

SOUTH CAROLINA DEPARTMENT OF COMMERCE

**RECYCLING MARKET DEVELOPMENT ADVISORY COUNCIL
2020 ANNUAL REPORT**





There are a lot of factors that can determine success in the economic development world. Two key factors we like to focus on – teamwork and adaptability. As a result of this focus, Team South Carolina has seen extraordinary economic development success over the last 10 years. One sector that has seen remarkable growth – recycling. With more than 300 recycling-related firms statewide, recycling is a \$13 billion industry in South Carolina. In 2020, one of the most challenging years in history, seven recycling companies committed to \$119 million in capital investment – nearly double from 2019 – representing over 200 new jobs within our borders. This critical industry includes hundreds of collectors, processors and manufacturers throughout the Palmetto State working together with one goal in mind – manage excess materials.

And, it's no secret South Carolina is a manufacturing powerhouse. Each time a finished product rolls off an assembly line in this state, waste is produced – and that is where our robust recycling sector has stepped in. We successfully manage these processes by adapting to the current environment, recruiting related businesses and developing systems that will endorse and increase sustainability.

As we continue to navigate the economic development landscape, recycling and the importance of sustainable practices will remain in the forefront. With our team approach, including a commitment to being adaptable, this sector will bring more investments and jobs to our great state and will also ensure that South Carolina remain 'Just right' for individuals and businesses alike for years to come.



RMDAC

RECYCLING MARKET DEVELOPMENT ADVISORY COUNCIL



RMDAC supports the economic growth of South Carolina's recycling industry through building recycling markets, increasing material recovery, and promoting the recycling value chain.



South Carolina
Department of Commerce

Just right for business.

RMDAC

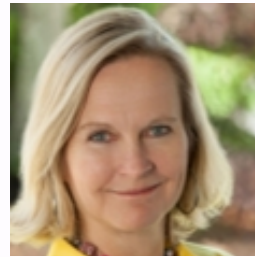
RECYCLING MARKET DEVELOPMENT ADVISORY COUNCIL



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RECYCLING MARKET DEVELOPMENT ADVISORY COUNCIL



Tyler Smith

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Mumford Industries
Recycling Industry



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Mid-Carolina Steel
Aluminum Industry



Glenn Odom

Ex Officio Member

Wellman Plastics
Recycling Industry



Ronnie Grant

Ex Officio Member

Sonoco
Paper Industry



Joseph McMillin

Emeritus Member

Atlas Organics
Organics

SC Department of Commerce



Anna DeLage

Recycling Market
Development
Manger



April Chaffins

Business Services
Coordinator



Ashley Jenkins

Recycling Program
Coordinator

RMDAC

RECOMMENDATIONS

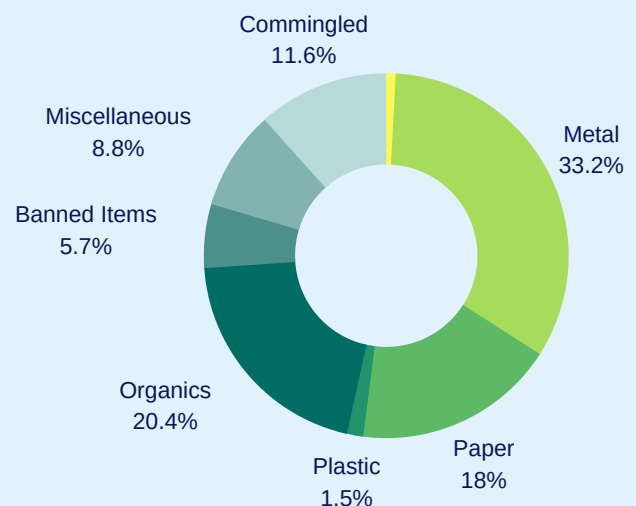
- 1 Revisions to initial report: no revisions necessary to the initial report.
- 2 Description and analysis of MSW recycling during previous year. **The recycling rate for 2020 is 25.5%.*** RMDAC will continue to work with businesses and industry to grow recycling markets and develop strategies to help increase the recovery and recycling of materials.
- 3 Recommendations regarding materials which should be added or deleted from source separation, recovery, recycling programs; and to increase the recovery of recyclable materials. RMDAC will continue to work towards recovery, recycling and sustainable material management options for the following to include but not limited to carpet, glass, plastic containers, metals, scrap tires, electronics, textiles, construction and demolition materials, universal wastes that can be recycled/repurposed, and organics.

- 4 Any other recommendations, including tax incentives, to facilitate the development of markets for recovered materials or products in the state. RMDAC should investigate the following mechanisms to spur recycling recovery and industry growth:
 - Add recycling to the types of businesses qualifying for job tax credits.
 - Require recycling infrastructure in the design for multi-family establishments.
 - Share best management practices for business recycling.
 - Assist with businesses reporting of recycling data.
 - Develop partnerships to support and increase market-based solutions to recycling.
 - Encourage Pay as You Throw as a mechanism to increase capture of recyclables.
 - Encourage businesses to adopt a framework for an economy that is restorative and regenerative by design.

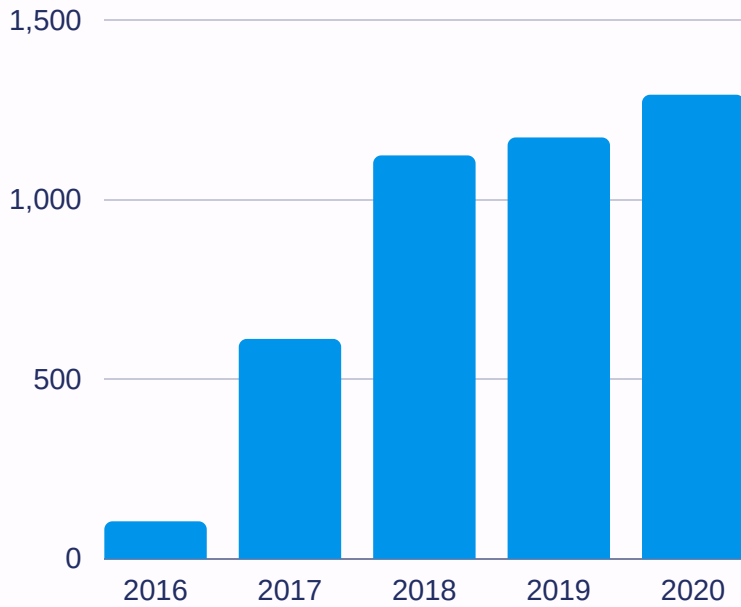
**2020 SC
Recycling
Rate:
25.5%**

FY: July 1, 2019 - June 30, 2020

**2020: % of SC's
MSW
Commodities
Recycled by
Weight**



**South Carolina Recycling Industry
5 Year Capital Investment (Cumulative)
(Millions)**



**SC Recycling
Industry Snapshot
2016 - 2020**

\$1,290M

Capital Investment

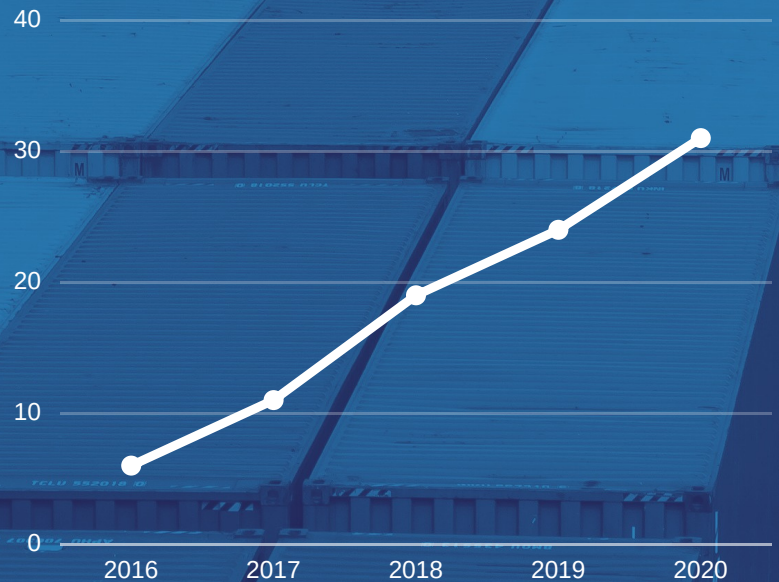
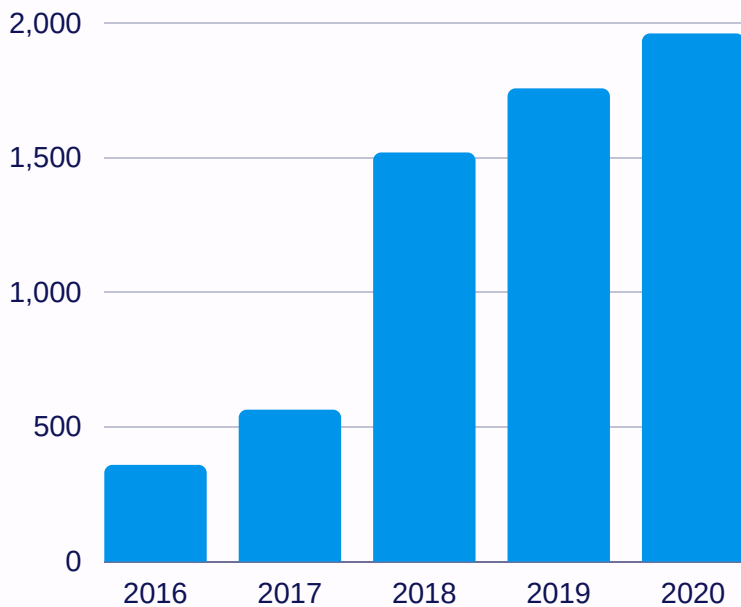
1,958

Job Creation

31

New/Existing
Businesses

**South Carolina Recycling Industry
5 Year Job Creation (Cumulative)**



South Carolina Recycling Industry
5 Year Business Investment (Cumulative)

Paper

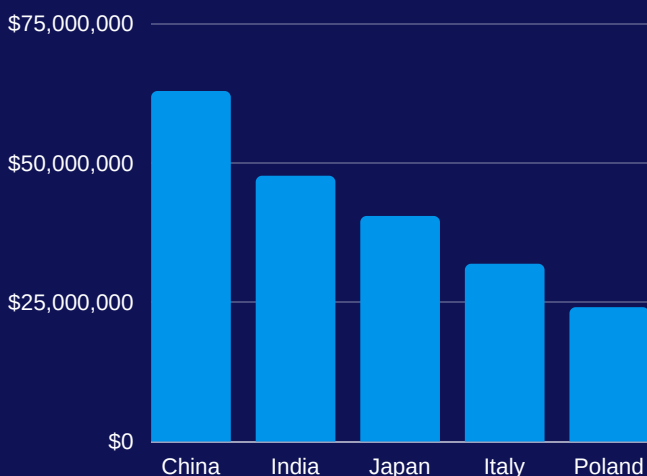
2021 will be the first full year where China banned recovered paper imports from global markets, reducing fiber supply by the 7.2 million tons imported in 2020. China's mill system must now fulfill their gap in raw material needs through imports of recycled pulp, virgin pulp and imported finished rolls of containerboard. This major dynamic shift from what was the world's largest consumer of recovered paper, opened the door for others throughout the globe. Southeast Asia, the US, and other countries have increased their production and announced new pulp production capacity to fulfill China's new demand and more projects are underway throughout the world. This global shift in market trade has created a disruption in ocean logistics. Ships coming from China with a product must now detour to alternate countries on the way back to be unloaded with RCP before returning to China making logistics more expensive and less reliable.

If this were not enough, COVID-19 had a significant impact on the global paper markets. As businesses shut down and people began working from home, less RCP supply was collected around the world. Alternatively, mills were deemed essential, coupled with the increased demand from eCommerce which drove demand putting pressure on the global fiber supply chain. Consequently, this significantly increased RCP prices in the early stages of the pandemic. Today the supply chain has leveled out somewhat and prices have settled to projected levels. As new capacity is added throughout 2021 and years to come, the demand for RCP will continue to improve for the foreseeable future.

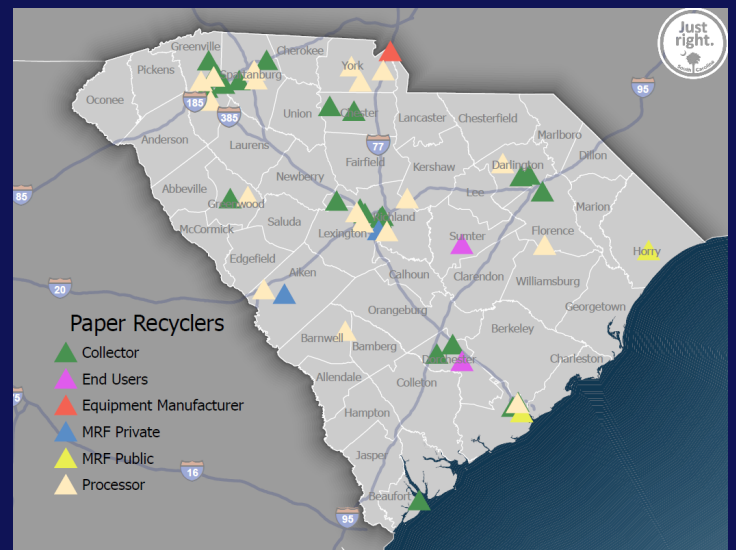
“ **COVID-19** had a significant impact on the global paper markets. ”



SC's Top 5 Export Countries in 2020 for Recycled Paper



Paper Recovery Facilities in South Carolina



Tires

South Carolina is the #1 state in the country for manufacturing tires. An estimated 5.08 M waste tires are generated by the citizens of SC. To address markets for recycled tires, Commerce continues to collaborate with DHEC's Waste Tire Sustainability Coalition to bring industry, government, and research stakeholders together to grow end markets for tires and pave the way for innovative technology. As a leader in tire manufacturing, South Carolina is well-positioned to drive the tire recycling industry forward. SC Department of Commerce staff presented at the U.S. Scrap Tire Workgroup Annual meeting to address national strategies for recycled tire applications for asphalt paving.

South Carolina's DHEC certified in-state tire recyclers include Ridge Recyclers, Envirogreen, and SC Tire Processing. Other states have certified tire recyclers who can also take SC tires for recycling. Tire-derived fuel, civil engineering, and ground rubber applications were the main markets for scrap tires.

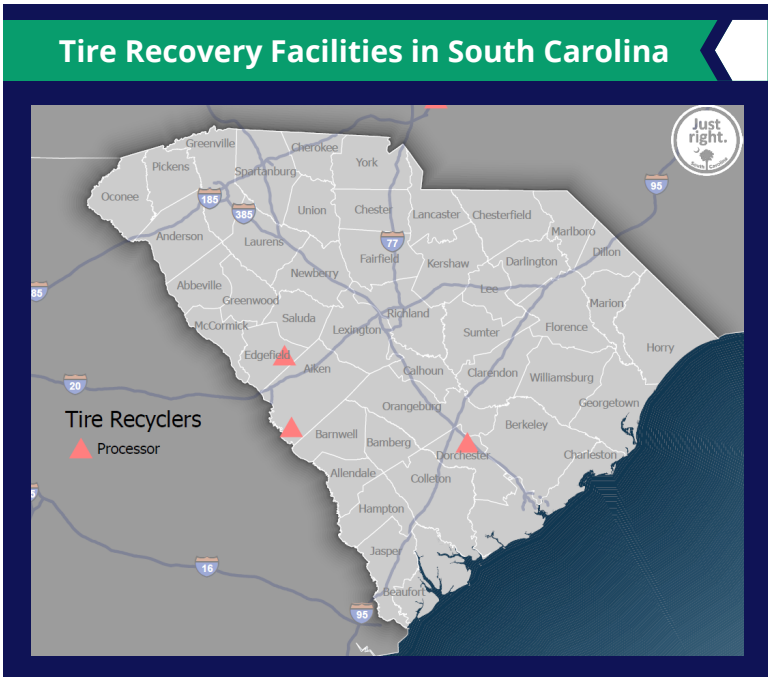
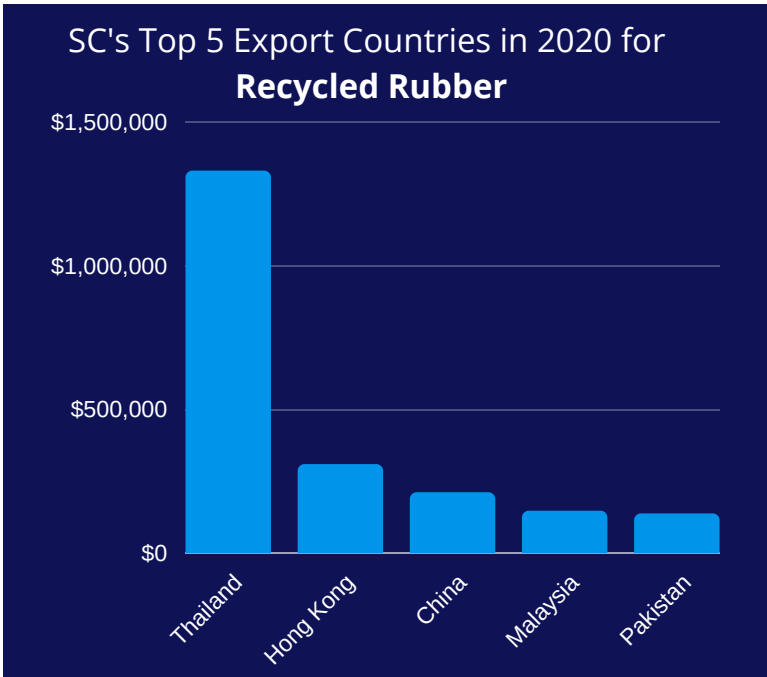
Tire Derived Fuel (TDF) is the major commodity produced in South Carolina from recycled tires. Several industrial sites in South Carolina utilize TDF as part of their fuel stream to make energy. Tires can also be ground into landscape mulch, playground surfacing, horse tracks, and, crumb rubber for asphalt. Recycled tires can even be used as bullet traps for ballistic courses and public works applications for erosion control, speed bumps, and traffic signs.



5.08M

An estimated 5.08 million waste tires are generated by the citizens of South Carolina.

The primary markets for scrap tires will continue to be TDF, civil engineering applications, and ground rubber applications, as whole tires are banned by law from any type of landfill disposal. Developing recycling market solutions for tires is crucial to the success of the industry, and Commerce's recycling team is working with public and private sector partners to develop those new markets.



Plastics

Plastics are polymers which offer many benefits to manufacturers in the automotive, aerospace, medical device, and packaging industries in SC. Plastics are lightweight, water-resistant, durable, strong, economical, and corrosion and chemical resistant. Many post-consumer and post-industrial plastics can be recycled. Whether it is economically feasible depends upon the quantity and quality of the plastics. Many manufacturers grind plastics onsite to reuse their post-industrial scrap in their processes. South Carolina has a robust plastic recycling industry with 83 companies in the value chain that collect and recycle residential, commercial, and industrial plastic scrap material. The SC plastic recycling industry's readily available markets employ more than 1,500 people who are converting bottles and other plastics into new products like carpeting, clothes/textiles, plastic pipe, plastic lumber, and other products.

There are 15 industrial plastics recyclers in the state who recycle more than 200 million pounds of these materials annually. Beyond polymers, textile recyclers handle both woven polyester, nylon, and non-woven materials derived from plastics. Leigh Fibers, Martex Fiber, and Bowers Fibers are three of the nation's largest textile recyclers with locations in South Carolina who serves the automotive and home furnishing industries.

In the Southeast, recycled PET pricing started strong in Q1 of 2020, but after COVID-19 hit the southern states, PET dropped and only started to recover in Q4.

This upswing will continue into 2021, with oil prices increasing. Natural HDPE trended the opposite, taking a hit in Q1, but rebounding from there and finishing the year higher than the beginning. HDPE ridged was not that lucky, seeing a steady decline throughout 2020. This is starting to rebound. Polypropylene gained quite a bit of traction from the beginning of 2020, and looks like it will continue into the beginning of 2021.*

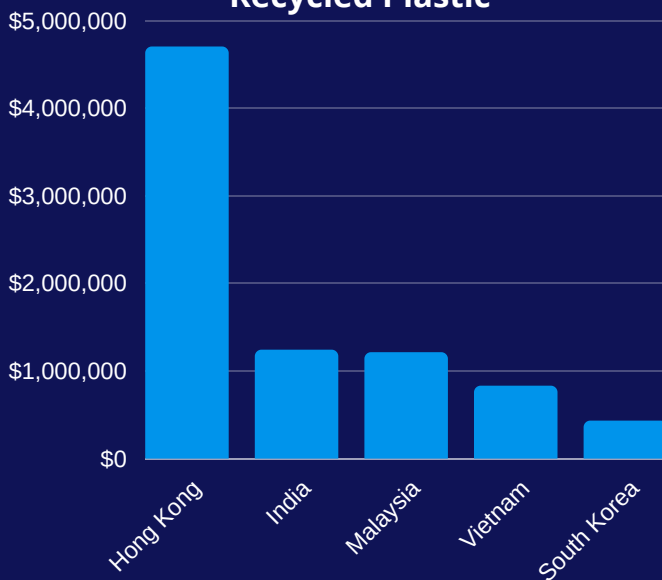
In the Southeast, recycled PET pricing started strong in Q1 of 2020, but after COVID-19 hit the southern states, PET dropped and only started to recover in Q4.



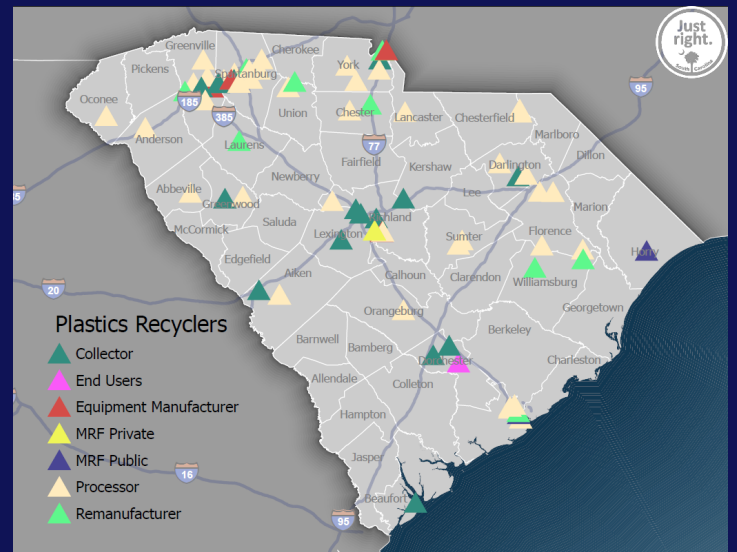
South Carolina markets continue to grow and evolve for plastics recycling. The state sees the benefits of plastics recycling in job creation and capital investment as well as reduced landfilling.

*Source www.recyclingmarkets.net

SC's Top 5 Export Countries in 2020 for Recycled Plastic



Plastic Recovery Facilities in South Carolina



500M

South Carolina has the capacity to process more than **500 million pounds** of plastic bottles per year.

10 
10 PET plastics reclaimers

1,500

The SC plastic recycling industry's employ **more than 1,500 people** who are converting bottles and other plastics to new products like carpeting, clothes/textiles, plastic pipe, plastic lumber and other products.

There are **15 industrial plastics recyclers** in the South Carolina who recycle more than 200 million pounds of plastic material annually.

15

OVER
70%

of all plastic bottles are thrown away, so recycling more of these plastic bottles is critical.



Metals

The annual demand is 5,440,000 tons for steel and 120,000 tons for aluminum. Commercial and industrial firms can reduce waste collection costs by increasing the volume of metals and other recyclables by working with scrap metal recyclers to divert those materials into the recycling stream. Construction, automotive, metal fabrication, packaging, and other industry sectors generate multiple types of easily recycled metals such as aluminum, copper, lead, steel, nickel, zinc, and brass. Businesses can also create revenue by recycling metals with local scrap yards that collect and process these commodity materials. South Carolina has more than 100 companies involved in metal recycling that can haul, process, and manufacture recycled metals for the automotive, construction and building, energy, agriculture, aerospace, tools, and packaging sectors. SC has a vibrant metal recycling industry with a trade association, the SC Recyclers Association, that advocates on behalf of its members. South Carolina has four steel mills: Nucor (2), CMC Steel, and Liberty Steel.

Steel is recycled at these locations to create structural steel building products and steel wire rods. JW Aluminum, a flat-rolled aluminum mill, produces siding, automotive body materials, and flexible packaging.

100

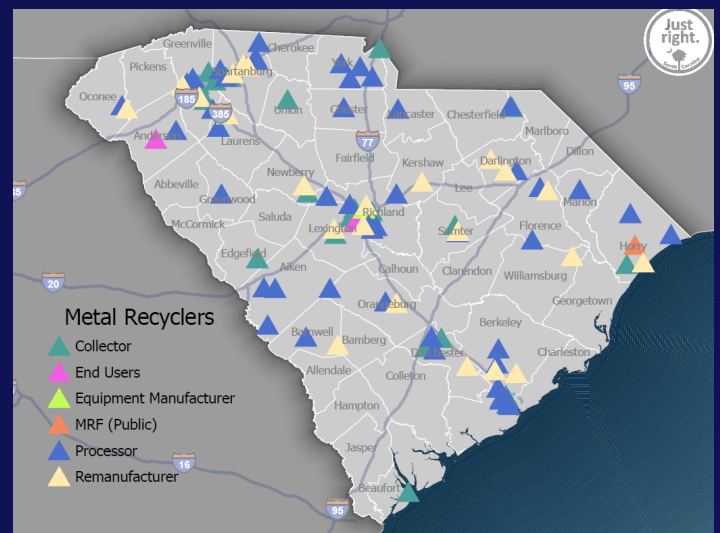
South Carolina has more than **100 companies** involved in metal recycling that can haul, process, and manufacture recycled metals for the automotive, construction and building, energy, agriculture, aerospace, tools, and packaging sectors.

Covid-19 had significant impacts on the metal recycling industry, especially in Q2 of 2020. According to data from the World Steel Association, U.S. steel production was slightly down by 0.9%. As many industries came to a halt at the beginning of the pandemic in SC, demand dropped significantly for steel and aluminum processors. Demand increased in the fourth quarter of the year, especially with steel seeing record increases in the last decade.

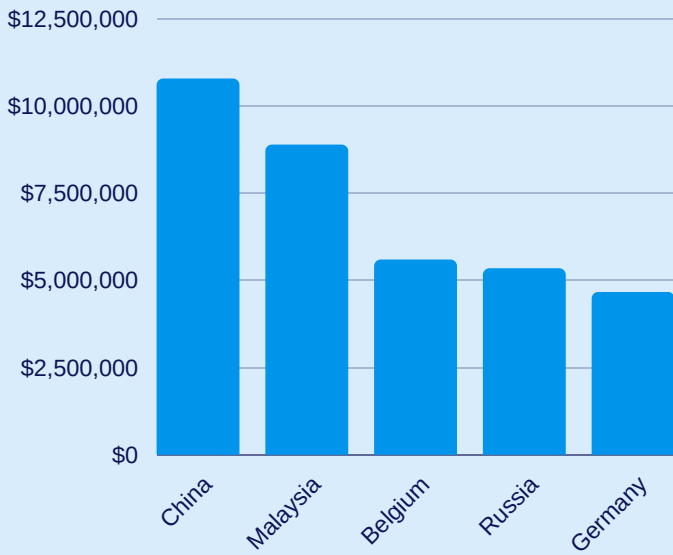
5.4
million tons

The annual demand for steel is 5,440,000 tons, and 120,000 tons for aluminum.

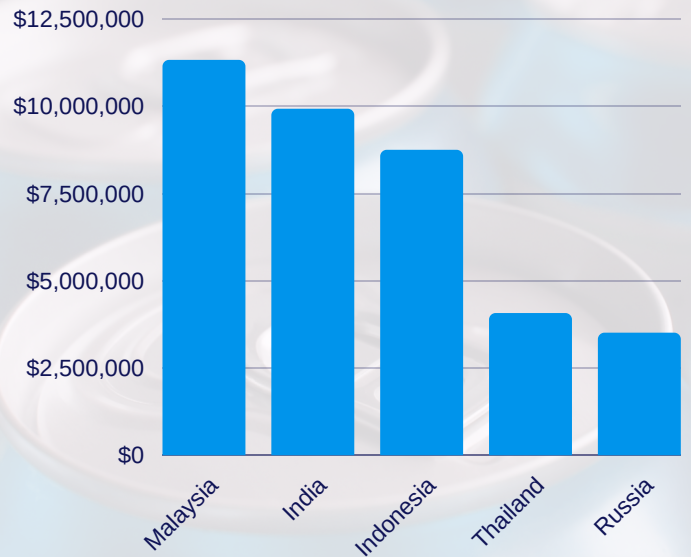
Metal Recovery Facilities in South Carolina



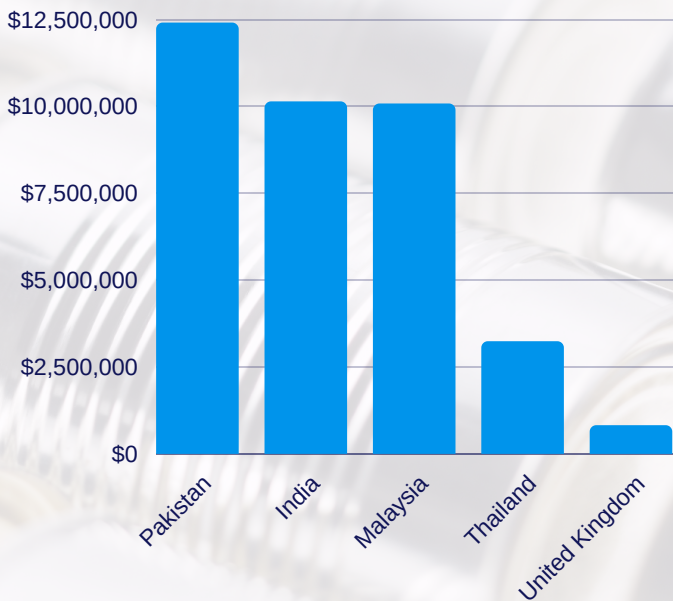
SC's Top 5 Export Countries in 2020 for **Recycled Copper**



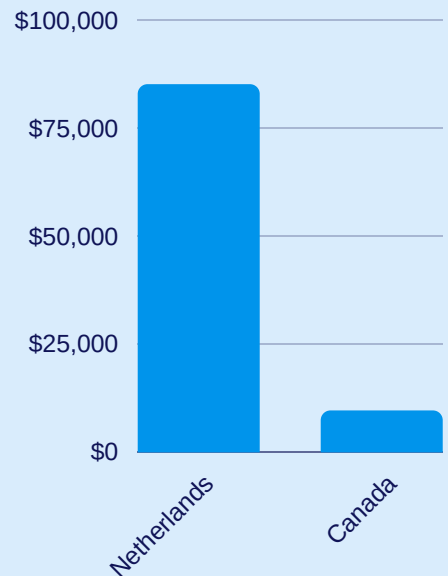
SC's Top 5 Export Countries in 2020 for **Recycled Aluminum**



SC's Top 5 Export Countries in 2020 for **Recycled Ferrous Metals**



SC's Top Export Countries in 2020 for **Recycled Nickel**



Food

Food is the No.1 item Americans throw away. Each year up to 40 percent of the nation's food supply is never consumed – an annual loss of \$218 billion. Don't Waste Food SC (DWFSC) is a collaborative outreach campaign between Commerce and the S.C. Department of Health and Environmental Control (DHEC) that brings together ambassadors from the public and private sectors dedicated to sharing knowledge, coordinating resources and working together to reduce food waste in South Carolina. Campaign goals are to 1) increase the awareness of the economic, environmental and social impacts of wasted food, 2) inspire individuals, communities, restaurants, schools and others to take action to reduce food waste through prevention, donation, and composting and 3) cut food waste in half in South Carolina by 2030.

The three pillars of the DWFSC campaign are prevent, donate, and compost.

The first pillar is prevention. Wasted food wastes natural resources. Any labor, energy, water, land or other resources used to produce, package and transport food from the farm to our plates are lost.

The second pillar is donation – all the more critical because as many as 50 million Americans are food insecure.

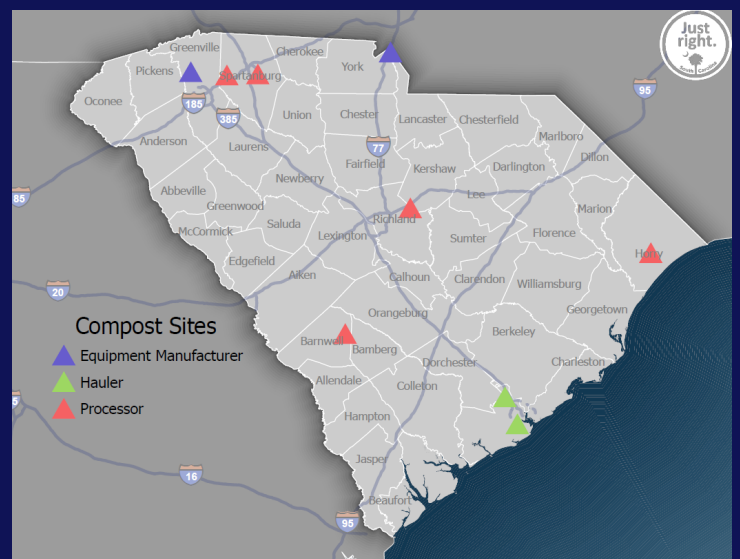
Composting is the third pillar. Commerce has been supporting the growth of four industrial scale food composting facilities across the state in Greenville, Columbia, Conway, and Charleston. CompostNow hauls food waste for home, office, and restaurant service in Charleston. SMART Recycling hauls organics in Horry and Charleston counties and the Midlands. Atlas Organics services 16 counties. Since 2014, the compost industry has seen increased numbers of jobs and investments each year.

40%

of the nation's food supply is never consumed – an annual loss of \$218 billion.

DWFSC

Food Recovery Facilities in South Carolina



Glass

Recycled glass has an endless lifespan and can repeatedly be recycled. The global market for recycled glass surrounds Asia-Pacific, Latin America, Europe, North America, the Middle East and Africa. The global glass market is projected to grow to approximately \$5.27 billion in 2027. The demand for glass material continues to increase, which allows opportunities for expansion and growth. The growing concerns of sustainable development have promoted the need to recycle glass in South Carolina.

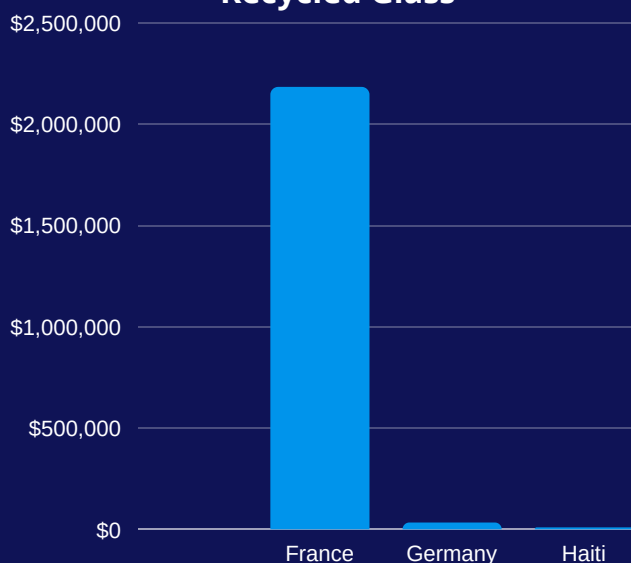
South Carolina has faced many market challenges when it comes to recycled glass. The challenges stem from contamination, high transportation and processing cost. The market challenges have caused some residential communities in SC to discontinue collecting glass or sorting glass separately. Many businesses and organizations in SC want to recycle glass, so the rise of drop-off centers has developed to provide the opportunity to recycle glass.

GLASS WRX SC, located in Beaufort, SC, is the only glass processor in the state. GLASS WRX SC is on the pathway to clean air, clean water, and clean building.

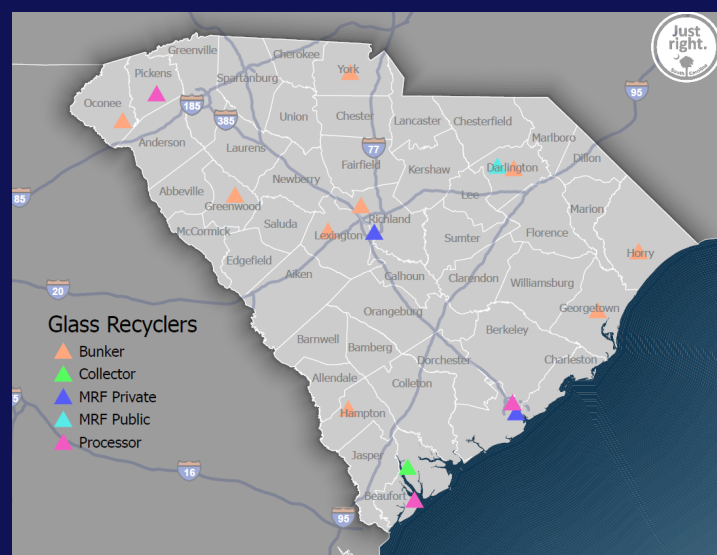
To acquire the glass, they're working with the Department of Health and Environmental Services (DHEC) and several counties in South Carolina to create a regional force to develop a bunker system for a glass collection program. This initiative has also galvanized a push to advocate a regional target to set up bunker systems to collect glass from Brunswick, GA – Wilmington, NC.

The other glass processor near South Carolina is Strategic Materials in Wilson, NC and College Park, GA. South Carolina has several public and private material recovery facilities (MRFs) that process glass. The MRFs accepting glass is Sonoco Recycling in Columbia, Horry County Solid Waste Authority, North Augusta, and Greenwood County.

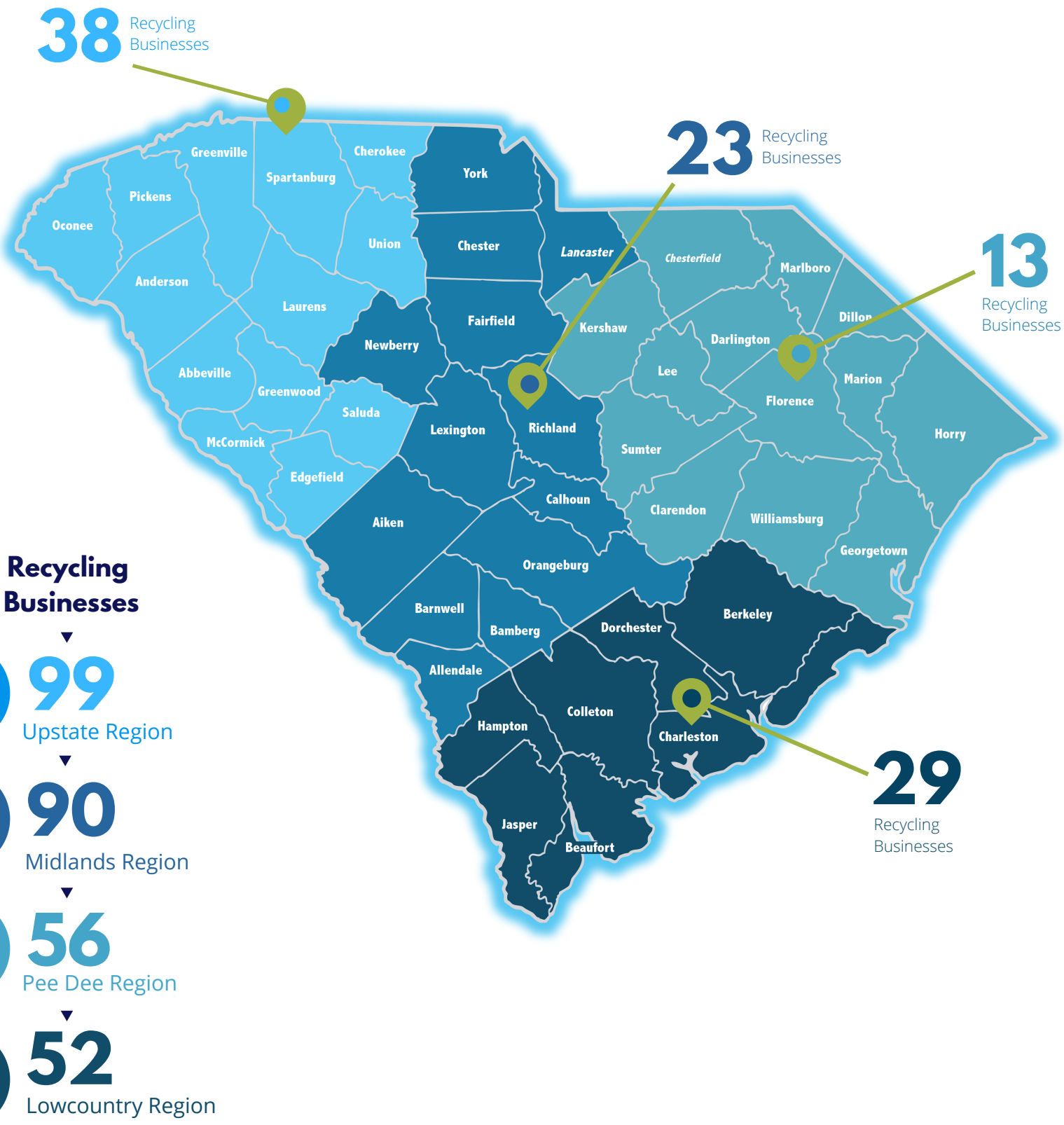
SC's Exports Countries in 2020 for Recycled Glass



Glass Recovery Facilities in South Carolina

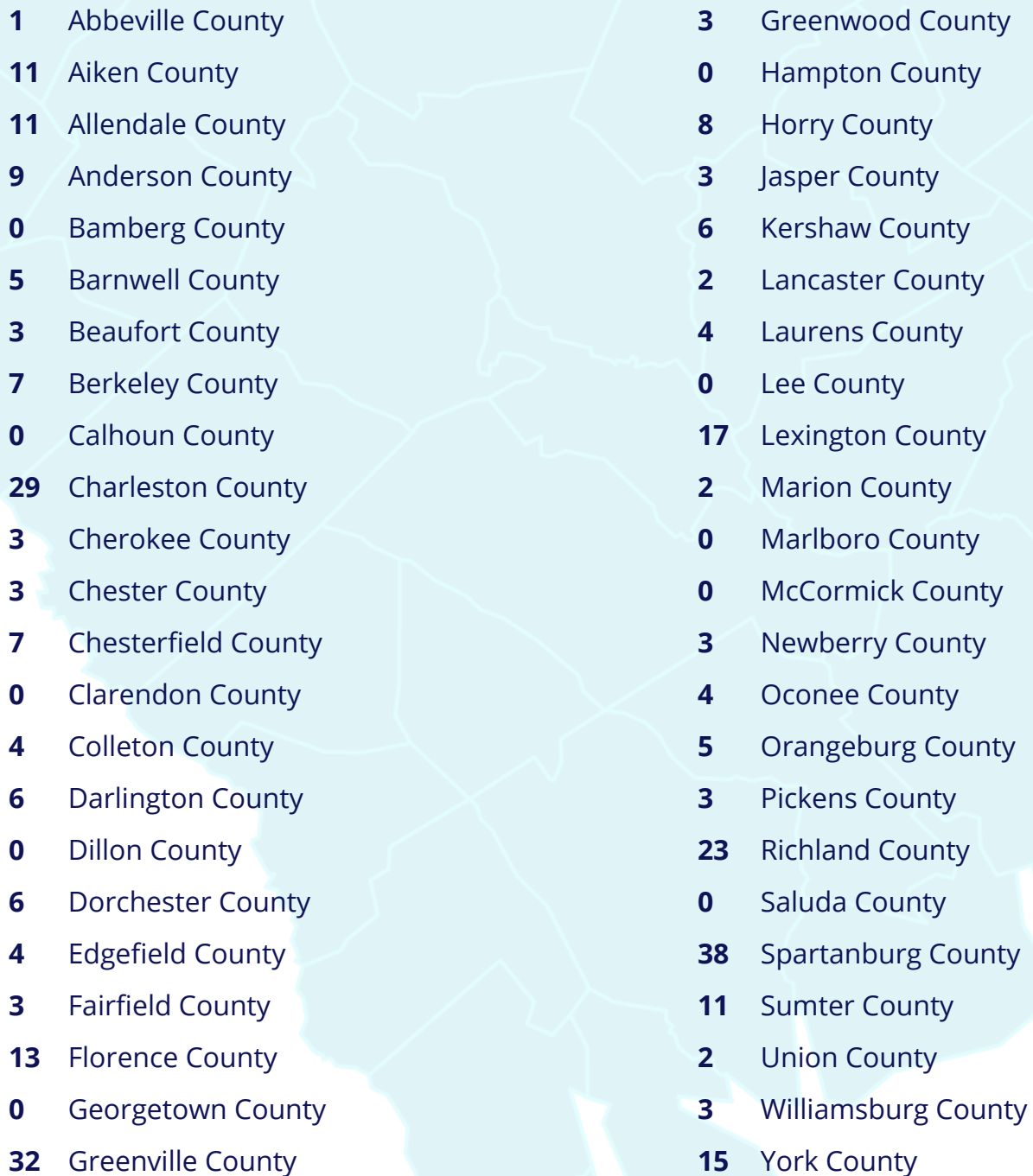


Recyclers by Region & County



Recycling Businesses: A type of business that earns an income from the collection of variety of materials for recycle.

Recycling Businesses by County



A map of South Carolina counties is shown in the background, with a blue triangle pointing downwards from the title. The map is overlaid with a list of counties and their corresponding number of recycling businesses. The list is organized into two columns. The first column lists counties from top to bottom: Abbeville, Aiken, Allendale, Anderson, Bamberg, Barnwell, Beaufort, Berkeley, Calhoun, Charleston, Cherokee, Chester, Chesterfield, Clarendon, Colleton, Darlington, Dillon, Dorchester, Edgefield, Fairfield, Florence, Georgetown, and Greenville. The second column lists counties from top to bottom: Greenwood, Hampton, Horry, Jasper, Kershaw, Lancaster, Laurens, Lee, Lexington, Marion, Marlboro, McCormick, Newberry, Oconee, Orangeburg, Pickens, Richland, Saluda, Spartanburg, Sumter, Union, Williamsburg, and York.

1 Abbeville County	3 Greenwood County
11 Aiken County	0 Hampton County
11 Allendale County	8 Horry County
9 Anderson County	3 Jasper County
0 Bamberg County	6 Kershaw County
5 Barnwell County	2 Lancaster County
3 Beaufort County	4 Laurens County
7 Berkeley County	0 Lee County
0 Calhoun County	17 Lexington County
29 Charleston County	2 Marion County
3 Cherokee County	0 Marlboro County
3 Chester County	0 McCormick County
7 Chesterfield County	3 Newberry County
0 Clarendon County	4 Oconee County
4 Colleton County	5 Orangeburg County
6 Darlington County	3 Pickens County
0 Dillon County	23 Richland County
6 Dorchester County	0 Saluda County
4 Edgefield County	38 Spartanburg County
3 Fairfield County	11 Sumter County
13 Florence County	2 Union County
0 Georgetown County	3 Williamsburg County
32 Greenville County	15 York County

RECYCLING MARKETS DIRECTORY



SC RECYCLING
MARKETS
D I R E C T O R Y

Connecting Materials to Markets

www.recyclinginsc.com/directory

The South Carolina Recycling Market Development team launched a free online tool called the SC Recycling Markets Directory. The South Carolina Recycling Markets Directory helps manufacturers keep valuable materials in motion by reducing waste and helping businesses meet sustainability goals. The platform showcases more than 300 South Carolina recycling companies, and it allows manufacturers to easily find recyclers in the area.

\$13 Billion

THE ECONOMIC IMPACT OF RECYCLING NOW
EXCEEDS \$13 BILLION.

Recycling is a green growth industry in South Carolina, home to recycling companies including collectors, processors, recycled product manufacturers and equipment makers.

MORE THAN

300

RECYCLING BUSINESSES

#COVID19

HIGHLIGHTS

MARKETS MATTER



2020 was a challenging year. COVID-19 disrupted the entire economy and impacted many recycling companies in South Carolina. Since recycling is a vital part of the supply chain, the recycling industry was declared an essential industry and service. While maintaining safety in the workplace, recycling businesses have championed and thrived in the midst of the pandemic. South Carolina is resilient and continues to create a pathway for a sustainable environment.

204

NEW JOBS

1 MRF Temporarily Suspended

York County's MRF temporarily suspended the processing from late March to May of unsorted, mixed recycling material coming to the MRF.

CAPITAL INVESTMENT

\$119M

Seven recycling companies brought jobs to South Carolina with an investment of **\$119,300,000**.

MUMFORD INDUSTRIES

“ We have worked quickly to get this production in place to fill the gap for healthcare workers and maintenance people, as well as those who work directly with the public and will be going back to work shortly. We are more than pleased to be able to contribute — we are humbled by the opportunity. ”

George Mumford, company President

INDUSTRY SPOTLIGHT

Mumford Industries Inc., one of the Southeast leaders in providing recycling and reprocessing services to manufacturers and distribution centers, has helped fill the gap for protective coverings by producing upcycled emergency ponchos for those serving on the front lines during the national COVID-19 pandemic.

The company, located in Ninety Six, S.C., responded to the urgency by pivoting its operation to produce plastic emergency ponchos, which are liquid and puncture resistant and made from unused, upcycled scrap plastic film.

Thanks to Mumford Industries Inc., for answering the call for help for our state and nation during this historic COVID-19 pandemic.

**RMDAC encourages
businesses to adopt
a framework for an
economy that is
restorative and
regenerative by
design.**



South Carolina
Department of Commerce

Just right for business.



State agency responsible for economic development in SC. Recycling Market Development builds recycling markets, increases material recovery and promotes the recycling value chain.

1201 Main Street Suite 1600
Columbia, South Carolina 29201
(803) 737-0400
www.SCcommerce.com
www.RecyclinginSC.com



South Carolina
Department of Commerce

Just right for business.

State agency that protects human health and the environment. The Office of Solid Waste Reduction and Recycling provides support to local governments and is non-regulatory in nature.

2600 Bull Street
Columbia, SC 29201
1-800-768-7348
www.scdhec.gov
<http://recyclemoresc.org>





The South Carolina Department of Commerce Recycling Market Development Advisory Council 2018 Annual Report is submitted by the S.C. Department of Commerce in compliance with SECTION 13-1-380 of the SC Code of Laws. This report was published by Recycling Market Development staff at the S.C. Department of Commerce on March 15, 2020.