Solid Waste Management Plan

Greenville County, SC
301 University Ridge
Suite 800
Greenville, SC 29601

Greenville County

Table of Contents

Section Page

EXECUTIVE SUMMARY 1

ARTICLE SUMMARIES 1

1.0 LEGISLATIVE AUTHORITY 4

1.1 FEDERAL AUTHORITY 4
1.2 STATE AUTHORITY 5
1.3 LOCAL AUTHORITY 5

2.0 GEOGRAPHY AND DEMOGRAPHICS 8

2.1 POPULATION 9
2.2 LAND CHARACTERISTICS 10
2.3 EMPLOYMENT AND ECONOMIC BASE 11
2.4 MAJOR TRANSPORTATION ROUTES 12

3.0 EXISTING AND FUTURE SOLID WASTE MANAGEMENT 13

3.1 GENERATION AND CHARACTERIZATION 13
3.1.1 Current Solid Waste Generation 14
3.1.2 Projected Solid Waste Generation 14
3.2 COLLECTION 15
3.2.1 Greenville County 15
3.2.2 The City of Fountain Inn 17
3.2.3 The City of Greenville 17
3.2.4 The City of Greer 18
3.2.5 The City of Mauldin 19
3.2.6 The City of Simpsonville 20
3.2.7 The City of Travelers Rest 21
3.2.8 Greater Greenville Sanitation District 21
3.3 TRANSFER 22
3.4 TREATMENT 23
3.4.1 Solid Waste Processing Facilities 23
3.5 DISPOSAL 23
3.5.1 Green Energy 25
3.5.2 Composting and Wood-Grinding 25
3.6 BANNED ITEMS 29
3.6.1 Tires 30
3.6.2 Used Oil 30
3.6.3 Batteries 31

3.6.4 Yard Trash 31
3.6.5 White Goods 32
3.6.5 Electronic Waste 33
3.7 Miscellaneous Items 34
3.7.1 Household Hazardous Waste 34
3.7.2 Special Waste 35
3.7.3 Construction and Demolition Debris 35
3.8 Import and Export 36

4.0 RECYCLING 37

4.1 Current Recycling Program 37
4.1.1 Recycling Coordinator 37
4.1.2 Materials Recycled 37
4.1.3 Recycling Drop Boxes 39
4.1.4 Business & Institutional Recycling 40
4.1.5 County College and University Recycling 41
4.1.5 Greenville County School District 42
4.2 Future Recycling Developments 42

5.0 GOALS, POLICIES, STRATEGIES, AND BARRIERS 43

5.1 Goals 43
5.2 Barriers 44
5.3 Public Education 44
5.3.1 School Programs 45
5.3.2 Social media 45
5.3.3 Backyard Composting 45
5.3.4 Promote Commercial and Event Recycling 46

6.0 PLAN REVISIONS 47

6.1 Annual Reporting 47
6.2 Plan Revisions and Amendments 47

7.0 FISCAL IMPACT STATEMENT 48

7.1 The Solid Waste Fund 48
7.1.1 Revenues 48
7.1.2 Expenses 52

Appendices

Appendix A Greenville County Solid Waste Disposal Facility Ordinance

Executive Summary

The Solid Waste Policy and Management Act of 1991 (SWPMA) requires county governments, or regional governments, to submit a Solid Waste Management Plan (Plan) for that county or region. The original Greenville County Solid Waste Management Plan was created in 1993 through the cooperative efforts of the Solid Waste Advisory Committee (SWAC), members of the County Solid Waste Division, and members of the community. Over the years, much of the data, information, and practices of the County included in the original Plan became outdated. It was for this reason that the Solid Waste Division performed several Plan revisions throughout the years.

The Division set forth a number of goals in the Plan. These goals, as well as brief summaries of each section of the Plan are included in the remainder of this section.

Article Summaries

Legislative Authority

Numerous federal, state, and local laws and regulations have affected owners and operators of solid waste management facilities. This section details the authority delineated at each level of government and provides the basis and guidelines for this Plan. At the federal level, the Resource Conservation and Recovery Act (RCRA) of 1976 (Subtitle D) serves as the principle legislative foundation. The State Law governing solid waste management includes both the Solid Waste Policy and Management Act of 1991, Regulation 61-107.19 Solid Waste Management: Solid Waste Landfills and Structural Fill, and Regulation 61-107.17 Demonstration-of-Need.

Greenville County local ordinances also direct solid waste policy. This Plan is consistent with the ordinances of Greenville County and all amendments to the ordinances, which empower the Greenville County Council with local authority over all solid waste management in the County. In compliance with Section 44-96-80 of the SWPMA, this Plan has been created to communicate the intent of Greenville County's Solid Waste Management facilities and services, and to display the consistency of Greenville County's Plan with both state and federal regulations.

Geography and Demographics

Greenville County is located on the Piedmont Plateau in the northwest section of South Carolina and covers an area of approximately 798 square miles. Greenville County contains several incorporated cities, including Greenville (the County Seat), Simpsonville, Mauldin, Fountain Inn, Greer, and Travelers Rest.

There are many factors that affect solid waste generation. The purpose of this section is to provide visual aids, statistics, and summaries dealing with the geography and demographics of the County, to better analyze and evaluate current and historic trends in solid waste generation.

The areas examined in this section are population, land use, employment, economic base, and major transportation routes.

Existing and Future Solid Waste Management

The purpose of this section is to provide information about the quantity and characteristics of the solid waste generated within Greenville County. This section also presents waste generation projections for the near future. Past, present and future waste generation data are all important to the successful waste management and recycling operations of Greenville County. The data from this section comes from the most recent annual report regarding the current and projected generation of solid waste within the County.

This section presents and analyzes the existing services and infrastructure which are currently used to manage the County's waste streams and recyclable materials. These services are provided by both the public and private sectors, with the latter mainly responsible for providing collection and recycling services to commercial and industrial customers. The presentation and analysis of the existing solid waste services and infrastructure in Greenville County provides a firm basis for the determination of the recycling and disposal services and infrastructure which will be needed in the County for years to come.

The six municipal governments in the County, as well as the County government and the Greater Greenville Sanitation Commission, provide an array of collection, processing, and disposal services to manage these mixed waste, yard waste, and recyclable materials streams.

The Twin Chimneys Landfill is Greenville County's only publicly owned and operated Class Three landfill and provides for the disposal of most of the residential waste currently generated in the County. The remaining waste stream is either recycled or disposed of in out-of-County Class Three landfills. This section addresses the following areas with respect to solid waste disposal in Greenville County: the current disposal facilities at the Twin Chimneys Landfill, including Class Three and Class Two facilities; other permitted Class Two and Class One sites throughout the County; provisions for the disposal of special and hazardous wastes; and plans for future facilities within Greenville County.

At this time, Greenville County's Class Two and Three Landfills have sufficient capacity to provide 100% disposal for the waste generated over the next twenty years. Additional private facilities are also available and will be allowed in the future to meet the disposal needs.

Recycling

This section provides an overview of Greenville County's recycling activities. These activities, including partnerships with public and private agencies, community drop boxes, and municipal curbside collection are all designed to move the County closer to its reduction, reuse and recycling goals. The section also includes summaries of the commercial, industrial, and institutional recycling programs, processing facilities within the County, and private recyclers.

The identification of these activities and services will provide insight into the County's actions and achievements, and strengths and weaknesses regarding the attainment of the waste stream recycling goals set forth.

Goals, Policies, Strategies, and Barriers

The purpose of this section is to present the recycling and reduction goals of the Greenville County Solid Waste Division. The section also identifies the most pervasive barriers to the completion of these goals. The brief introduction serves as a statement of purpose and direction for the reduction and recycling activities of the County.

Public participation is essential for the success of any solid waste reduction or recycling program. Greenville County has several programs and resources available that are designed to educate, inform, and encourage the public to actively participate in the County's programs. These programs include school presentations, social media, backyard composting, newsletters, landfill tours, and the promotion of residential, commercial, and event recycling. Through these methods, the Solid Waste Division hopes to create a greater sense of environmental responsibility among the citizens of Greenville County, and steadily increase the number of citizens who will work toward the County's reduction and recycling objectives.

Plan Revisions

To maintain this Solid Waste Management Plan as an accurate and effective document, the Plan must be continually revised and updated to reflect the status of solid waste management within Greenville County. Each county is required to submit an annual progress report and any revisions to its local Solid Waste Management Plan to the Department of Environmental Services each year. The State recommends that counties should review their local Solid Waste Management Plans to determine consistency with the State Plan and consistency with current solid waste practices within the County.

Fiscal Impact Statement

The Solid Waste Management Plan is funded through the Solid Waste Enterprise Fund of Greenville County. All County-operated programs described in the Plan are financed through a combination of millage and landfill disposal fees. This includes the construction of future solid waste facilities. Some small specific projects may also be funded through grants from the Department.

1.0 Legislative Authority

The purpose of this section is to detail the legislative authority of this Plan.

1.1 Federal Authority

The federal role in the legislative authority of this Plan is to establish the general regulatory direction. The federal government provides minimum nationwide standards for protecting human health and the environment and gives technical assistance to states for planning and developing their own solid waste management practices.

The principal section of the RCRA, which directly applies to state and local government waste management practices, is Subtitle D, Solid Waste. Subtitle D establishes a framework for federal, state, and local government cooperation in controlling the management of non-hazardous solid waste.

The management criteria pertaining to Municipal Solid Waste Landfills have been identified and addressed as the following:

1. The location of municipal solid waste landfills, including the proximity to airports, 100-year flood plains, wetlands, fault areas, seismic impact areas, and unstable areas.
2. The operating procedures to be followed at municipal solid waste landfills, including exclusion of hazardous waste, selection and application of daily cover, disease and vector control, explosive gases control, compliance with air criteria, implementing access restrictions, control of run on and run off, handling surface water and other liquids, and record keeping procedures.
3. The design criteria for municipal solid waste landfills, including the requirement that such landfills be lined with 2 feet of clay that has a permeability of at least 1×10^{-7} and a polyvinyl chloride (PVC) liner that is 30 millimeters thick or a high-density polyethylene (HDPE) liner that is 60 millimeters thick.
4. The procedures to be followed in conducting a ground water monitoring and assessment program as well as the selection and implementation of appropriate corrective actions.
5. The requirements for closure and care of a municipal solid waste landfill, as well as post closure procedures.
6. The identification of financial assurances and mechanisms necessary to maintain a municipal solid waste landfill.

In addition to these regulations, the EPA amended Subtitle D in 1994, 1996, and 1997, to include provisions regarding used oil regulations, construction and demolition debris, and financial assurance.

1.2 State Authority

The actual planning and direct implementation of each county's solid waste program remains largely the responsibility of the state and local governments. The Solid Waste Policy and Management Act of 1991 (SWPMA) was enacted in accordance with Subtitle D of the RCRA.

The purpose of the SWPMA is to protect public health and safety, preserve the environment, establish and maintain a cooperative state program for providing planning, technical, and financial assistance to local governments, and to ensure that solid waste is transported, stored, treated, and disposed of in a manner that is safe for both humans and the environment.

Section 44-96-60 of the SWPMA dictates the minimum requirements for solid waste management that must be included in the South Carolina Solid Waste Management Plan. Some of these provisions include:

1. An inventory of the amounts and types of solid waste being disposed of in the State.
2. Estimates of solid waste volumes and capacities of facilities.
3. Evaluation of current solid waste management practices.

The South Carolina Department of Health and Environmental Control (DHEC) published the first State Solid Waste Management Plan on November 27, 1992. The latest revision of the Plan was published in 1999.

On July 1, 2024, DHEC became two separate agencies – the South Carolina Department of Environmental Services (SCDES) and the South Carolina Department of Public Health (DPH). Responsibilities of the SCDES include the Bureau of Land and Waste Management.

1.3 Local Authority

The Code of Laws of South Carolina, 1976, as amended, gives counties the authority to regulate the disposal of solid waste and to establish landfills within their boundaries. Pursuant to this authority, legislation has been enacted by the Greenville County Council to institute control over solid waste management in the County.

Ordinances pertaining to solid waste management in Greenville County address the following issues:

1. The establishment of user and permit fees for the disposition of solid waste.
2. Conditions for issuance of permits and variances to requirements.
3. Regulations regarding the lawful use of solid waste disposal facilities in Greenville County, and establishment of criminal penalties for violations.

Section 44-96-80(J) of the SWPMA gives the governing body of the County the responsibility and authority to provide for the operation of solid waste management facilities. The governing

body of Greenville County is the Greenville County Council. The primary solid waste ordinance enacted by the council can be found in **Appendix A**.

As stated in section 44-96-80 of the SWPMA, the minimum requirements to be addressed in the Plan include the following:

1. An estimate of the amount of solid waste currently disposed of at solid waste disposal facilities within that county or region and a projection of the amount of solid waste which will be disposed of at solid waste disposal facilities during the twenty-year period following this chapter's effective date.
2. An estimate of the current capacity within that county or region to manage solid waste, including identification of each solid waste management facility and a projection of its useful life.
3. An analysis of the existing and new solid waste facilities which will be needed to manage the solid waste generated within that county or region during the projected twenty-year period.
4. An estimate of the cost of implementing the Solid Waste Management Plan within that county or region.
5. An estimate of the revenue which each local government or region needs and intends to make available to fund implementation of the Solid Waste Management Plan.
6. An estimate of the cost of siting, constructing, and bringing into operation any new facilities needed to manage solid waste within that county or region during the projected twenty-year period.
7. A description and estimate of the sources and amount of revenues which can be made available for the siting, construction, and operation of new solid waste management facilities.
8. A description of resource recovery, or recycling program, or both, which shall be implemented in each county or region which shall include, at a minimum, the following:
    a. The designation of a recycling coordinator.
    b. An identification of the categories of solid waste materials to be source separated, recovered, recycled, or all of the above.
    c. An identification of the means by which such materials will be collected and marketed.
    d. A description of the public education program which will be used to inform the public of the need for and benefits of source separation, recovery, and recycling end requirements of the recycling program.
9. A description of efforts, in addition to the recycling program, which will be undertaken within that county or region to meet the solid waste reduction goals established in Section 44-96-50.

The original Greenville County Solid Waste Management Plan was created in 1993. Multiple revisions have been made since then to account for changes in the rules and regulations involving solid waste management. This Plan is prepared for the purpose of meeting the requirements of Section 44-96-80 of the SWPMA.

Each of the incorporated municipalities within Greenville County has their own solid waste management ordinances. These local ordinances include:

The City of Fountain Inn: The City of Fountain Inn Code of Ordinances covers solid waste related matters in Chapter 16 – Solid Waste Management.

The City of Greenville: The City of Greenville Code of Ordinances covers solid waste related matters in Chapter 32.

The City of Greer: Chapter 74 of the City of Greer Code of Ordinances covers solid waste related matters.

The City of Mauldin: Chapter 34 of the City of Mauldin Code of Ordinances covers solid waste management.

The City of Simpsonville: Chapter 30 of the City of Simpsonville Code of Ordinances covers solid waste management.

The City of Travelers Rest: The City of Travelers Rest Code of Ordinances covers solid waste related matters in Title 6 – Health and Sanitation, Chapter 6.08 Garbage and Refuse Collection and Disposal.

2.0 Geography and Demographics

The purpose of this section is to provide details of the geography and demographics in the County to better evaluate trends in solid waste generation. The areas examined in this section include population, land use, employment, economic base, and major transportation routes.

Greenville County contains several incorporated cities, including Greenville (the County Seat), Simpsonville, Mauldin, Fountain Inn, Greer, and Travelers Rest. A map of the County and Municipalities can be seen in Figure 2-1.

Figure 2-1 Greenville County and Municipalities[1]



[1] Greenville Maps (gcgis.org)

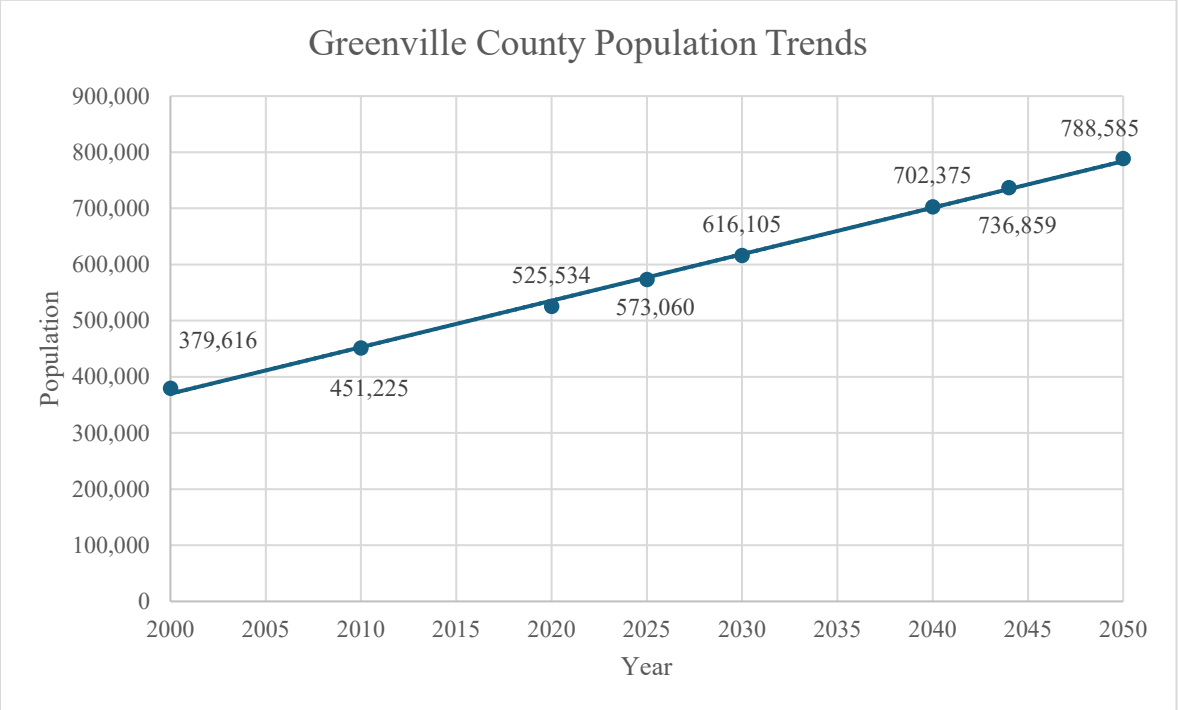
2.1 Population

According to the 2020 U.S. Census, Greenville County had a total population of 525,534 people. This total shows an increase of about 14% above the total measured by the U.S. Census Bureau in 2010. South Carolina's Office of Revenue and Fiscal Affairs published population projections for all counties from 2019 to 2035.[2] These numbers were used to estimate the population through the end of the planning period. The population at the end of this planning period (2044) is projected to be 736,859, which is shown in the table and graph below.

Table 2-1 Greenville County Population Projection

Year	Population
2000	379,616
2010	451,225
2020	525,534
2025	573,060
2030	616,105
2040	702,375
2044	736,859
2050	788,585

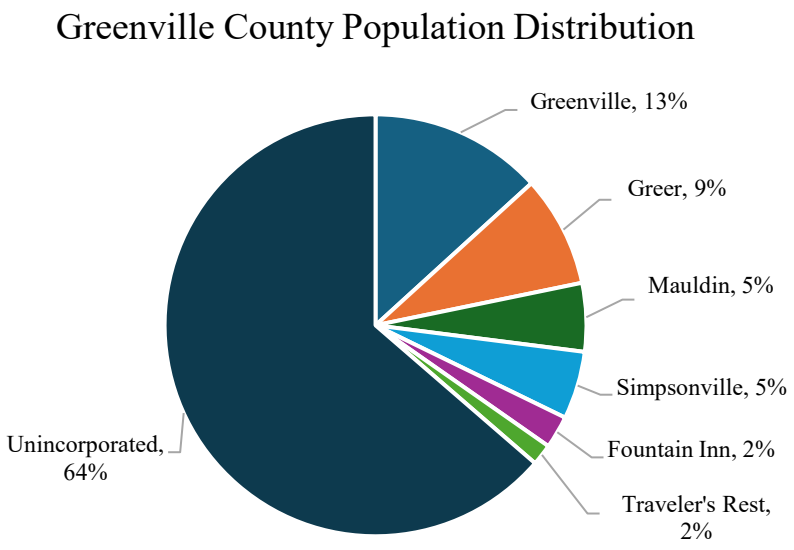
Figure 2-2 Greenville County Population Trends



[2] Population Estimates & Projections | South Carolina Revenue and Fiscal Affairs Office

The population of Greenville County is more concentrated in its six incorporated cities – Greenville, Greer, Mauldin, Simpsonville, Fountain Inn, and Travelers Rest. However, most of the population is in unincorporated areas.[3] A chart showing the population distribution can be seen below.

Figure 2-3 Greenville County Population Distribution



2.2 Land Characteristics

Greenville County is located on the Piedmont Plateau in the northwest section of South Carolina and covers an area of approximately 798 square miles. To the north, the County is bordered by Transylvania, Henderson, and Polk Counties of North Carolina. The west boundaries are shared with Pickens and Anderson Counties, the east boundary is shared with Spartanburg County, and Laurens County borders the south.

Greenville County contains several incorporated cities, including Greenville (the County Seat), Simpsonville, Mauldin, Fountain Inn, Greer, and Travelers Rest. Most of the land and population are in unincorporated areas in the County.

The landscape of the County is characterized by rolling hills with a wide diversity of vegetation. In the north, the County is crossed by the Blue Ridge chain of the Appalachian Mountains. The highest elevation point in the County is Sassafras Mountain, with an altitude of 3,548 feet. The average elevation of the County is 957 feet above sea level. Climatic conditions are both moderate and seasonal.

[3] Cities in Greenville County, South Carolina by Population (2024) (worldpopulationreview.com)

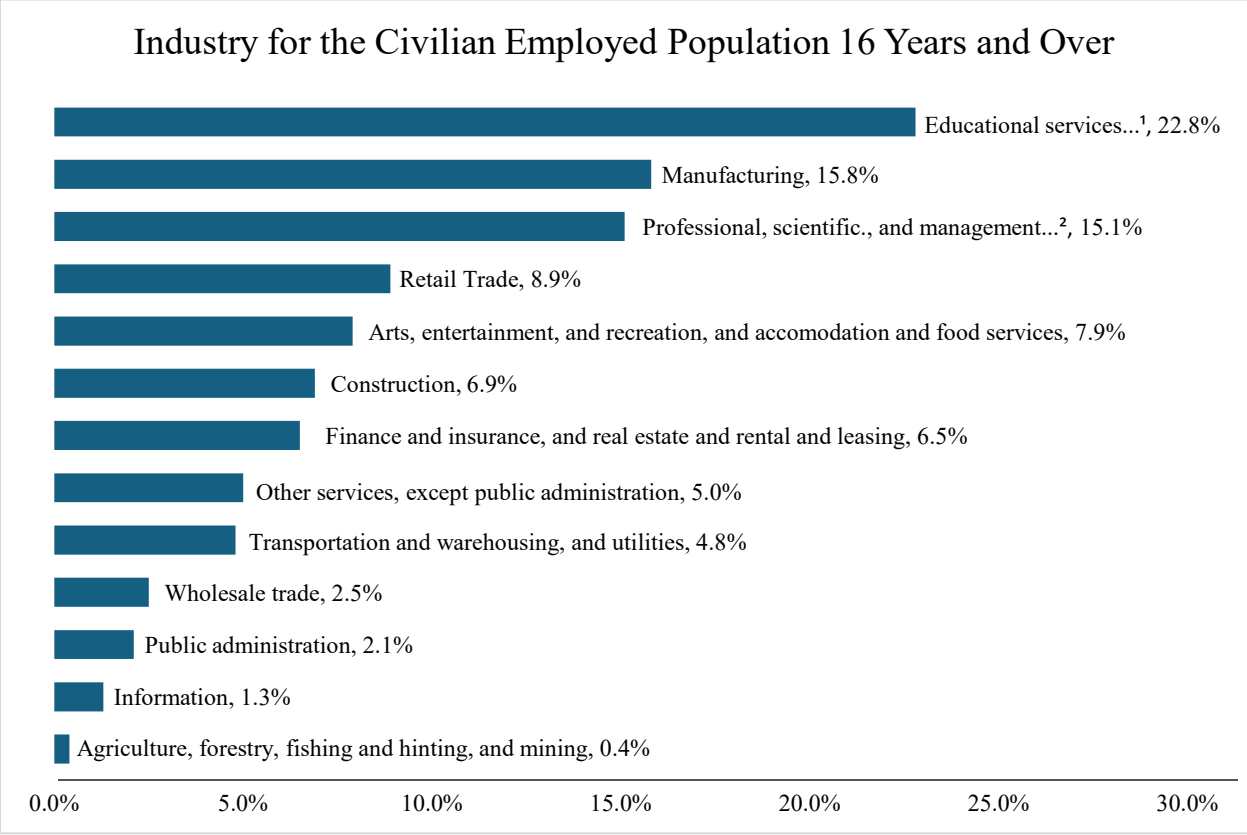
2.3 Employment and Economic Base

According to the U.S. Census Bureau, the employment rate in Greenville County in 2023 was 63.8%.[4] The industries that employ the most residents are:

- Manufacturing – 15.8%
- Professional, scientific, and management, and administrative and waste management services – 15.1%
- Educational services, and health care and social assistance – 22.8%

A complete breakdown of employment can be seen in Figure 2-4 below.

Figure 2-4 Industry for the Civilian Employed Population 16 Years and Over



[1]Educational services, and health care and social assistance
[2]Professional, scientific, and management, and administrative and waste management services

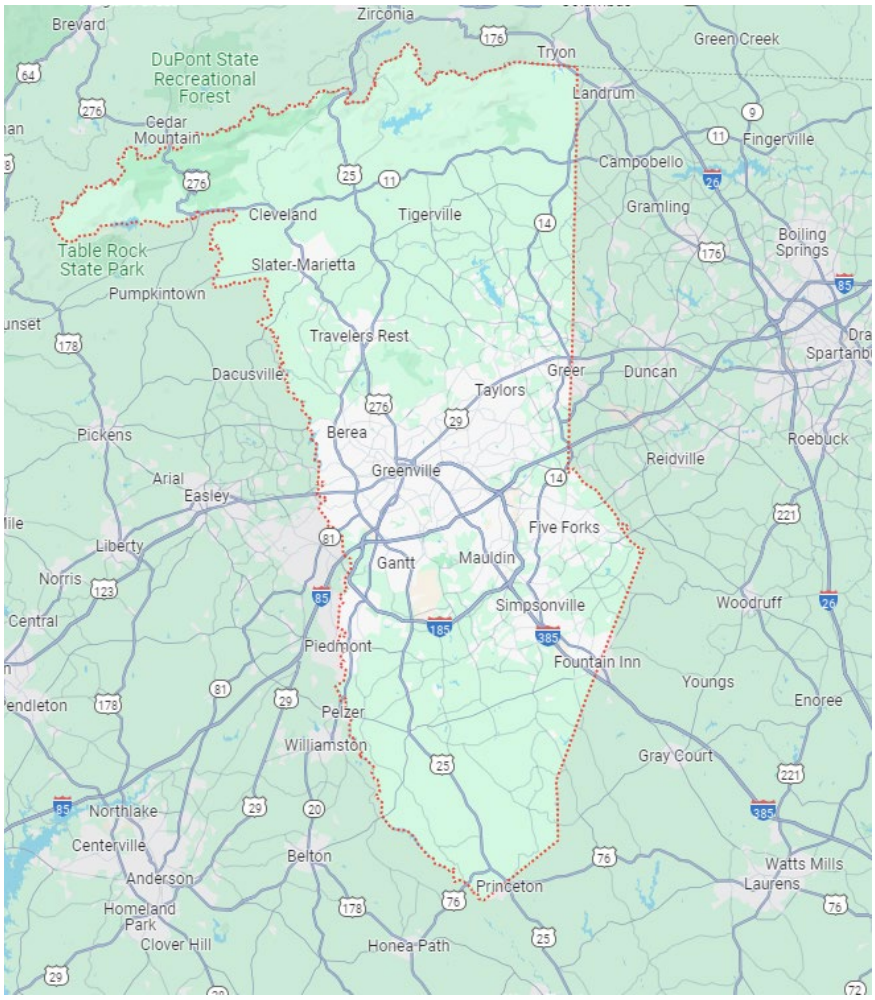
Population growth is supposed to continue in the next 20-year period, meaning an increase in the workforce in the County. The growth is also expected to increase municipal solid waste (MSW) generation within the County.

[4] Greenville County, South Carolina - Census Bureau Profile

2.4 Major Transportation Routes

All major markets on the eastern seaboard and most markets east of the Mississippi River are within two days via truck of the Greenville area. The roadways are in good condition and the majority of South Carolina's 64,000 miles of roadway are currently toll free. Interstate 85 is the backbone of the region and passes through four counties in Upstate South Carolina on its stretch from Richmond, Virginia to Atlanta, Georgia. Greenville also connects with I-26 to the south via I-385, which enables direct access to South Carolina Ports in Charleston, Port Royal and Georgetown. The figure below shows the major highways that run through Greenville County (outlined in red dots).

Figure 2-5 Interstates in Greenville County[5]



[5] Google maps

3.0 Existing and Future Solid Waste Management

The information in this section describes the current and future solid waste management in Greenville County.

3.1 Generation and Characterization

Municipal Solid Waste

Municipal Solid Waste (MSW) is defined as non-hazardous solid waste derived by households, generated by commercial establishments, and non-hazardous sludge. MSW includes waste from the following sources:

- Household, or residential waste
- Commercial, or solid waste
- Institutional solid waste
- Bulky wastes
- Household hazardous wastes
- Non-regulated medical wastes
- Banned materials
- Special waste/industrial waste

Total Solid Waste

Total Solid Waste (TSW) is defined as all solid waste that is generated, disposed of, and recovered. TSW includes:

- Automobile bodies
- Combustion ash
- C&D debris
- Industrial process waste (i.e., scraps and by-products from manufacturing)
- Land-clearing debris
- MSW
- Natural disaster debris
- Processed waste tires
- Other material (e.g., asbestos, contaminated soil, sludge, treated wood, manure)

The data presented in this section is sourced from the latest South Carolina Solid Waste Management Annual Report. Both MSW and TSW figures are detailed in the report. Exported and imported waste is considered in the TSW totals, but only South Carolina tonnages are included in TSW generation.

3.1.1 Current Solid Waste Generation

The SWPMA requires South Carolina to submit a comprehensive annual report that reflects solid waste management activities in each fiscal year (FY). The latest report published reflected data from the 2023 fiscal year (FY23) which spans from July 1, 2022, to June 30, 2023. This report includes information about the amount of MSW and TSW generated and disposed of in the state. Public and private solid waste facilities are required to report the amount and type of solid waste disposed of, incinerated, or exported to the SCDES (formally DHEC). Reported recycling, generation, and disposal data from Greenville County can be seen in the tables below, where p/p/d means pounds per person per day. The rates were calculated using the population of the County at the time of reporting (547,950 people).

Table 3-1 MSW Recycling, Disposal and Generation in FY23

Recycled (tons)	Recycling Rate (p/p/d)	Disposal (tons)	Disposal Rate (p/p/d)	Generation (tons)	Generation Rate (p/p/d)
76,325.20	0.76	835,920	8.36	912,245	9.12

Table 3-2 TSW Recycling, Disposal and Generation in FY23

Recycled (tons)	Recycling Rate (p/p/d)	Disposal (tons)[1]	Disposal Rate (p/p/d)	Generation (tons)	Generation Rate (p/p/d)
142,987.80	1.43	1,367,909	13.86	1,510,897	15.11

[1]Includes waste that was incinerated or exported

3.1.2 Projected Solid Waste Generation

Based on previous population growth in Greenville County, future growth has been projected. Future waste generation and disposal is based on per capita generation/disposal rates from FY23 (shown in table 3-1 and 3-2) which account for both residential and commercial waste generation. The tables below show projected TSW and MSW generation and disposal over the next 26 years. The planning period for this Plan ends in 2044.

Table 3-3 Projected Municipal Solid Waste Generation

Year	Projected Population	Projected MSW Disposed (tons)	Projected MSW Generated (tons)
2030	616,105	939,991.40	1,025,445.16
2044	736,859	1,124,225.78	1,226,428.12
2050	788,585	1,203,144.13	1,312,520.87

Table 3-4 Projected Total Solid Waste Generation

Year	Projected Population	Projected TSW Disposed (tons)	Projected TSW Generated (tons)
2030	616,105	1,558,406.79	1,698,955.75
2044	736,859	1,863,848.00	2,031,943.96
2050	788,585	1,994,686.33	2,174,582.28

Based on these projections, the increase in MSW and TSW generation and disposal over the reporting period (2024-2044) is estimated to be about 31 percent.

3.2 Collection

The six incorporated areas within the County provide an array of collection, processing, and disposal services to manage the mixed waste, yard waste, and recyclable material streams. These services, which are summarized in the table below, are described in this section.

Table 3-5 Curbside Collection Services by Provider

Curbside Collection Services					
Service Provider	Residential Waste	Bulky Items	Commercial Waste	Residential Recycling	Yard Waste
Fountain Inn	X	X	X	X	X
City of Greenville	X	X		X	X
Greer	X	X			X
Mauldin	X	X	X	X	X
Simpsonville	X	X	X[1]		X
Travelers Rest	X	X		X[2]	X
Greater Greenville Sanitation District	X	X	X		X

[1]Simpsonville only provides commercial service to a small part of the central business district.

[2]Travelers Rest offers private sector subscription service.

3.2.1 Greenville County[6]

Greenville County has seven (7) Residential Waste and Recycling Centers (RW&RC) to provide convenient self-disposal drop-off stations for county residents. Disposal at these facilities is limited to three cubic yards per vehicle per day. A list of these centers and their locations can be found in the table below.

[6] County of Greenville, SC (greenvillecounty.org)

Table 3-6 Locations of Residential Waste and Recycling Centers in Greenville County

Location	Name	Address	Hours of Operation
Eastside Area and South of Greer	Enoree Residential Waste and Recycling Center	1311 Anderson Ridge Rd Greer, SC	7:00 am – 6:00 pm Tuesday – Saturday
Greer and Blue Ridge Area	O'Neal Residential Waste and Recycling Center	3778 Camp Rd Greer, SC	7:00 am – 6:00 pm Tuesday – Saturday
Simpsonville, Mauldin, and Fountain Inn	Simpsonville Residential Waste and Recycling Center	517 Hipps Rd Simpsonville, SC	7:00 am – 6:00 pm Tuesday – Saturday
South Greenville	Piedmont Residential Waste and Recycling Center	200 Owens Rd Piedmont, SC	7:00 am – 6:00 pm Tuesday – Saturday
Travelers Rest and Slater-Marietta	Echo Valley Residential Waste and Recycling Center	3705 Greer Highway Marietta, SC	7:00 am – 6:00 pm Tuesday – Saturday
West Greenville and the Downtown Area	Blackberry Valley Residential Waste and Recycling Center	409 Blackberry Valley Rd Greenville, SC	7:00 am – 6:00 pm Tuesday – Saturday
Countywide	Twin Chimneys Landfill	11075 Augusta Rd Honea Path, SC	7:30 am – 4:30 pm Monday – Friday 8:00 am – 4:00 pm Saturday

The Twin Chimneys Landfill accepts both residential and commercial waste. Residents can drop off household waste free of change. Other wastes such as C&D waste, yard/brush waste, and mulch have a disposal fee. Fees are subject to change periodically. Commercial waste can be dumped at the landfill for a disposal fee. A list of acceptable items and their respected disposal fees can be found on the County website: County of Greenville, SC (greenvillecounty.org).

The SWPMA bans certain materials from being disposed of in the landfill. These items include:

- Electronic waste
- Motor oil
- Yard waste
- Car batteries
- White goods
- Tires

These materials are collected separately at Twin Chimneys and the RW&RCs to be recycled.

3.2.2 The City of Fountain Inn[7]

The City of Fountain Inn provides trash collection service to its residents. The city will pick up only one trash receptacle per residence, business, or church. Each additional container picked up will be charged a fee of $96 per year. There is a two-receptacle limit per residence, business, or church. Trash is placed in a 96-gallon green cart weekly for collection.

Curbside recycling is an optional service for residents. Recycling is collected every two weeks in a 96-gallon blue cart.

Seasonal trimmings such as tree limb cuttings, shrubbery, and other yard debris will be collected by the city if it meets the following conditions:

- Yard debris must be no more than 6 inches in diameter and 6 feet in length
- Yard debris must be placed on a front corner of the owner's property near the street or a public alley
- If a commercial tree cutter does the work, the owner must contract with the cutter to dispose of the limbs, cuttings, shrubbery, etc.

Bagged or loose leaves will be collected by the city if piled at the edge of the owner's property near the street.

3.2.3 The City of Greenville[8]

The City of Greenville provides curbside garbage and recycling services to single family homes, duplexes, and triplexes. The green cart is used for trash collection and recycling is collected in blue carts. The collection fee is included in the resident's water bill and equals $18/month.

The following items should not be placed in the green cart: yard debris, grass, leaves, brush, bricks, dirt, rocks, building materials, or other hazardous materials. Yard waste is collected every week and must be placed unbagged, by the curb. Limbs should be no longer than 6 feet in length and no more than 6 inches in diameter. Mulch and dirt will not be collected. Limbs, twigs, and branches must be in a separate pile from grass and leaves.

Greenville provides bulk waste collections for items that do not fit in the trash or recycling receptacles. These items include mattresses, appliances, and white goods. The following items are not accepted:

- Construction materials (wood pallets, lumber, brick, block, concrete, fencing, decking, shingles)
- Electronics (TVs, computers and computer items, phones, printers, scanners, gaming consoles)

[7] Solid Waste Collection | Fountain Inn, SC
[8] Residential Curbside Service | Greenville, SC - Official Website (greenvillesc.gov)

The City of Greenville website has a search engine where residents can enter a waste item, and it tells them how to recycle or dispose of it. The GVL trash tracker can be found on the City's website: Solid Waste | Greenville, SC - Official Website (greenvillesc.gov).

3.2.4 The City of Greer[9]

The City of Greer provides curbside garbage collection to city residents through a contract with Meridian Waste. For residents who are physically unable to place their container at the curb, they can request an "at the house" service.

Grass, leaves, and small hedge trimmings are collected by the City if they are placed in bags with a capacity of no more than 39 gallons. A limited quantity (up to 8 cubic yards) of loose tree limbs and bush trimmings will be collected curbside weekly. Limbs must be no larger than 6 feet in length and 6 inches in diameter.

Greer discontinued curbside recycling services in August of 2022 due to the cost. Residents can still drop off their recycling at the Greer Convenience Center and other drop-off centers in the County. The Greer Convenience Center accepts the following items:

- All paper products
- Aluminum and steel cans
- Appliances
- Automobile tires
- Batteries
- Cell phones
- Corrugated cardboard
- Old lawnmowers (must be drained of oil and gas)
- Used motor oil

Materials that will not be accepted include:

- Glass
- Brush and leaves
- Building materials
- Chemicals
- Household garbage
- Vehicles
- Paint, etc.

Meridian Waste and the City of Greer host an annual Spring-Cleaning Day for non-recyclable items.

[9] Trash & Yard Waste | Public Services (cityofgreer.org)

3.2.5 The City of Mauldin[10]

The City of Mauldin offers weekly trash removal and recycling pickup to residents and businesses. Trash must be bagged and placed in green City of Mauldin cans to be serviced. Items that are prohibited include:

- Paints, solvents
- Tires
- Propane tanks
- Electronics
- Combustive materials (acetone, gasoline, solvents, etc.)
- Medical waste
- Batteries
- Construction materials
- Carpet and carpet padding
- Liquid paint

Similarly to the weekly trash service, only blue City of Mauldin recycling cans will be collected. Food waste and glass are prohibited from the recycling cart. Acceptable items include aluminum cans, foil, and pans, dry newspaper and inserts, magazines, catalogs, mailers, telephone books, plastic bottles and jugs, and cardboard (must be broken down).

Beginning November 13, 2023, the city stopped servicing handheld recycle bins and started only servicing roll-away recycling carts. This change was because the Public Works Department transitioned to a full fleet of side-arm trash trucks.

Mauldin collects yard debris throughout the year if the following guidelines are observed:

- Grass and small hedge trimmings must be bagged and placed in the green trash container or set next to it
- Loose leaves can be placed by the curb to be vacuumed
- Up to 4 cubic yards of tree limbs will be collected by the City. Limbs must be no larger than 6 feet in length and 6 inches in diameter
- Yard debris should not be comingled
- Soil, sod, and other excavated materials are prohibited

[10] Public Works - City of Mauldin

3.2.6 The City of Simpsonville[11]

The Simpsonville Public Works Department provides residential trash collection weekly. Non-curbside collection can be provided to residents that are physically unable to move their trash cans to the curb.

Simpsonville also collects trash from businesses and commercial properties in the Core Central Business District. These businesses will receive collection of one trash container. Recycling, yard waste, and extra trash collection is the responsibility of each business.

Curbside recycling was discontinued in 2021 due to contaminated material and increasing fees. Residents can bring recyclables to any of the drop-off centers located in Greenville County. The nearest recycling drop-off locations in Simpsonville include:

- Contestee Park
- Fountain Inn Elementary School

Residents have the choice to subscribe to a private recycling service. A company called Recyclops recently expanded into the City of Simpsonville and provides a bi-weekly collection of recyclables for $12/month.

Yard waste will be collected weekly if it meets the following conditions:

- All leaves, pine needles, hedge clippings, and grass clippings must be bagged and separated from other yard debris
- Bags of yard waste must weigh no more than 25 pounds
- Only leaves, pine needles, hedge clippings, and grass clippings generated from the residential property are collected
- Loose brush must not exceed 6 inches in diameter or 6 feet in length. All brush removal is limited to 2 yards per pickup

Simpsonville collects household bulk items from the curb without appointment the first weeks of May and October. Acceptable bulk items include appliances (remove refrigerator doors), bed frames, bikes, carpet (rolled), chairs, furniture, and mattresses. Unacceptable bulk items include dirt, sand, sod, rocks, bricks, concrete, lead-acid batteries, live ammunition, electronics, construction debris, tires, and household hazardous waste.

[11] Solid Waste Management Policy | Simpsonville South Carolina

3.2.7 The City of Travelers Rest[12]

The City of Travelers Rest offers weekly curbside collection of residential household trash. Each residence receives one refuse cart. Overflow trash must be bagged and placed next to the cart for collection.

Yard waste is collected weekly from residents. Tree waste may not be larger than 6 feet in length and 6 inches in diameter. Brush piles will only be collected if uncontaminated. Residential loose leaf collection season runs from November to February. Leaves must be unbagged and placed one foot into the street.

Travelers Rest does not offer curbside recycling services to its residents. Residents would need to subscribe to a private hauler for that service. However, the city does pay for the processing cost for recyclables picked up in the County at the MRF. Residents can also bring recyclables free of charge to drop-off locations throughout the County.

Residents can schedule curbside pickup of bulk waste. Acceptable items include:

- Mattresses and box springs
- Furniture
- Appliances (remove doors)
- Plastic playsets, plastic houses, trampolines (disassembled)
- Lawnmowers (remove all fluids and/or oils)
- BBQ grill (remove tanks)
- Needles/sharps (placed in a rigid container and taped shut)
- Paint (mixed with sand, saw dust, or kitty litter)
- Carpet and Vinyl flooring (cut into 5 ft sections, rolled, and tied)

Materials that are unacceptable include construction and demolition debris, ammunition and explosives, tanks, lead-acid batteries, bio-medical waste, electronics, and tires. Unwanted medications can be deposited in the red Medication Disposal Box located in the After Hours Police Lobby. Items accepted are over-the-counter medications, prescription ointments, vitamins, samples, and pet medications. Items not accepted include inhalers, aerosol cans, needles, hydrogen peroxide, and non-prescription ointments and lotions.

3.2.8 Greater Greenville Sanitation District

The Greater Greenville Sanitation District (GGSD) was established by the South Carolina legislature in 1968 to provide non-hazardous solid waste collection to some of the unincorporated areas of Greenville County. As discussed in the previous section, approximately

[12] Waste Collection - Travelers Rest (travelersrestsc.com)

64 percent of the County's population resides in unincorporated areas. The GGSD provides residential and commercial services to customers.

The GGSD will only service their 96-gallon containers. The following items are prohibited from collection:

- Construction and demolition debris (including concrete, brick, block, wood, asphalt, gypsum, drywall, salvaged building components, windows, etc.)
- Ammunition and explosives
- Tanks (propane, fuel)
- Biomedical waste
- Electronics (TVs, computers, gaming systems, cellular devices)
- Green waste

Green waste is collected separately, unbagged and at the curb. Loose material like leaves and grass clippings should be in a separate pile from woody waste. Woody waste (limbs and branches) can be no larger than 6 feet in length and 6 inches in diameter.

Bulky waste can be scheduled to be picked up curbside. GGSD services are funded by a combination of the Sanitation fee and millage which appears on residents' annual tax statement. More information can be found on their website: Greater Greenville Sanitation – Serving the Greater Greenville area since 1968 (ggsc.gov).

3.3 Transfer

The transfer of solid waste is governed by the South Carolina DES under Regulation 61-107.7. This regulation "establishes minimum requirements for facilities where solid waste is transferred from collection vehicles to other transportation units for movement to another solid waste management facility prior to its processing and disposal." The table below provides a list of transfer facilities in Greenville County.

Table 3-7 Greenville County Transfer Facilities List

Facility Name	Type of Facility	Permitted Rate	Amount Received (tons)
MRR Upstate	Class 2 Transfer Station	500 TPD	61,081
Blackberry Valley	Class 3 Transfer Station	150 TPD	2,322

Drop-off and Residential Waste and Recycling Centers are not regulated as transfer stations under SCDES.

3.4 Treatment

The Solid Waste Policy and Management Act defines treatment as "any technique designed to change the physical, chemical, or biological character or composition of any solid waste so as to render it safe for transport, amenable to storage, recovery, or recycling, safe for disposal, or reduced in volume or concentration." Examples of solid waste treatment include shredding, compacting, incinerating, and baling.

3.4.1 Solid Waste Processing Facilities

Solid waste processing facilities are used to treat waste as defined above. These facilities are governed by the South Carolina Department of Environmental Service under Regulation 61-107.6. The table below details a list of permitted solid waste processing facilities in Greenville County.

Table 3-8 Greenville County Processing Facilities List

Facility Name	Facility Type
SH Carter	Class 2 C&D Processing Facility
VLS Recovery Systems	Class 3 Industrial and Used Oil Processing Facility
Piedmont Processing	Class 3 MSW Processing Facility
4.6 Fennell Container – Greenville Processing	C&D Debris/Class 3 MSW Processing Facility
Twin Chimneys	Waste Tire Facility
Holston Group	Used Oil Processing Facility

Facilities that process solid waste generated during normal operations on property under the same ownership or control as the solid waste processing facility are exempted from the requirements of SC Regulation 61-107.6. This includes Industrial or Manufacturing facilities that process their own waste. Section 44-96-80(G) of the SWPMA limits the County's power in regulating industrial solid waste.

3.5 Disposal

The 2008 South Carolina regulation (61-107.19) defines the classification of landfills to Class One, Two and Three.

- Class One – landfills used solely for the disposal of trees, stumps, wood chips, and yard trash that is generated from land-clearing activities.
- Class Two – landfills that accept waste generated by construction, demolition, land-clearing, industrial, manufacturing activities, and/or obtained from segregated

commercial waste. A full list of acceptable wastes can be found in Appendix I of South Carolina regulation 61-107.19.

- Class Three – landfills that accept municipal solid waste, industrial solid waste, sewage sludge, non-hazardous municipal solid waste incinerator ash, and other non-hazardous waste.

As reported in the SC Solid Waste Management Annual Report for FY23, Greenville County has a total of three permitted landfills. These landfills are listed in the table below.

Table 3-9 Permitted landfills in Greenville County in FY23

Facility Name	Class	Landfill Ownership	Permitted Disposal Rate (tons/year)	Amount Disposed of (tons)
Norris	One	Private	250	228
WI Shiloh	Two	Private	128,000	94,103
Twin Chimneys	Two	Public	137,157	78,495
Twin Chimneys	Three	Public	500,000	323,282

The Twin Chimneys Landfill is currently the County's only publicly owned and operated landfill and has areas permitted as a Class Two landfill and areas permitted as a Class Three landfill. The facility provides disposal for MSW, construction and demolition waste, banned materials, yard waste, and tires. The landfill is located on 1,155 acres at 11075 Augusta Road in southern Greenville County. The facility is permitted to accept 500,000 tons of waste per year and currently has a capacity of 36.3 million cubic yards. The landfill receives about 1,000 tons of waste each day.[13] The photo below is an aerial of the Twin Chimneys Landfill.



[13] More people, more trash: Greenville landfill adds capacity, composting (greenvilleonline.com)

Twin Chimneys is a Subtitle D landfill that is constructed in accordance with the requirements of the Resource Conservation and Recovery Act. To comply with State and Federal regulations, the landfill is equipped with the following:

- A composite liner system with both clay and geosynthetic liners
- Two leachate storage tanks
- Monitoring wells for groundwater and methane testing
- A leachate evaporator
- A renewable natural gas project

The estimated remaining life of Twin Chimneys based on its permitted disposal rate is about 58 years. The Twin Chimneys Landfill will provide disposal capacity sufficient to accommodate the waste generated within Greenville County beyond the twenty-year planning period. Therefore, the County of Greenville will not allow the siting or permitting of any additional MSW Class Three landfills within its borders.

Greenville County is working on a 10-acre expansion of the Twin Chimneys Landfill to add capacity. The initial land clearing for the expansion has already begun, and construction is expected to be fully completed in March of 2025. Greenville's County Council recently approved $11.5 million for new cells at the landfill. This expansion is estimated to cost around $11.3 million. The money comes from the general obligation bond.[14]

3.5.1 Green Energy

In March of 2023, Enerdyne Power Systems began operation of a project collecting and transforming landfill gas into pipeline quality renewable natural gas (RNG) at the Twin Chimneys Landfill. This project, also known as the Twin Chimneys Power Producers (TCPP) is the first commercial operated RNG project in South Carolina. The environmental benefits associated with this project will be equivalent to reducing the carbon dioxide emissions of more than 66 million gallons of gasoline each year. [15]

3.5.2 Composting and Wood-Grinding

Composting and wood-grinding facilities are governed by SCDES under Regulation 61-107.4. The rule breaks these facilities into three categories:

- Type One facilities: Type One facilities grind, or compost source separated organic residuals listed below (category one feedstock).
    - Yard trimmings, leaves, and grass clippings
    - Land-clearing debris

[14] More people, more trash: Greenville landfill adds capacity, composting (greenvilleonline.com)
[15] The Landfill Group Announces Commercial Operation of the First RNG Project in South Carolina (prnewswire.com)

    - Wood, woodchips, and sawdust, from untreated and unpainted wood that has not been in direct contact with hazardous constituents
    - Agricultural crop field residuals
    - Compostable bags commonly used for collecting and transporting yard trimmings, leaves, and grass clippings
    - Similar materials as specifically approved in writing by the department
- Type Two facilities: Type Two facilities compost source separated organic residuals listed below (category two feedstock) or a combination of category one and two feedstocks.
    - Non-meat food processing wastes, including marine shells and dairy processing waste
    - Produce and non-meat food preparation residuals generated by wholesale or retail sales establishments or food service establishments
    - Plate scrapings including cooked meats generated by food service establishments
    - Manufactured compostable products and wastepaper products that are otherwise unsuitable for recycling
    - Animal manures and materials incidental to its collection as defined in this regulation
    - Residual organics from anaerobic digestors or other waste-to-energy conversion processes utilizing only Category One or Category Two feedstocks
    - Industrial wastes/sludges that meet the waste characterization requirements found in R. 61-107.19, Part IV, Section A for disposal into a Class Two Landfill
- Type Three facilities: Type Three facilities compost source separated organic residuals listed below (category three feedstock) or a combination of category three feedstock with the other feedstocks listed.
    - Sewage sludge
    - Industrial sludges not identified as a category two feedstock
    - Drinking water treatment sludge
    - Fats, oils, and greases (FOG)
    - Animal-derived residuals not identified as a category two feedstock
    - Residual organics from anaerobic digesters or other waste-to-energy conversion processes utilizing category three feedstocks
    - Other industrially produced non-hazardous organic residuals not previously categorized

Similar materials to all three feedstock categories can be approved in writing by the department. A list of prohibited feedstocks can be found in the South Carolina Regulation 61-107.4 Appendix. The table below shows a list of permitted composing and wood-grinding facilities in Greenville County.

Table 3-10 Permitted Composting and Wood-Grinding Facilities in Greenville County

Facility Name	Type of Facility	Amount Received (tons)	Average Tipping Fee ($/ton)	Amount of Product Generated (tons)	Amount of Product Sold (tons)
Atlas Organics Composting	Type 2	6,078	$24.75	2,401	2,401
CA Carter Composting	Type 1	2,181	$0.00	1,468	1,468
Dillard Excavating Wood Chipping Center	Type 1	3,000	$0.00	3,000	3,000
Henson's Mulch and More Wood Chipping Facility	Type 1	5,440	$30.00	7,134	6,897
Schneider Tree Care Wood Chipping Facility	Type 1	4,318	$120.00	3,796	28,583
SH Carter Wood Chipping	Type 1	5,194	$36.00	4,911	4,911
Southern Grading I Site – Piney Mtn Rd	Type 1	20,928	$5.00	20,100	18,390
Southern Grading II Site – Fairview Rd	Type 1	0	$5.00	0	0
SR Mulch & Wood Grinding Facility	Type 1	14,269	$8.40	14,269	1,469
The Daylee Grind Wood Chipping	Type 1	0	$0.00	0	0
Timber Tech Inc.	Type 1	4,002	$0.00	4,002	3,765
Twin Chimneys Composting Facility	Type 2	3,277	$21.50	3,277	3,277

3.5.2.1 Twin Chimneys Compost Facility

In 2016, Atlas Organics finished constructing a 9-acre composting facility at the Twin Chimneys Landfill.[16] The site was designed to process local food and yard waste from the County. The private company collects food waste from 100 sites in the area and combines it with mulched yard waste collected through the County's collection program. The mixture undergoes a 45-day aeration process that results in a high-quality soil amendment that can be used to produce higher crop yields and reduce the use of pesticides and fertilizer.

Atlas Organics recently moved their operation to another location, leaving the County to take over operations at the Type II permitted composting facility. Private Haulers are planning on collecting food waste from some of Atlas Organics' former clients as well as hospitals and schools. This transition made Greenville County the fourth permitted food waste composter in South Carolina.[17]

The County hopes to place composting bins at their Residential Waste and Recycling Centers to encourage residents to dispose of their food waste. They also plan on working with private organics collectors, like Smart Recycling, to transport food waste to the facility. Based on the

[16] New composting facility unveiled at Twin Chimneys Landfill - GREENVILLE JOURNAL
[17] More people, more trash: Greenville landfill adds capacity, composting (greenvilleonline.com)

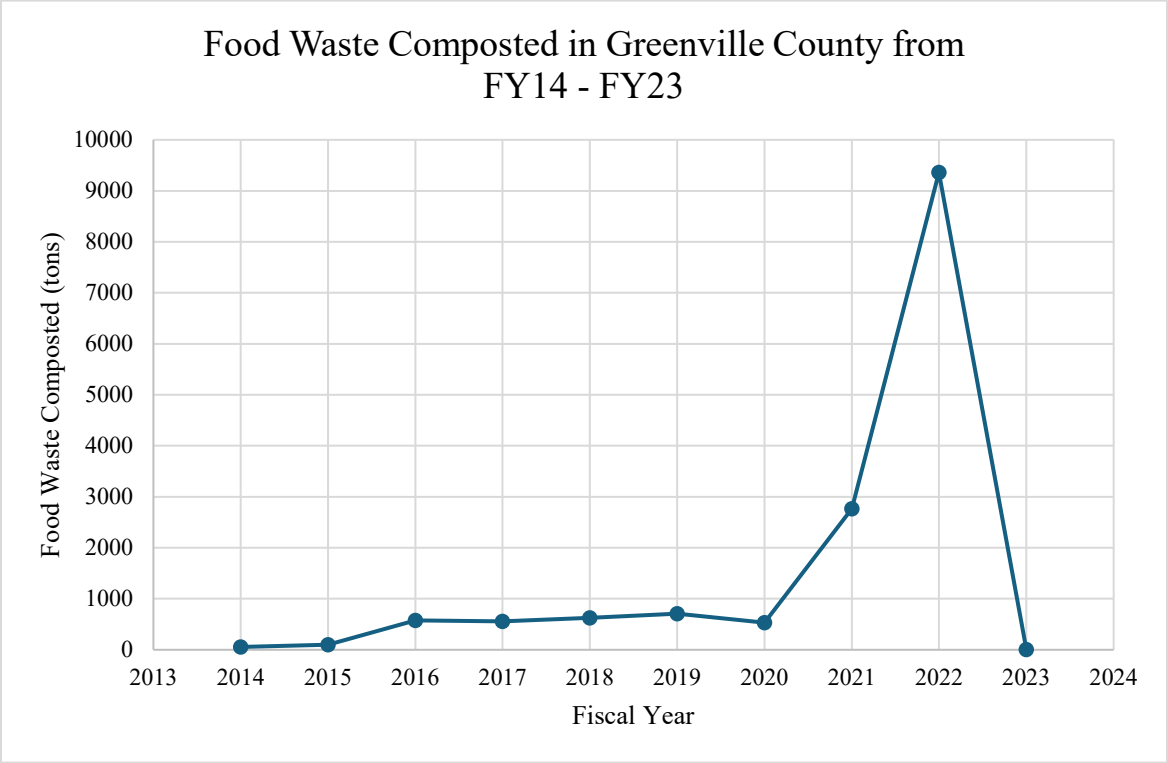
FY23 annual solid waste report, Greenville County recycled 6.36 tons of food waste into compost and 33,870.93 tons of yard waste into mulch. The amount of food waste composted significantly decreased from FY22 to FY23 because of Atlas Organics moving. With the County taking over the operation, the amount composted should increase. The facility restarting should have an initial anticipated production of 4,000 tons of STA Certified compost annually.[18] The table below shows the types and quantities of materials composted over the past decade. It is important to note that food scraps recycling increased dramatically in 2016 with the opening of the compost facility as shown in the graph below.

Table 3-11 Materials Composted in Greenville County

Fiscal Year	Food Waste Composted (tons)	Yard Trimmings Mulched (tons)
2014	55.10	23,434.14
2015	96.36	10,250.25
2016	573.71	29,938.06
2017	555.21	9,181.64
2018	628.98	49,598.49
2019	707.09	29,462.39
2020	534.99	20,033.14
2021	2,768.16	18,777.29
2022	9,358.85	26,077.26
2023	6.36	33,870.93

[18] County of Greenville (greenvillecounty.org)

Figure 3-1 Food Waste Composted in Greenville County



3.6 Banned Items

The SWPMA placed disposal bans on certain types of solid waste. These items are shown in the table below. These prohibited substances can also be found in Greenville County's code of ordinances under Article III of Chapter 9.

Table 3-12 Items Banned from MSW Landfills

Controlled Materials	Effective Dates
Waste tires	November 27, 1992
Used oil	November 1, 1991
Lead acid batteries	May 27, 1991
Yard trash	August 27, 1992
White goods	May 27, 1994

E-Waste is also banned from disposal in landfills per South Carolina law. House Bill 4093, the Manufacturer Responsibility and Consumer Convenience Information Technology Equipment Collection and Recovery Act, was signed in May of 2010. This bill enacted a program for the recovery of used electronics beginning July of 2011.

3.6.1 Tires

Section 44-96-170 of South Carolina's SWPMA banned waste tires from the MSW and C&D waste streams. Residents can recycle tires at the Residential Waste and Recycling Centers at the Twin Chimneys landfill (preferred), County-run Residential Waste and Recycling Centers, and curbside (only in certain cities). All commercial truck, racing, or tractor tires need to be disposed of at Twin Chimneys. A photo of the tire disposal area at Twin Chimneys Landfill can be seen below.



Photo sourced from Greenville County website

The amount of waste tires recycled in the past five years is detailed in the table below.

Table 3-13 Tons of Waste Tires Recycled in Greenville County

	FY19	FY20	FY21	FY22	FY23
Tons of Waste Tires Recycled	4,607.51	4,649.60	5,596.43	4,986.73	3,825.38

Source: South Carolina Solid Waste Management Annual Report FY19-FY23

Sections §9-185 through §9-189 of the Greenville County Code of Ordinances regulates the storage, transportation, collection, processing, and disposal of used and waste tires. These ordinances require waste tire haulers to register and obtain a Waste Tire Hauler Certificate from Greenville County Solid Waste Services annually.

3.6.2 Used Oil

Residents can dispose of used oil at the Twin Chimneys Landfill and the Residential Waste and Recycling Centers. There is a farm oil collection center at the landfill. Residents can also dispose of cooking oil in a labeled drum at the landfill or at a Residential Waste and Recycling Center.

About 107 tons of cooking oil/grease were recycled in Greenville County during Fiscal Year 2023. A list of used oil facilities can be found in **Table 3-8**. The tonnage of motor oil recycled in the County in the past five years is shown in the table below.

Table 3-14 Tons of Used Motor Oil Recycled in Greenville County

	FY19	FY20	FY21	FY22	FY23
Tons of Used Motor Oil Recycled	326.00	169.69	202.87	209.56	215.65

Source: South Carolina Solid Waste Management Annual Report FY19-FY23

3.6.3 Batteries

Section 44-96-180 of South Carolina's Solid Waste Policy and Management Act bans the disposal of lead-acid batteries in landfills. Greenville provides the recycling of lead-acid batteries at Residential Waste and Recycling Centers throughout the County or at the Twin Chimneys Landfill's Residential Waste and Recycling Facility. The tons of lead-acid batteries recycled in the past five years are shown in the table below.

Table 3-15 Tons of Lead-acid Batteries Recycled in Greenville County

	FY19	FY20	FY21	FY22	FY23
Tons of Lead-Acid Batteries Recycled	150.68	211.57	829.55	1,528.12	910.48

Source: South Carolina Solid Waste Management Annual Report FY19-FY23

3.6.4 Yard Trash

Section 44-96-190 of the SWPMA bans the disposal of yard waste at a MSW landfill or resource recovery facility. Yard debris is collected at RW&RCs (limited to three cubic yards per day), Twin Chimneys Landfill, and curbside (in municipalities and GGSC). Twin Chimneys Landfill recycles yard waste into mulch which is available to residents, businesses, and landscapers free of charge. The amount of yard trimmings recycled using different methods can be seen in the table below.

Table 3-16 Tons of Yard Trimmings Recycled in Greenville County

	FY19	FY20	FY21	FY22	FY23
Tons of Yard Trimmings (for use as boiler fuel)	0.00	0.00	0.07	0.00	0.00
Tons of Yard Trimmings (if recycled into compost)	3,402.51	25.00	2,012.28	1,739.20	1,492.61
Tons of Yard Trimmings (if recycled into mulch)	29,462.39	20,033.14	18,777.29	26,077.26	33,870.93

Source: South Carolina Solid Waste Management Annual Report FY19-FY23

Photos of the yard waste disposal area at Twin Chimneys landfill can be seen below.




Photos sourced from Greenville County website

3.6.5 White Goods

Section 44-96-200 of the SWPMA bans the disposal of white goods at MSW landfills. According to the SWPMA "white goods" refers to refrigerators, ranges, water heaters, freezers, dishwashers, trash compactors, washers, dryers, air conditioners, and commercial large appliances. In Greenville County, white goods can be recycled at Residential Waste and Recycling Centers and the Twin Chimneys Landfill. Photos of the white goods disposal area at Twin Chimneys are shown below.




Photos sourced from Greenville County website

The tons of white goods recycled in the County in the past five years are shown below.

Table 3-17 Tons of Appliances Recycled in Greenville County

	FY19	FY20	FY21	FY22	FY23
Tons of Appliances Recycled	2,455.00	2,098.39	2,378.61	1,237.36	1,961.05

Source: South Carolina Solid Waste Management Annual Report FY19-FY23

3.6.5 Electronic Waste

Beginning in 2011, disposal of most electronic waste (e-waste) was prohibited in landfills. Intact and undamaged e-waste is accepted for recycling at all the County's Residential Waste and Recycling Centers.



Photo sourced from Greenville County website

Dismantled e-waste or TVs with broken cathode tubes are accepted at the E-Waste Aggregation and Loading Facility at Twin Chimneys landfill. Electronic waste disposal rates at the landfill are:

- Intact e-waste: $400/ton
- Harvested CRT TVs & Monitors: $500/ton
- Crushed CRT TVs & Monitors: $1,000/ton

Only residents can drop e-waste at the RW&RC. Businesses must use the E-Waste Aggregation and Loading Facility at Twin Chimneys landfill. The amount of electronics recycled in Greenville County in the past five years can be seen in the following table.

Table 3-18 Tons of Electronics Recycled in Greenville County

	FY19	FY20	FY21	FY22	FY23
Tons of Electronics Recycled	513.16	368.08	698.94	400.30	313.13

Source: South Carolina Solid Waste Management Annual Report FY19-FY23

3.7 Miscellaneous Items

The table below shows miscellaneous items recycled by Greenville County in FY23.

Table 3-19 Tons of Miscellaneous Materials Recycled in Greenville County

Material	Tons Recycled
Antifreeze	2.40
Carpet	0.03
Carpet Padding	0.01
Cooking Oil/Grease	107.37
Fluorescent Bulbs & CFLs	14.48
Household Hazardous Materials	0.00
Inkjet/Toner Cartridges	0.04
Mattresses & Box Springs	0.00
Paint	60.00
Rechargeable Batteries	0.28
Textiles (recycled, not donated for reuse)	0.00
Used Oil Filters	24.80
Wood Packaging (pallets, crates, barrels)	1,158.73

Source: South Carolina Solid Waste Management Annual Report FY23

3.7.1 Household Hazardous Waste

The South Carolina Hazardous Waste Management Act stipulates the regulations and standards for the collection, source separation, storage, transportation, processing, treatment, recovery, and disposal of hazardous waste in the state. Hazardous waste means any waste that causes or significantly contributes to an increase in mortality or serious illness or poses a substantial present or potential hazard to human health or the environment when improperly managed. Some hazardous waste can be brought to the Twin Chimneys landfill to be managed. Residents can bring oil, oil filters, oil-based car fluids, small amounts of kerosene, antifreeze, and car batteries for proper disposal. The County promotes alternatives to common household hazardous waste products.

3.7.2 Special Waste

The SWPMA stipulates that each MSW landfill is required to have a department approved Special Waste Analysis and Implementation Plan (SWAIP). Section 44-96-390 defines "special wastes" as nonresidential or commercial solid wastes, other than regulated hazardous wastes, that are either difficult or dangerous to handle and require unusual management at municipal solid waste landfills. Examples include:

- Pesticide wastes
- Liquid wastes and bulk liquid wastes
- Sludges
- Industrial process wastes (e.g. chemical catalysts, equipment cleanings, asbestos dust, and contaminated products)
- Wastes from a pollution control process
- Residue or debris from the cleanup of a spill or release of chemical substances
- Articles that are contaminated from the cleanup of a facility
- Containers and drums

The Twin Chimneys Landfill adheres to its approved SWAIP.

3.7.3 Construction and Demolition Debris

According to the SWPMA construction and demolition debris (CDD) is defined as "discarded solid wastes resulting from construction, remodeling, repair and demolition of structures, road building, and land clearing." Types of CDD include:

- Bricks
- Concrete
- Soil
- Rock
- Lumber
- Road spoils
- Pavement material
- Tree and brush stumps

Requirements for facilities that recycle construction and demolition waste can be found in Section 44-36-360 of the SWPMA. The table below lists the permitted construction and demolition recyclers in Greenville County in calendar year (CY) 2023.

Table 3-20 Greenville County Construction and Debris Recyclers in CY23

Facility Name	Tons Received During CY23
Bailey Old Pelzer	0
Bailey Piedmont Hwy	0
Blue Sky Recycling CDR	2,361
CA Carter	12,525
Eco Waste Services	5,599

Greenworks Recycling	0
Mack Lindsey CDR	3,206
Vulcan Construction Materials Lakeside CDR	0
Waste Industries Shiloh Landfill CDR	10,419
Double Bridge	9,000

3.8 Import and Export

Twin Chimneys Landfill (Class Three) receives imported waste from other counties in South Carolina. The imported waste is either directly hauled from other counties or disposed of at the Landfill from out-of-county transfer stations and/or processing facilities. The total amount of imported waste disposed of at the Landfill via direct haul in FY23 was 12,697 tons. The table below shows the amount of waste coming from each county.

Table 3-21 Imported Waste from Direct Haul Disposed of at Twin Chimneys Landfill

County	Amount Disposed of at Twin Chimneys (tons)
Anderson	1,555
Edgefield	18
Greenwood	3,088
Laurens	1,454
Lexington	17
McCormick	327
Oconee	8
Pickens	470
Saluda	10
Spartanburg	5,191
TOTAL	12,138

The Twin Chimneys Landfill also received out-of-county waste from transfer stations in surrounding areas. The table below shows the amount of waste coming from transfer stations and their county of origin.

Table 3-22 Imported Waste from Transfer Stations Disposed of at Twin Chimneys Landfill

County	Amount Disposed of at Twin Chimneys (tons)
Laurens	19,020
Pickens	54,821

Greenville also exported some waste to out-of-county Class Three landfills. In total the County exported 577,006 tons of waste.

4.0 Recycling

The goal of this section is to provide an overview of Greenville County's recycling activities.

4.1 Current Recycling Program

The South Carolina Solid Waste Policy and Management Act of 1991 established recycling mandates for regions and counties. Section 44-96-80(A)(8) requires counties to implement a resource recovery or recycling program.

4.1.1 Recycling Coordinator

Greenville County's recycling coordinator can be contacted as follows:

Andrew Talkish
Sustainability Program Manager
Greenville County Solid Waste Division
Atalkish@greenvillecounty.org

4.1.2 Materials Recycled

Greenville maintains a list of recyclable materials in the County and where to dispose of them on their website (County of Greenville, SC (greenvillecounty.org)). A list of materials that can currently be recycled in the County can be found in the call-out box below.

Recyclable Materials in Greenville County

- Aluminum Cans
- Appliances (White Goods)
- Automotive Petroleum Products
- Batteries (Lead-acid)
- Cardboard
- Cooking Oil
- E-Waste
- Lightbulbs
- Paper
- Plastics
- Steel Cans
- Tires
- Yard Debris
- Food and Beverage Cartons

The County website also contains a list of hard to recycle materials including thermostats, packing peanuts, and smoke detectors and private companies that recycle them.[19]

A table summarizing the recyclables listed above and where they can be dropped off can be found below.

[19] County of Greenville, SC (greenvillecounty.org)

Table 4-1 Recyclable Materials in Greenville County

Material	Description	Where to Recycle
Aluminum Cans	Includes aluminum beverage cans, scrap aluminum, and clean pie plates. Aluminum needs to be rinsed and flattened.	RW&RC Twin Chimneys Landfill Drop-off Boxes Curbside
Appliances (white goods)	All metal appliances.	RW&RC Twin Chimneys Landfill
Automotive Petroleum Products	Includes used motor oil, filters, bottles, etc. Limit of five gallons. Over five gallons – farmer oil tank at Twin Chimneys Landfill.	RW&RC Twin Chimneys Landfill
Batteries (Lead-acid)	Includes used automotive, marine, and lawn mower batteries. Place in container provided.	RW&RC Twin Chimneys Landfill
Cardboard	Includes corrugated cardboard and any cardboard boxes (except those with wax coating). Cardboard needs to be flattened.	RW&RC Twin Chimneys Landfill Drop-off Boxes Curbside
Cooking Oil	Can be poured into an on-site drum – ask attendant for placement.	RW&RC Twin Chimneys Landfill
E-Waste	Includes cell phones, computers and computer accessories, printing devices, TVs, monitors, laptops, telephones of any type, personal digital assistants (PDA), and global positioning systems (GPS). No dismantled electronics allowed. Residential generation only. Place in container provided.	RW&RC Twin Chimneys Landfill
Lightbulbs	All lightbulbs are accepted, see attendant for placement. Compact Fluorescent Light Bulbs (CFL) are collected at all Home Depot Stores nationwide.	RW&RC Twin Chimneys Landfill
Paper	Includes any type or color of paper. Wax paper is not allowed. Do not tie paper in bundles or bag in plastic.	RW&RC Twin Chimneys Landfill Drop-off Boxes Curbside
Plastics	Includes #1 and #2 plastic bottles and jugs with a neck. Plastic needs to be rinsed and flattened. No diapers, plastic grocery bags, flowerpots, I.V. bags, or medical tubing allowed.	RW&RC Twin Chimneys Landfill Drop-off Boxes Curbside
Steel Cans	Includes steel food cans and aerosol cans. Cans must be rinsed. No paint cans, clothes hangers, or cooking pots allowed.	RW&RC Twin Chimneys Landfill Curbside (except Greer)
Tires	Includes passenger vehicle tires. All commercial truck, racing, or tractor tires must be taken to Twin Chimneys Landfill.	RW&RC Twin Chimneys Landfill Curbside (except Fountain Inn and Travelers Rest)
Yard Debris	Includes tree limbs, leaves, glass clippings, etc. Limbs cannot exceed 6 feet in length and 6 inches in diameter.	RW&RC (limit of 3 cubic yards per day) Twin Chimneys Landfill Curbside
Food and Beverage Cartons		RW&RC Drop-off Boxes Twin Chimneys Landfill

Weights of recyclable materials disposed of in the County are submitted to South Carolina and published in their Solid Waste Management Plan updates. The following table summarizes Greenville County's MSW recycling data in tons in FY23.

Table 4-2 Greenville County MSW Recycling Data in Tons in FY23

Commodities	Residential	Commercial/ Institutional	Industrial (office/packaging)	Total
Glass	0.00	0.27	0.00	0.27
Metal	1,933.45	5,015.38	227.92	7,716.75
Paper	1,248.38	7,354.88	564.76	9,168.02
Plastic	59.96	20.89	4,548.50	4,626.35
Organics	19,151.30	3.00	16,215.60	35,369.90
Banned	5,183.06	1,957.19	85.44	7,225.69
Miscellaneous	122.06	785.61	484.28	1,391.95
Commingled	9,909.58	557.78	898.91	11,366.27
Total	37,604.79	15,695.00	23,025.41	76,325.20

Miscellaneous items recycled include mattresses and box springs, paint, rechargeable batteries, textiles (recycled, not donated for reuse), used oil filters, and wood packaging (pallets, crates, barrels). Based on the County's current recycling rate of 8.37%, or 0.76 pounds per person per day, the amount of MSW recycled throughout the planning period can be seen in the table below.

Table 4-3 Projected Municipal Solid Waste Recycled

Year	Projected Population	Projected MSW Recycled (tons)
2030	616,105	85,453.76
2044	736,859	102,202.34
2050	788,585	109,376.74

4.1.3 Recycling Drop Boxes

In 1992 the County joined with an outside contractor to provide recycling drop off services to County residents. There are currently nine (9) recycling drop boxes in operation. A container that can be typically found at one of these locations can be seen below.



Photo sourced from the Greenville County website

Unstaffed drop boxes are available 24 hours per day, seven days per week. The following materials are collected at each site: plastic bottles and jugs with neck, paper, cardboard, aluminum cans, and steel cans. A list of current drop-off locations can be found in the table below. The list can also be found on the County website.

Table 4-4 List of Recycling Drop Box Locations

Location	Address
Trailblazer Park	301 Trailblazer Dr Travelers Rest, 29690
Blue Ridge High School	2151 Fews Chapel Rd Greer, 29651
Fountain Inn Elementary School	608 Fairview St Fountain Inn, 29644
City of Greenville Recycling Center[1]	800 E. Stone Ave at E. North St Greenville, 29602
City of Greer Recycling Center[2]	315 Bucombe St Greer, 29650
Bi-Lo	3715 E. North St Greenville, 29615
North Greenville Recycling Center[1]	514 Rutherford Rd Greenville 29609
Conestee Park	840 Mauldin Rd Mauldin, 29607
Simpsonville Woodside Park	110 Woodside Park Dr Simpsonville, 29681

[1]The City of Greenville and North Greenville centers are operated by the City of Grenville.
[2]Must show proof of Greer residency to use facility. The facility is operated by the City of Greer.

4.1.4 Business & Institutional Recycling

Greenville County provides technical assistance to businesses by negotiating with waste contractors to implement recycling programs. Businesses are encouraged to work together to establish a recycling collection point to cut costs. The County promotes the EPA's WasteWise

business networking opportunity. In addition, Greenville has compiled a list of recycling vendors on their website: County of Greenville, SC (greenvillecounty.org).

South Carolina has a Smart Business Recycling Program that is advertised to businesses on the County's website. The program offers services including:

- Site visits to assess reuse, waste reduction, and recycling opportunities
- Technical assistance including telephone consultations and best management practices
- Research and contacts for potential markets, service providers and beneficial reuse
- A state recognition program
- Workshops

4.1.5 County College and University Recycling

The SWPMA requires state-supported colleges and universities to:

- Establish a recycling program for the collection of high-grade office paper, corrugated paper, aluminum, glass, tires, composting materials, plastics, batteries, and used oil.
- Make necessary modifications to the recycling program to ensure that all materials are recycled to the maximum extent feasible.
- Report the type and amount of materials recycled to the South Carolina Department of Environmental Services each year.
- Report the amount of products purchased containing recycled-content material each year to the SCDES. The SWPMA sets a goal that at least 25 percent of all product purchases contain recycled content material.

South Carolina aids state-supported colleges and universities to enhance recycling on their campuses. Through this program, Recycle U, SCDES offers free site-visits, technical assistance, and recycling workshops. The state also offers the Collegiate Recycling Grant that allocated grant funds to public and private colleges and universities for projects that promote sustainability through recycling, reuse, composting, and waste reduction.

Greenville Technical College is a two-year public college that must meet the following requirements listed above. In 2012, the College received first place in the Grand Champion category of the Recyclemania (now called "campus race to zero waste") competition among competing colleges and universities in South Carolina for having the highest percentage of waste recycled (53%). [20]

Both Furman and Bob Jones University operate recycling programs. As they are private universities, they do not have to abide by the requirements listed in the SWPMA but are encouraged through the assistance and grants offered by the State.

[20] Greenville Technical College Bags First Place In Recyclemania Competition | Environmental XPRT (environmental-expert.com)

4.1.5 Greenville County School District

In 2002, the Greenville County School District worked with the Greenville County Solid Waste Division to promote paper and cardboard recycling in all Greenville County Public Schools. This recycling program was funded by a grant from the Greenville County Solid Waste Division to encourage environmental stewardship in students. A local recycling program picks up cardboard once a week. This program was fully funded by a grant for the first year.

4.2 Future Recycling Developments

Approximately 211,000 households, located in incorporated and unincorporated parts of Greenville, have access to the recycling roll-off containers at the County's RW&RCs. The roll-off containers provide dual-stream collection. Each 30-yard container is dual sided with 60 percent of its space allotted for fiber collection (paper and cardboard), and the other 40 percent reserved for commingle collection (plastic bottles and jugs and aluminum and steel cans). Waste audits performed in 2023 found that when the containers were collected the fiber side was at 100 percent capacity while the commingled side was typically less than fifty percent full. This problem is especially prominent after a 40 percent increase in usage of the containers due to the GGSD ending curbside collection of recyclables.

In March of 2023 the County began a pilot study of a modified recycling collection system at the Simpsonville RW&RC. The study involved replacing four of the dual-stream containers with three all-fiber containers and one all-comingled container. Prior to implementing the pilot program, the RW&RC has 16 dual-stream containers and making 16 round trips from the center to the closest MRF. After replacing four of the containers, the County transported only 13 containers a week. This led to an annual reduction of roughly 156 round trips to the MRF.

The County decided to expand this pilot program to the O'Neal RW&RC. At this center they installed a purchased 39-cubic yard self-contained compactor for mixed paper collection. This compactor unit can increase mixed paper capacity to three times the original amount. Adding compactor units will reduce the number of round trips needed to be taken to the MRF.

The County hopes to expand this pilot program to include the rest of the RW&RCs throughout the region. Greenville was awarded the Energy Efficiency and Conservation Brock Grant (EECBG) to finance this program.

5.0 Goals, Policies, Strategies, and Barriers

This section presents the recycling and reduction goals of the Greenville County Solid Waste Division. The section also identifies the most pervasive barriers to the completion of these goals. The brief introduction serves as a statement of purpose and direction for the reduction and recycling activities of the County.

5.1 Goals

A requirement of the SWPMA is to meet certain thresholds for waste reduction. The current goals, as outlined in the annual report, are detailed in the call-out box below.

Waste Reduction & Recycling goals

By 2030, South Carolina's goals are to:

1. Reduce MSW disposal to 3.25 pounds/person/day or less;
2. Recycle at least 50 percent of its MSW; and
3. Reduce food loss and waste by 50 percent.

According to Section 44-96-50(G) of the SWPMPA, each county or region is required to make every effort to meet the state solid waste recycling and reduction goals.

As of fiscal year 2023, the County has an MSW disposal rate of 8.36 pounds per person per day compared to the statewide average of 5.65 pounds per person per day. For Greenville County to meet the State's goal of 3.25 p/p/day, both residential and commercial generation of MSW for disposal must decrease significantly. Methods to promote source reduction include:

- **Education**: Increasing awareness of what happens to materials after they are thrown away can incentivize individuals to re-evaluate their behavior. Educational efforts can include newspaper articles, social media posts, flyers, and speaking engagements.
- **Incentives**: Monetary incentives like tax breaks can motivate businesses in the County to dispose of less. Grants from the local or state governments could help to fund source reduction efforts. Other types of incentives like awards or certifications could be used. Some municipalities offer sustainability awards or certificates to businesses that meet certain source reduction goals.
- **Policy:** Passing policies that promote source reduction, like only allowing businesses to dispose of a certain tonnage of trash a week or requiring recycling and/or composting, can de
- crease the amount of waste disposed of.

According to projections made in **Table 3-3**, the County will generate over one million tons of MSW in 2030. To meet the second goal set forth by SCDES, Greenville will have to recycle about 500,000 tons of waste. This would mean increasing the recycling rate from 0.76 pounds per person per day to 4.56 pounds per person per day by 2030. Greenville County is focused on increasing the recycling infrastructure for collection, processing, and marketing within Greenville County. The County will continue to work with the municipalities and the Greater Greenville Sanitation Commission to promote these efforts. The Greenville County Comprehensive Plan also addresses this goal.[21]

As mentioned in section 3.5.2.1 of this Plan the County plans on operating a Type II composting facility previously run by Atlas Composting. This will help to reach the third goal listed by SCDES of reducing food waste disposed by half. Educating residents and businesses on food scrap reduction and disposal will increase awareness of the issue.

5.2 Barriers

The greatest barriers to improving solid waste diversion and recycling are detailed below.

- **Funding Constraints**: Arguably one of the largest barriers to improving solid waste diversion is cost. In March of 2023 the Greater Greenville Sanitation Commission stopped offering curbside recycling services due to the increase in cost of collection. The Commission found that the collection and disposal of recyclable items is more than four (4) times the cost of collection and disposal of garbage. [22]
- **Volatility in Recycling Markets**: Markets fell drastically in 2018 when China no longer accepted recycled materials from the United States. As soon as the markets started to recover from the international policy change, the economic impacts from the coronavirus caused recycling commodity markets to fall again. The instability of recycling commodity markets has made it increasingly difficult to expand recycling programs. Private businesses and municipalities will not invest in something that is economically unstable.
- **Recycling Behavior**: Waste generation is directly correlated to economic activity. People tend to be more wasteful when they are in good financial standing, often opting to purchase new commodities instead of reusing what they have.

5.3 Public Education

Public participation is essential for the success of any solid waste reduction or recycling programs. Education efforts made by the County are detailed below.

[21] GREENVILLECOUNTY2019COMPREHENSIVEPLAN.pdf
[22] Greater Greenville Sanitation to stop recycling, but city of Greenville will continue - GREENVILLE JOURNAL

5.3.1 School Programs

The Solid Waste Division offers tours of the Twin Chimneys Landfill and Recycling Center as well as in-person presentations to school groups. Twin Chimneys has a 2,000 square foot education building on-site that is equipped with classroom space, video projection equipment, education resources, and hands-on activities. A photo of this facility can be seen below.



Photo sourced from Greenville County website

The Roper Mountain Science Center is helpful in scheduling presentations for teachers, who can then share reduction and recycling information with their classes. The Greenville County website contains lesson plans for teachers about air quality (County of Greenville, SC (greenvillecounty.org)).

5.3.2 Social media

The Solid Waste section of the Greenville County website provides up-to-date information on everything solid waste related in the County. Recycling drop box locations, RW&RC information, and specifics about recycling procedures can be found there.

5.3.3 Backyard Composting

The Solid Waste Division developed a Compost Education Garden with the assistance of Roper Mountain Science Center and South Carolina DHEC Grant funds. The Garden is maintained by the Science Center and serves as an outdoor classroom for Greenville County School District students and teachers. It is also open to the public to view examples of donated manufactured compost bins and homemade bins. The Master Gardeners have developed an organic garden plot to promote the use of compost. Construction guidelines and other handouts are provided by the Solid Waste Division, as well as an annual assessment of needs.

Greenville County promotes composting, grasscycling, and vermicomposting through education. The County website provides links to a composting brochure and a grasscycling brochure to

provide residents with information on how to implement these processes. The County also promotes South Carolina's "Don't Waste Food" initiative on their website, including links to additional educational materials.

5.3.4 Promote Commercial and Event Recycling

The County encourages businesses and event planners to recycle. The Solid Waste Division maintains contact with the haulers and spreads the word about recycling opportunities on a regular basis. The Recycling Coordinator is available to provide technical assistance whenever possible.

6.0 Plan Revisions

This section presents the Plan revision schedule and outlines the procedures that must be used to revise or amend this Plan at any time.

6.1 Annual Reporting

Greenville County submits an annual progress report to SCDES by October 1 of each year. The report includes annual disposal and recycling data. According to Section 44-96-80(F) of the SWPMA, the annual report should at minimum contain:

- Any revisions to the Solid Waste Management Plan previously submitted by the county or region.
- The amount of waste disposed of at municipal solid waste disposal facilities during the previous year by type of waste.
- The percentage reduction each year in solid waste disposed of at municipal solid waste disposal facilities.
- The amount, type, and percentage of materials recycled, if any, during the previous year.
- The percentage of the population participating in various types of source separation, recovery, or recycling activities during the previous year.
- A description of the source separation, recovery, or recycling activities or all of the above activities attempted, if any, their success rates, the reasons for their success or failure, and a description of such activities which are ongoing.

6.2 Plan Revisions and Amendments

The Greenville County Solid Waste Management Plan will be reviewed at least every four years. Section 44-96-80(O) of the South Carolina Solid Waste Policy and Management Act of 1991 states that any amendments to the Plan must be adopted and implemented in the same manner as provided for in the initial Plan. The proceedings are as follows:

- The proposed revision or amendment must be presented to the Solid Waste Director for review.
- Upon approval by the Solid Waste Director, the revision or amendment must be submitted to the Greenville County Assistant County Administrator for Engineering and Public Works for review.
- Upon approval by the Assistant County Administrator for Public Works, the revision or amendment must be introduced before the Greenville County Council.
- The revision will be an agenda item for Greenville County Council open to public comment at a regular meeting. Greenville County Council will determine approval or denial based on majority vote. Upon approval, the revision or amendment will be adopted into the most recent version of the Plan and will be fully enforceable. Upon denial by Council, the revision or amendment dies.

7.0 Fiscal Impact Statement

The purpose of this section is to illustrate the Solid Waste Division's budget breakdown and projections for the current year and near future. This data should give some insight into the current financial framework of the Division and help with future budget analysis.

Section 44-96-80 of the SWPMA requires the County's Solid Waste Management Plan to include:

- An estimate of the cost of implementing the Solid Waste Management Plan within that county or region.
- An estimate of the revenue which each local government or region needs and intends to make available to fund implementation of the Solid Waste Management Plan.

7.1 The Solid Waste Fund

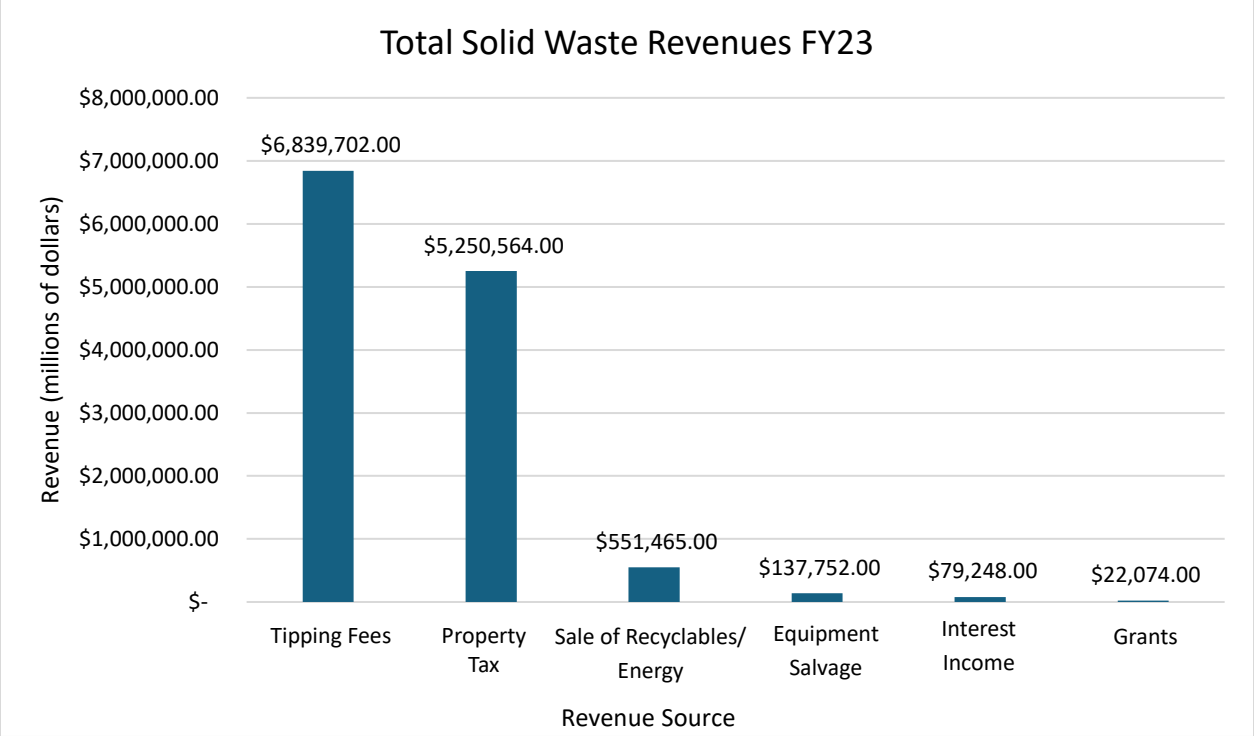
According to the FY23 Comprehensive Financial Report, the Solid Waste Fund accounts for the operation, maintenance, and development of various landfills and disposal sites for the citizens on a cost-reimbursement basis.[23] The total net position (deficit) of the Solid Waste Fund for fiscal year 2023 is about $25 million, compared to $16 million for FY22. This can mainly be attributed to a large increase in the landfill closure/post-closure estimated liability from the closure of a cell at the Twin Chimneys Landfill soon. The revenues and expenses from solid waste programs are described below.

7.1.1 Revenues

According to § 9-40 of the County Code of Ordinances, solid waste disposal programs are funded through a dedicated county-wide millage set annually during the budget processes. The cost to residents of Greenville County will be based on this millage. Revenues from solid waste programs include tipping fees, property taxes, interest income, sale of recyclables and energy, equipment salvage, and grants. A chart detailing the revenue breakdown from FY23 can be seen below. The data from this chart is sourced from Greenville County's latest Full Cost Disclosure Report that is submitted to SCDES annually. The sources of revenue for the Solid Waste Fund will continue to be the same throughout the planning period. Another source of future revenue could be compost sales and tipping fees from the Twin Chimneys' compost facility.

[23] County of Greenville, SC (greenvillecounty.org)

Figure 7-1 Total Solid Waste Revenues in FY23



As shown in the chart above, tipping fees account for the largest source of revenue for Solid Waste. Along with tipping fees, the Twin Chimneys Landfill will load mulch into vehicles for citizens. The first half scoop loading fee is free and there is an additional $15.00 loading fee for each additional scoop. The tables below display the 2024 tipping fees for residential and commercial waste disposal at the Twin Chimneys Landfill.

Table 7-1 Residential Waste Disposal Rates

Material	Disposal Rate
Household Waste All perishable refuse (kitchen garbage) Household rubbish Rags Bottles, cans Bicycles, lawnmowers, etc.	No charge
Construction/Demolition (dense materials) Shingles, sheetrock, dirt, & railroad ties	$15.00/cubic yard
Construction and Demolition (light materials) All other construction debris	$5.00/cubic yard
Yard/Brush Waste Loose leaves, grass clippings Tree/branch trimmings (under 6” in diameter, less than 6’ long)	$3.00/cubic yard

Table 7-2 Commercial Waste Disposal Rates for Automated Tippers, Electric Dumpers, Small Vehicles (Less than 15,000 lbs) and Vehicles Unloaded by Hand

Material	Disposal Rate
Domestic Waste All perishable refuse (kitchen garbage) Household rubbish Rags Bottles, cans Waste from small businesses (less than a 100-gallon container per week) Bicycles, lawnmowers, etc.	$5.00/cubic yard
Commercial Waste All waste from businesses (except those generating less than a 100-gallon container per week)	$5.00/cubic yard
Construction/Demolition Shingles, sheetrock, dirt, & railroad ties Bagged yard waste	$15.00/cubic yard (dense) $5.00/cubic yard (light)
Construction/Demolition All items listed in **Figure 7-2**	$30.00/ton
Electronic Waste Intact e-waste	$400/ton
Electronic Waste Harvested CRT TV's & Monitors	$500/ton
Electronic Waste Crushed CRT TV's & Monitors	$1,000/ton
Yard/Brush Waste Loose leaves, grass clippings Tree/branch trimmings (under 6" in diameter, less than 6' long) [1]	$5.00/cubic yard

[1]Yard/brush waste exceeding 6" in diameter, more than 6' long, or containing bags or other contaminants will be classified as construction/demolition waste

Table 7-3 Commercial Waste Disposal Rates for Automated Tippers (Greater than 15,000 lbs)

Material	Disposal Rate
Domestic Waste All perishable refuse (kitchen garbage) Household rubbish Rags Bottles, cans Waste from small businesses (less than a 100-gallon container per week) Bicycles, lawnmowers	$20.00/ton

Commercial Waste All waste from businesses (except those generating less than a 100-gallon container) White goods from businesses and haulers	$33.00/ton
Construction/Demolition All items listed in **Figure 7-2**	$30.00/ton
Electronic Waste Intact e-waste	$400/ton
Electronic Waste Harvested CRT TVs & Monitors	$500/ton
Electronic Waste Crushed CRT TVs & Monitors	$1,000/ton
Industrial/Special Waste[1] All waste from industries Pre-compressed and high-density materials Dusts Bailed goods, plastic rolls, steel/plastic banding Textile waste Waste requiring inspection and approval prior to disposal Steel/plastic banding	$33.00/ton
Special Handling Waste Any waste which causes equipment problems during disposal	$75.00/ton
Tires Undocumented tires	$150.00/ton

[1]All generators/haulers should request approval for the disposal of their special waste in writing and will be notified of acceptance or advised of procedures should an inspection or any testing be required prior to disposal

Figure 7-2 Acceptable Construction/Demolition Waste

Bricks and Masonry Blocks	Pallets and Crates
Cardboard and Packaging	Pipes
Concrete	Plaster & Plasterboard
Carpet, Vinyl Flooring (any floor covering)	Poly Fiberglass (highly polished, cured material used to build boats, etc.)
Earthen Material (Clays, Sands, Gravel, and Silts)	Rock
Glass	Rock Mats
Glass Wire (Optical Fiber)	Shingles and Roofing Material
Hardened Cement	Structural Steel
Hardened/Cured Asphalt	Tire (Floor, Wall, and Ceiling)
Insulation	Topsoil
Logs (greater than 6” in diameter or 6’ in length)	Tree Stumps
Lumber (including treated lumber)	Vegetation
Mirrors	Vinyl Siding
Other Structural Fabrics	Wall Coverings
Painted Waste (including lead-based paint)	

The Twin Chimneys Landfill will not accept any waste that has been in contact with petroleum products or friable asbestos materials. Anyone disposing waste at a Greenville County Solid Waste Facility without separating controlled materials (lead-acid batteries, waste oil, yard/brush and cellulosic waste, white goods, tires, and e-waste) will be subject to a fee of $150.00 per ton.

In 2020, Greenville County hired a consultant to perform a Solid Waste Tipping Fee Study on the Solid Waste Division. The study found that the County needed to increase their landfill tipping fees over the next decade to meet all its current and projected financial requirements.

7.1.2 Expenses

In October of 1991, the Environmental Protection Agency (EPA) placed specific regulations on the closure of municipal solid waste landfills as well as post-closure maintenance for thirty years after closure. The County is responsible for funding the closure and post-closure of any public landfill. Greenville is responsible for the post-closure maintenance costs for Enoree Landfill, a public facility that closed 15 years ago, as well as Twin Chimneys Landfill when it closes. According to the FY23 Comprehensive Financial Report, the decrease in net position for the Solid Waste Fund can mainly be contributed to a $4.5 million increase in the landfill cell closure estimated liability.[24]

The expenses during the planning period include the Twin Chimneys Landfill expansion that is estimated to cost around $11.3 million. The money comes from the general obligation bond.

[24] Microsoft Word - {38DCA90C-419C-4420-A074-7E88A7DF6D85}.docx (greenvillecounty.org)

Appendix A

Greenville County Solid Waste Disposal Facility Ordinance

ARTICLE III: COUNTY SOLID WASTE DISPOSAL FACILITIES

Section

9-31 Authority

9-32 Findings

9-33 Definitions

9-34 Applicability of other legislation

9-35 Criminal penalties

9-36 Enforcement

9-37 Facilities to be used only by county residents

9-38 Authorized uses

9-39 Unlawful activities

9-40 Landfill users fee

9-41 Landfill and residential waste and recycling centers

9-42—9-47 Reserved

9-48 Permits for haulers

9-49 Prohibition

9-50 Reserved

§ 9-31 AUTHORITY.

This article is authorized by the South Carolina Solid Waste Policy and Management Act of 1991, S.C. Code, §§ 44-96-10 *et seq*., as amended.

(1976 Code, § 9-31) (Ord. 2768, § 1, passed 10-3-1995)

§ 9-32 FINDINGS.

The county operates numerous landfills and other solid waste disposal facilities, such as transfer stations. These facilities are under the direction and control of the solid waste department of the county government. The county council finds that the health, safety, and welfare of the citizens of the county require the promulgation of rules and regulations governing the collection, deposit and disposal of solid waste. The council further finds that many of the practices prohibited in this article have been permitted to exist to the detriment of sound health and sanitary practices.

(1976 Code, § 9-32) (Ord. 2768, § 1, passed 10-3-1995)

§ 9-33 DEFINITIONS.

The following definitions shall apply herein:

Construction and demolition debris means discarded solid wastes resulting from construction, remodeling, repair, and demolition of structures, road building, and land clearing.

Convenience centers are county operated solid waste drop-off facilities which are staffed by county employees during specified operating hours. Waste deposited at the centers is transported in solid waste containers to the county operated landfill.

Domestic waste shall mean all perishable refuse, including animal and vegetable wastes resulting from the handling, preparation, cooking, and consumption of food; household rubbish, including paper, cardboard, boxes, rags, plastic, cloth, glass, bottles, cans and any similar waste that is generated from household activities or small businesses as defined herein.

Health authority includes members and representatives of the county health department and the state department of health and environmental control.

Householder is one who uses county waste disposal facilities for his own use to dispose of household garbage and refuse, including tires, and yard trash and including household garbage collected from family, friends, or the handicapped, provided a fee is not charged for the service.

Lead-acid battery means any battery that consists of lead and sulfuric acid, is used as a power source, and has a capacity of 6 volts or more.

Person means an individual, firm, or corporation.

Private hauler is any person, firm, or corporation which, as a service to others and for a fee, hauls their waste, or provides a similar service to business or industry.

Refuse means nonputrescible waste such as paper, cardboard, tin cans, wood, glass, bedding and crockery.

Residential properties are properties which are principally used as a dwelling place. Residential properties include, but are not limited to, houses, apartments, condominiums, townhouses, mobile homes, cottages and cabins which are rented for whatever periods of time, including such premises rented for vacation and resort purposes. It shall not, however, include rooms within motels, hotels, inns, and boarding houses. Residential properties shall either be single-family residences or multifamily units as defined below:

(1) Single-family residences are residential properties which are classified by the county assessor as having only 1 dwelling unit per property, parcel, or account. This definition includes but is not limited to mobile homes.

(2) Multifamily units are residential properties consisting of dwelling units classified by the county assessor as having more than 1 dwelling unit per property, parcel, or account. This definition includes but is not limited to apartments, as well as any detached houses of a multiple number on a single piece of property.

Sanitary landfill shall mean a sanitary landfill operated by the county, and constitutes a method of solid waste disposal without creating pollution, nuisance, or danger to the public health and safety.

Scavenge means uncontrolled picking from discarded solid waste materials.

Small business shall mean a commercial establishment which generates less than a 100-gallon container of refuse weekly, or the equivalent thereof.

Solid waste shall mean garbage, refuse, litter, rubbish or any other waste resulting from industrial, agricultural, or residential activity not disposable by means of a sewerage system operated in accordance with state laws or regulations.

Solid waste container means those roadside containers which are intended only for use by homeowners and the traveling public.

Transfer station shall mean a station operated by the county for the collection and transfer of solid waste, and includes the solid waste container herein mentioned.

Used oil means any oil which has been refined from crude or synthetic oil and, as a result of use, storage, or handling, has become unsuitable for its original purpose due to the presence of impurities or loss of original properties, but which may be suitable for further use and may be economically recyclable.

Waste tire means a tire that is no longer suitable for its original intended purpose because of wear, damage, or defect.

White goods include refrigerators, ranges, washers, dryers, water heaters, freezers, dishwashers, trash compactors, air conditioners, and commercial large appliances.

Yard trash means solid waste consisting solely of vegetative matter resulting from landscaping maintenance.

(1976 Code, § 9-33) (Ord. 2768, § 1, passed 10-3-1995)

§ 9-34 APPLICABILITY OF OTHER LEGISLATION.

Except insofar as they are in conflict with this article, Act 893 of the 1940 Acts and Joint Resolutions, and any other act of the General Assembly relating to the collection and disposal of solid waste in the county, shall remain in full force and effect.

(1976 Code, § 9-34) (Ord. 2768, § 1, passed 10-3-1995)

Cross-reference:

For the South Carolina Waste Policy and Management Act, see §9-31

§ 9-35 CRIMINAL PENALTIES.

Any person, firm, corporation or agent, who shall violate the provisions of this division shall be guilty of a misdemeanor and shall be punished within the jurisdictional limits of magistrate's court. Each such person, firm, corporation or agent shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this division is committed or continued.

(1976 Code, § 9-35) (Ord. 2768, § 1, passed 10-3-1995)

§ 9-36 ENFORCEMENT.

The primary responsibility for the enforcement of this article is delegated to the county administrator, but all lawfully constituted law enforcement officers in the county are empowered to enforce and carry out the provisions of this article.

(1976 Code, § 9-36) (Ord. 2768, § 1, passed 10-3-1995)

§ 9-37 FACILITIES TO BE USED ONLY BY COUNTY RESIDENTS.

Nonresidents of Greenville County shall not be permitted to deposit solid wastes, garbage or refuse in any county landfill or transfer station except by authority of the county council upon the recommendation of the county administrator.

(1976 Code, § 9-37) (Ord. 2768, § 1, passed 10-3-1995)

§ 9-38 AUTHORIZED USES.

(a) Convenience centers are intended for use by householders and the traveling public, and their use by private, industrial or commercial haulers is prohibited. Separate solid waste containers are provided for the deposit of materials such as dirt, rocks, trees, stumps, brush, leaves, limbs, abandoned kitchen appliances and household garbage, but such materials must be placed wholly within the container.

(b) Householders, licensed haulers, municipalities, other political subdivisions, and authorized commercial and industrial establishments may dispose of solid wastes in county operated landfills in accordance with this and other ordinances and applicable state laws.

(1976 Code, § 9-38) (Ord. 2768, § 1, passed 10-3-1995)

§ 9-39 UNLAWFUL ACTIVITIES.

(a) It shall be unlawful for any person to loiter about or trespass upon any sanitary landfill or transfer station except for transaction of business during normal operating hours.

(b) It shall be unlawful for any person to remove, scatter, probe through, scavenge, interfere with, or disturb waste, garbage, refuse, or other objects or materials deposited in or collected at any sanitary landfill or transfer station.

(c) It shall be unlawful for any person to mutilate in any manner a container or other equipment located at a transfer station, convenience center or set fire to the container or its contents.

(d) It shall be unlawful for any person to set fire to the landfill or its contents.

(e) It shall be unlawful for any person to deposit in any landfill or container at a transfer station any dangerous materials or substances such as poisons, acids, caustics, infected materials, and explosives unless such disposal is authorized in writing by the state department of health and environmental control.

(f) It shall be unlawful for any person to deposit solid waste of any kind beside, around, or on top of, any container at a transfer station.

(g) It shall be unlawful for anyone to misrepresent to landfill operators the following:

(1) The nature and composition of the waste they are depositing;

(2) The capacity for which they are hauling, i.e., commercial hauler or householder, etc.;

(3) The amount of waste they intend to deposit and its degree of compaction or density.

(1976 Code, § 9-39) (Ord. 2768, § 1, passed 10-3-1995)

§ 9-40 LANDFILL USERS FEE.

(a) *Applicability*.

(1) Tipping fees will not be charged on residential solid waste hauled by Greater Greenville Sanitation Commission or hauled by a municipality located within the boundaries of Greenville County, South Carolina or the agent of such municipality. Householders shall be allowed to deposit up to 3 cubic yards per load of waste per visit to a convenience center. Householders shall be allowed to deposit up to 4 tires with a Department of Transportation number per visit to a convenience center without payment of a tipping fee. Documentation for proof of purchase on tires generated within Greenville County may be required. Quantities of waste or tires in excess of the amount specified above must be transported directly to the county operated landfill for disposal.

(2) Commingled wastes eligible for a tipping fee shall be charged at the highest applicable rate and no fees shall be prorated.

(b) *Fee structure*. A dedicated county-wide millage, set annually during the budget process, will be used to fund the solid waste disposal programs. Cost of residential solid waste disposal for all residents of Greenville County will be serviced by the dedicated millage. The applicable tipping fees are as follows:

(1) Seventeen dollars per ton for all domestic waste (applicable only to commercial haulers as specified);

(2) Thirty dollars per ton for all commercial, industrial, yard trash, white goods, alkaline stabilized biosolids and grit and screenings debris, and all other wastes not otherwise provided for herein (applicable only to commercial haulers as specified);

(3) Twenty-six dollars per ton for all construction and demolition debris (applicable to both householders and commercial haulers);

(4) Fifty-five dollars per ton for all municipal wastewater belt press sludge and nonstabilized grit and screening debris;

(5) Seventy-five dollars per ton for all waste requiring special handling and disposal techniques or waste which contains levels of toxicity characteristic contaminants which exceed the chronic toxicity reference level but are less than the regulatory level. Waste included in this category shall include, but not be limited to, precompressed and high density materials such as sludges (not including municipal wastewater sludges), dust, bailed goods, plastic rolls, mulch, textile waste, stumps, and other special commercial or industrial wastes requiring approval for disposal from the Greenville County solid waste department; and

(6) Seventy-five dollars and fifty cents per ton for all tires for which no disposal fee has been paid pursuant to S.C. Code, § 44-96-170. This disposal or tipping fee shall also apply to all waste tires, heavy equipment tires, and oversized tires that have a greater diameter than the largest tire with a Department of Transportation number. Greenville County hereby requires fleets to provide documentation for proof of purchase on in-state tires. This disposal or tipping fee shall further apply to all waste tires manufactured in the State of South Carolina for which no state tire disposal fee has been paid. There shall not be any disposal or tipping fee on waste tires generated within the county. Documentation for proof of purchase on tires generated within the county may be required.

(c) *Amendment*. The above-referenced tipping fees may be amended in the annual budget ordinance.

(1976 Code, § 9-40) (Ord. 2768, § 1, passed 10-3-1995)

§ 9-41 LANDFILL AND RESIDENTIAL WASTE AND RECYCLING CENTERS.

(a) *Prohibition.* The Greenville County Solid Waste Division shall establish and post opening and closing hours for the Twin Chimneys landfill and for each County Residential Waste and Recycling Center. No person shall enter or remain in the landfill for in a Residential Waste and Recycling Center beyond the times posted without permission from the Solid Waste Division.

(b) *Penalty.* A violation of this Ordinance shall consititute a misdemeanor, and violators shall be punished within the jurisdictional limits of magistrate court.

(Ord. 5509, §§ 1, 2, passed 4-4-2023)

§§ 9-42—9-47 RESERVED.

§ 9-48 PERMITS FOR HAULERS.

All private and municipal haulers that deposit waste in any waste facility owned or operated by Greenville County shall be required to register with the county and obtain a permit for $35 which permit shall be renewed annually. Permitted haulers shall identify the numbers of residential, small business, commercial, and industrial units serviced on a quarterly basis and shall provide such other information and at such intervals as deemed necessary by the solid waste department for proper maintenance and operation of the county landfills.

(1976 Code, § 9-48) (Ord. 2768, § 1, passed 10-3-1995)

§ 9-49 PROHIBITION.

It shall be unlawful for anyone to deposit a waste load at a Greenville County Solid Waste Facility without first separating the following controlled materials:

Controlled Materials	***Effective Dates***
(1) Waste tires	November 27, 1992
(2) Used oil	November 1, 1991
(3) Lead acid batteries	May 27, 1991
(4) Yard trash	August 27, 1992
(5) White goods	May 27, 1994

On or after the above effective dates, anyone depositing a waste load at a Greenville County Solid Waste Facility without first separating those controlled materials listed above shall be assessed an additional fee of $150 per ton, or $37.50 per cubic yard. In addition to any additional fees imposed and any normal disposal fees associated with the waste load, all violators will be required to separate the controlled materials listed above from the waste load deposited at a Greenville County Solid Waste Facility. Anyone who refuses to separate these controlled materials from the waste load deposited at a Greenville County Solid Waste Facility shall, in addition to any additional fees imposed and any normal disposal fees associated with the waste load be responsible for all expenses incurred in removing such controlled materials from the waste load and disposing of such controlled materials in a proper manner.

(1976 Code, § 9-49) (Ord. 2768, § 1, passed 10-3-1995)

§ 9-50 RESERVED.