
Laurens	46.39	28.00	156.79	22.47	438.63	63.53	755.81
Lee	0.00	7.00	30.63	0.53	243.75	2,033.89	2,315.80
Lexington	1,226.27	322.00	349.52	205.14	1,381.22	9,904.60	13,388.75
Marion	0.08	17.00	24.80	329.19	283.28	778.00	1,432.35
Marlboro	0.00	13.00	2.08	0.53	190.12	2,400.00	2,605.73
McCormick	15.85	13.00	16.56	1.49	73.96	0.00	120.86
Newberry	20.53	29.00	102.57	56.55	290.99	3,356.17	3,855.81
Oconee	555.74	57.00	14.95	192.29	802.84	4,478.00	6,100.82
Orangeburg	24.55	62.00	189.11	93.56	825.57	0.00	1,194.79
Pickens	1,442.72	123.00	462.91	71.29	981.51	7,521.00	10,602.43
Richland	553.78	107.00	969.49	1,811.65	2,086.61	1,593.50	7,122.03
Saluda	27.14	28.00	27.32	24.97	182.44	0.00	289.87
Spartanburg	535.31	204.00	597.05	97.68	2,443.61	15,170.04	19,047.69
Sumter	3,031.26	88.00	158.33	189.81	1,040.59	2,057.40	6,565.39
Union	0.00	24.00	50.30	11.85	147.53	0.00	233.68
Williamsburg	0.00	31.00	78.64	0.53	463.98	100.80	674.95
York	34.97	194.00	794.30	237.22	1,702.24	9,486.93	12,449.66
STATE TOTAL	14,952.10	3,265.00	9,257.55	11,100.33	45,080.21	245,136.23	328,791.42

On average, nearly

141

pounds of banned items were recycled per person in South Carolina in FY12.

27%

of all MSW recycled in the state during FY12 was banned items.

About

10%

more yard trimmings were recycled in FY12 than FY11.

S.C. local governments reported an average revenue of

\$404

per ton for lead-acid batteries recycled in FY12.

S.C. local governments reported earning an average of

\$254

per ton for used motor oil recycled in FY12.

A Note on Banned Electronics ...

South Carolina’s ban on electronics targets specific electronics from residents (i.e., computers, computer monitors, televisions and printers). For ease of reporting, the banned electronics reported in this section include all of the electronics that were recycled in FY12.



TABLE 4.7: Miscellaneous Items by County in Tons

COUNTY	ANTIFREEZE	COOKING OIL	FLUORESCENT BULBS	FOOD SCRAPS	HAZARDOUS MATERIAL	INKJET/TONER CARTRIDGES	MATTRESSES	PAINT	RECHARGEABLE BATTERIES	TEXTILES	USED MOTOR OIL FILTERS	WOOD PACKAGING	OTHER ITEMS	TOTAL MISCELLANEOUS
Abbeville	4.72	48.14	2.00	0.00	0.00	0.07	0.00	0.00	0.25	0.01	2.59	279.33	29.25	366.36
Aiken	19.51	607.99	21.21	0.00	0.00	14.98	0.00	0.00	149.49	0.01	7.23	375.82	142.49	1,338.73
Allendale	4.72	12.79	0.80	0.00	0.00	0.06	0.00	0.00	0.02	0.01	1.89	0.52	29.25	50.06
Anderson	4.72	268.16	9.54	0.00	0.00	0.67	0.00	12.50	20.82	0.01	1.63	722.17	29.30	1,069.52
Bamberg	4.72	38.28	0.99	0.00	0.00	0.06	0.00	0.00	0.04	0.01	0.41	0.52	29.25	74.28
Barnwell	5.16	119.14	1.19	0.00	0.00	0.06	0.00	0.00	0.02	0.01	2.19	0.52	29.25	157.54
Beaufort	21.65	1,389.28	10.79	0.00	22.00	3.76	96.00	0.00	4.97	192.21	22.16	674.93	77.60	2,515.35
Berkeley	10.52	288.06	17.73	0.00	0.00	3.27	0.00	4.32	16.48	7.28	77.00	460.23	156.64	1,041.53
Calhoun	4.72	46.89	2.51	0.00	0.00	0.56	0.00	0.00	0.40	0.01	1.40	125.52	29.25	211.26
Charleston	57.00	3,057.75	35.24	1,615.73	44.07	7.32	0.00	7.84	22.31	0.01	368.46	1,400.90	33.01	6,649.64
Cherokee	5.02	214.15	4.15	0.00	0.00	0.94	0.00	0.00	0.14	0.01	2.01	951.69	29.25	1,207.36
Chester	4.72	38.00	1.55	0.00	0.00	0.09	0.00	0.00	0.02	0.01	1.81	15.66	33.75	95.61
Chesterfield	4.72	94.34	4.11	0.00	0.00	0.56	0.00	0.00	0.16	0.01	2.17	0.52	36.05	142.64
Clarendon	4.72	145.79	9.18	0.00	0.00	0.61	0.00	0.00	0.46	0.01	4.36	117.32	53.15	335.60
Colleton	4.72	316.78	1.71	0.00	0.00	0.05	0.00	0.00	0.02	0.01	5.92	0.52	29.25	358.98
Darlington	5.25	149.72	3.07	0.00	0.00	0.44	0.00	0.00	0.57	0.01	7.57	253.42	40.00	460.05
Dillon	4.51	257.85	1.93	0.00	0.00	0.12	0.00	0.00	0.00	0.01	0.35	0.75	29.25	294.77
Dorchester	9.42	767.66	5.30	0.00	0.00	1.60	0.00	0.00	0.65	7.28	6.22	246.45	29.25	1,073.83
Edgefield	6.91	55.14	1.34	0.00	0.00	0.18	0.00	0.00	0.10	7.28	1.31	24.63	29.25	126.14
Fairfield	4.72	124.43	1.97	0.00	0.00	0.13	0.00	0.00	0.04	0.01	3.29	0.75	29.39	164.73
Florence	4.95	984.50	6.69	0.00	0.00	0.87	0.00	0.00	0.79	7.28	3.42	400.20	77.95	1,486.65
Georgetown	4.72	430.30	3.80	0.00	0.00	0.18	0.00	0.00	0.51	0.01	4.18	117.55	35.95	597.20
Greenville	75.56	1,344.21	58.72	6.29	0.00	8.85	0.00	1.44	6.24	573.78	112.13	3,682.32	1,845.22	7,714.76
Greenwood	5.63	1,256.16	7.11	0.00	0.00	3.20	0.00	0.00	1.17	0.01	2.52	3,395.53	38.15	4,709.48
Hampton	4.72	76.07	1.17	0.00	0.00	0.06	0.00	0.00	0.02	0.01	1.20	38.22	29.25	150.72
Horry	81.12	3,397.68	26.69	2.60	0.00	5.92	171.24	1.56	6.56	2,656.11	128.65	998.24	0.00	7,476.37
Jasper	4.72	62.26	1.28	0.00	0.00	0.06	0.00	0.00	0.06	0.01	0.41	0.52	29.25	98.57
Kershaw	5.73	129.73	2.48	0.00	0.00	0.18	0.00	0.00	0.28	7.28	0.42	204.99	29.25	380.34
Lancaster	4.72	106.65	3.73	0.00	0.00	0.13	0.00	0.09	0.64	3.87	6.26	874.56	34.33	1,034.98
Laurens	4.72	108.71	3.03	0.00	0.00	0.35	0.00	0.00	0.48	0.01	0.42	91.93	29.25	238.90
Lee	4.72	15.05	1.08	0.00	0.00	0.06	0.00	0.00	0.04	0.01	3.81	0.52	29.25	54.54
Lexington	5.78	1,219.54	12.52	0.00	0.00	3.12	38.93	0.25	3.24	38.24	25.23	1,624.78	108.34	3,079.97
Marion	4.97	149.80	1.54	0.00	0.00	0.07	0.00	0.00	0.35	0.01	10.62	0.52	29.25	197.13
Marlboro	4.72	75.85	1.39	0.00	0.00	0.56	0.00	0.00	0.02	0.01	1.01	0.52	29.25	113.33
McCormick	4.83	29.00	0.80	0.00	0.00	0.11	0.00	0.00	0.10	7.28	0.59	24.40	29.25	96.36
Newberry	5.11	112.76	3.43	0.00	0.00	0.57	0.00	0.00	1.07	0.01	0.42	110.12	29.25	262.74
Oconee	20.53	374.57	7.58	0.00	0.00	1.44	0.00	0.00	2.75	0.01	10.13	1,401.53	34.18	1,852.72
Orangeburg	4.92	359.68	7.06	0.00	0.00	0.22	0.00	9.38	1.62	0.01	7.14	653.06	50.71	1,093.80
Pickens	12.36	343.47	5.89	0.00	0.00	0.83	0.00	28.45	0.74	144.15	8.88	500.00	49.55	1,094.32
Richland	7.73	7,541.92	60.62	0.02	0.00	5.71	55.00	4.53	8.62	32.82	8.59	918.45	91.35	8,735.36
Saluda	4.72	44.61	1.11	0.00	0.00	0.06	0.00	1.51	0.04	0.01	3.25	400.52	29.25	485.08
Spartanburg	14.72	440.32	25.76	0.00	0.00	1.03	0.00	0.79	12.10	7.28	9.55	6,021.61	29.51	6,562.67
Sumter	7.92	968.29	6.29	0.00	0.00	1.57	0.00	0.00	0.94	0.01	8.68	128.88	50.33	1,172.91
Union	4.72	39.29	1.89	0.00	0.00	0.55	0.00	0.00	0.32	0.01	0.91	0.52	29.25	77.46
Williamsburg	4.72	503.29	1.57	0.00	0.00	0.31	0.00	0.00	0.02	0.01	0.41	1.02	29.25	540.60
York	143.64	798.46	23.11	0.00	0.00	22.14	0.00	38.45	5.62	83.24	89.19	1,460.57	339.69	3,004.11
STATE TOTAL	644.85	28,952.51	412.65	1,624.64	66.07	93.68	361.17	111.11	271.30	3,775.69	967.99	28,703.25	4,060.14	70,045.05

Hazardous Household Material

Hazardous household material (HHM) is reported as a miscellaneous item and highlighted here because it comprises a significant part of MSW as well as poses a potential risk to human health and the environment. It is called hazardous material in Table 4.16 because it includes material generated by businesses – and not just households. This section highlights efforts to properly manage or recycle HHM.

HHM is defined by the U.S. Environmental Protection Agency as “leftover household products that contain corrosive, toxic, ignitable or reactive ingredients.” Examples of HHM include paint, cleaners, pool chemicals as well as lawn and garden products. While businesses are required to properly recycle or dispose of these items, households are encouraged to do the same. Improper disposal of HHM poses a threat to human health and the environment. Examples of improper disposal of HHM include pouring it down the drain, on the ground or into storm sewers. In an effort to keep HHM out of the environment and to ensure proper handling of the various items, several local governments offer some type of HHM collection program for residents.

Four counties and one municipality have permanent collection sites or weekly curbside collection for HHM. Another four counties and three municipalities offer HHM collection events. For many local governments, the greatest obstacle to HHM collection is funding. There is significant cost related to the collection and sorting as well as the recycling, incineration or proper disposal of HHM. Some local governments set aside funding or seek grants to offset costs.

DHEC offers educational materials – such as fact sheets and the “S.C. Smart Gardener Handbook” – for households about methods to reduce and properly manage HHM. Topics include choosing non-toxic or less toxic options, buying only the amount needed and encouraging reuse of unwanted materials.

DHEC also offers technical assistance to local governments looking to manage HHM and guidance on setting up single-day collection events.



57%
more miscellaneous items were recycled in FY12 than the previous FY.

On average, nearly **30** pounds of miscellaneous items were recycled per person in South Carolina in FY12.

Nearly **744%** more cooking oil was reported recycled in FY12 than the previous FY due to better data provided.

Nearly **98%** of rechargeable batteries came from commercial/institutional and industrial sources in FY12.

Nearly **181%** more mattresses were recycled in FY12 than the previous FY.

S.C. HHM Collection Programs

Below is the list of programs and the amount* of HHM collected in FY12.

- **BEAUFORT COUNTY:** Single-day collection events and permanent paint collection sites (121 tons)
- **CHARLESTON COUNTY:** Permanent collection site (584 tons)
- **CHESTER COUNTY:** Single-day collection events (8.99 tons)
- **CITY OF AIKEN:** Curbside collection – yard chemicals only (80 pounds)
- **CITY OF NORTH AUGUSTA:** Single-day collection events (5.36 tons)
- **CITY OF SIMPSONVILLE:** Single-day collection events (paint only, no record of amount)
- **GEORGETOWN COUNTY:** Permanent collection site (23.1 tons)
- **HORRY COUNTY:** Permanent collection site (81.39 tons)
- **RICHLAND COUNTY:** Single-day collection event (100 tons)
- **SPARTANBURG COUNTY:** Single-day collection event (11.54 tons)
- **TOWN OF SURFSIDE BEACH:** Weekend collection events (sent to and reported by Horry County)
- **YORK COUNTY:** Single-day collection events and a permanent collection site (61.13 tons)

* This list includes all HHM collected in South Carolina in FY12. Only that listed in Table 4.7 was recycled. The rest was disposed of properly and does not count towards the state's recycling rate.

Commingled recyclables accounted for

7%

of the MSW recycled in FY12.

On average, each South Carolinian recycled about

35

pounds of commingled recyclables in FY12.

The average revenue reported by local governments was

\$24

per ton in FY12.

The amount of commingled recyclables increased

72%

from FY11 to FY12.

More than **87%**

of commingled recyclables recycled in FY12 came from residential sources.

TABLE 4.8: Commingled Recyclables by County

COUNTY	TONS	COUNTY	TONS
Abbeville	0.00	Greenwood	0.00
Aiken	2,878.74	Hampton	0.00
Allendale	0.00	Horry	0.00
Anderson	1,631.69	Jasper	0.00
Bamberg	0.00	Kershaw	0.00
Barnwell	0.00	Lancaster	31.54
Beaufort	4,299.33	Laurens	119.06
Berkeley	1,405.00	Lee	0.60
Calhoun	0.00	Lexington	5,547.81
Charleston	17,337.00	Marion	12.90
Cherokee	8.04	Marlboro	0.00
Chester	110.00	McCormick	0.00
Chesterfield	259.38	Newberry	0.00
Clarendon	0.00	Oconee	0.00
Colleton	0.00	Orangeburg	13.56
Darlington	347.84	Pickens	1,205.80
Dillon	2.70	Richland	25,263.43
Dorchester	5,997.40	Saluda	12.35
Edgefield	56.70	Spartanburg	3,063.96
Fairfield	0.00	Sumter	0.00
Florence	1,295.79	Union	0.00
Georgetown	0.00	Williamsburg	0.00
Greenville	7,648.28	York	3,260.94
		STATE TOTAL	81,809.84



Curbside programs use a variety of collection containers for commingled recycling.

Pictured are roll carts used by the City of Simpsonville and Charleston County. Below are recycling bins used by the cities of Columbia and Greenville.