

The Economic Impact of Recycling



Recycling is an essential part of the nation's and South Carolina's economy. By transforming waste into valuable raw material, recycling stimulates economic development, creates jobs and businesses, produces tax revenue and generates income for businesses and local governments from the sale of recyclables.

The state's recycling industry has a \$13 billion annual impact on South Carolina's economy according to a 2014 study done by the College of Charleston. It is comprised of more than 520 companies that collect, haul, process and broker material, sell equipment and manufacture recycled-content products. It includes 10 plastic reclaimers, five recycled paper manufacturing facilities, three steel mills and one recycled aluminum manufacturer. Overall, the industry also provides more than 22,000 direct jobs, \$2.7 billion in annual labor income and nearly \$330 million in state and local taxes every year.

The recycling industry continued to grow in 2016 with five new or existing companies making \$102 million in capital investments and creating 356 jobs according to the S.C. Department of Commerce. In the past five years, the industry has announced \$1.1 billion in capital investments and 3,000 jobs created.

New Economic Impact Study Released

The S.C. Department of Commerce released the results of a new study done by the University of South Carolina's Darla Moore School of Business on the economic impact of recycling. The study, done in conjunction with the S.C. Department of Health and Environmental Control's

(DHEC) Office of Solid Waste Reduction and Recycling, had several key findings including:

- **Recycling can cost less than disposal during positive market trends.** The relative cost of recycling vs. disposal is largely dependent on the price that recycling firms can sell processed recycled materials for on the open market. According to the study, the price for processed recycled materials peaked at \$146 per ton in 2011 and dropped to \$52 per ton by 2016. As a result, recycling was about \$28 per ton cheaper than disposal in 2011, but was \$9 per ton more expensive than disposal in 2016.
- **The recycling industry in South Carolina supports an employment multiplier of 2.4.** This implies that for every 10 jobs generated in the recycling industry an additional 14 jobs are created elsewhere in the South Carolina economy. Thus, the recycling industry has the ability to scale up employment at a higher rate than the average South Carolina industry; and
- **Small increases in household recycling can have a substantial statewide impact.** For example, if just one percent of all South Carolina households were to recycle an additional eight newspapers per month, this additional effort could generate an annual gain of up to \$3.8 million in economic activity for the state, 16 jobs and about \$794,000 in labor income. Similar results can be observed for many recycled goods across commodity types.

The complete report, "The Benefits of Increased Household Recycling Rates in South Carolina: A Commodity-Level Analysis," can be found at https://sccommerce.com/sites/default/files/all/sc_recycling_economic_impact.pdf.

Recycling Market Development

The S.C. Department of Commerce's Recycling Market Development Advisory Council (RMDAC) supports the state's recycling industry by working to build markets, increase material recovery and promote the impact of recycling on South Carolina's economy.

Established by the S.C. Solid Waste Policy and Management Act of 1991, RMDAC is comprised of 14 members appointed by the Governor that represent the solid waste industry, recycling sectors, government, higher education and the public.

The Recycling Market Development Division staff coordinates the activities of the council while providing technical and economic development assistance to assist recycling businesses and the industry. Key market development activities for the past fiscal year include composting, food waste, carpet, plastic and glass.



South Carolina
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Learn more at <https://sccommerce.com/events/recycling-market-development-advisory-council>.

The Economics of Managing Solid Waste in South Carolina

The collection, proper disposal and recycling of solid waste are essential services that have long been recognized as a critical segment of a community's infrastructure.

These services are no simple task. They include disposal, recycling, staffing, outreach/education, trucks, fuel, equipment, buildings, land, insurance and managing facilities (e.g., landfills, transfer stations).

These services are also expensive. Local governments spent more than \$342 million to manage solid waste in fiscal year (FY) 2016 (July 1, 2105 to June 30, 2016) and more than \$1.9 billion since FY11 according to the full-cost disclosure information reported to DHEC.

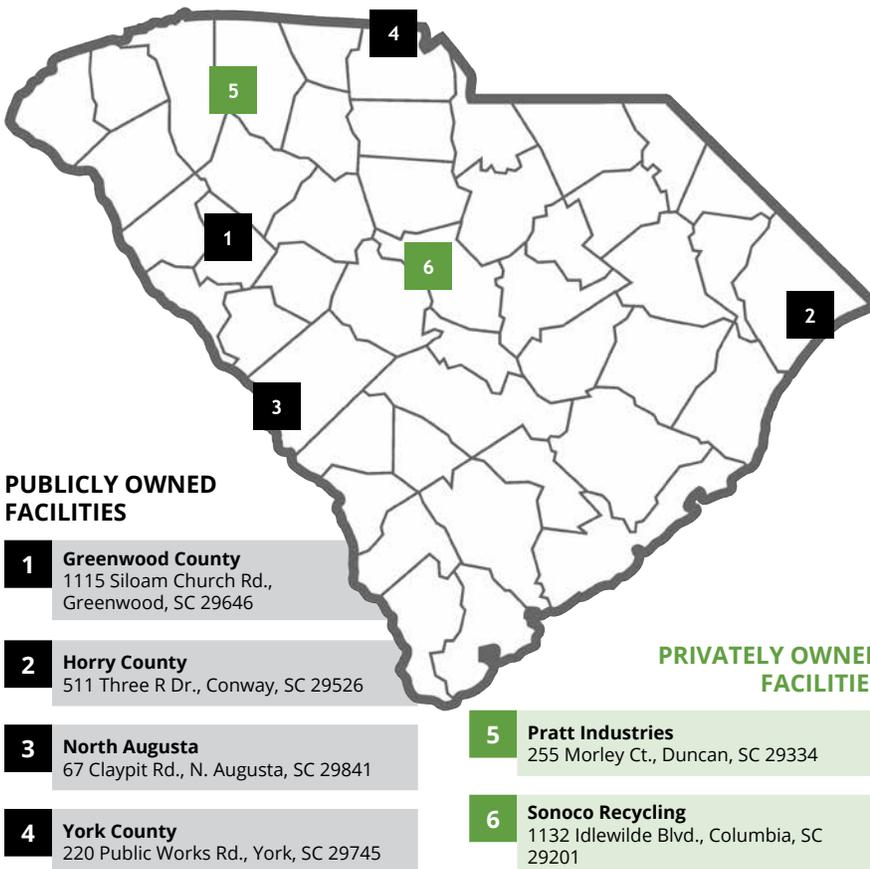
Local governments face a difficult balancing act of costs and services. Recycling programs compete with the low cost of disposal in South Carolina. The state's average tipping fee is \$41 per ton – about \$3.50 less per ton than the regional average according to a 2016 study.

The true cost of recycling is much more difficult to measure in part due to outside factors beyond the services provided to residents. Recycling programs are impacted by the markets and materials recovery facilities (MRFs) that are available.

South Carolina has robust state and regional markets for many but not all materials. The state has only six MRFs. (See Figure 4.1.) South Carolina also lacks a MRF in the low country leaving a huge regional gap that includes one of the state's largest county recycling programs. All of this impacts costs.

Recycling allows local governments to avoid disposal costs – an often forgotten positive – and earn revenue from the sale of recyclables. Unfortunately, this revenue is inconsistent because recyclables are commodities that are subject to the same change in value as other commodities. Commodity prices have been low for the past few years, but began to improve near the end of fiscal year (FY) 2016 (July 1, 2015 to June 30, 2016).

FIGURE 4.1: South Carolina's Materials Recovery Facilities in FY16



Estimated Lost Revenue

It is estimated that nearly 590,000 tons of easily recyclable material – aluminum cans, cardboard, glass bottles and jars, office paper, plastic bottles and steel cans – were disposed of in FY16.* Using the state's average tipping fee of \$41 per ton, it is projected that local governments spent more than \$24 million to dispose of this material.

It is also estimated that more than \$52 million in potential revenue from the sale of this material was lost based on the average revenue received per ton as reported by local governments of each of these types of material.

* The estimated amount of material disposed of that could have been recycled is calculated by using the U.S. Environmental Protection Agency's most recent municipal solid waste (MSW) generation rates to South Carolina's FY16 generation.