

Prepared For:

City of Martinsville
55 West Church Street
Martinsville, Virginia 24112



Submitted by:

LaBella Associates
400 S. Tryon Street
Suite 1300
Charlotte, North Carolina 28285
704-376-6423
NC License No. C-0430



SOLID WASTE MANAGEMENT PLAN

City of Martinsville

Henry County

Town of Ridgeway

MARCH 2022

PROJECT NO. 2212773.01, PHASE 01

**CITY OF MARTINSVILLE AND HENRY COUNTY
SOLID WASTE MANAGEMENT PLAN**

Table of Contents

<u>Section</u>	<u>Page</u>
1.0 INTRODUCTION	1
1.1 SUMMARY	1
1.2 PLAN GOALS.....	1
2.0 PROJECTIONS AND WASTE QUANTITIES.....	1
2.1 SWMP COVERAGE AREA	1
2.2 POPULATION DATA AND PROJECTIONS.....	1
2.2.1 <i>City of Martinsville</i>	2
2.2.2 <i>Henry County</i>	2
2.2.3 <i>Town of Ridgeway</i>	3
2.3 COMPOSITION OF SOLID WASTE	3
2.4 CURRENT MARKET CONDITIONS	3
2.5 SOLID WASTE GENERATION AND FLOW PATTERNS	4
2.5.1 <i>Types of Waste Generated</i>	4
2.5.2 <i>Waste Stream Projections</i>	4
2.5.2.1 <i>Municipal Solid Waste</i>	4
2.5.2.2 <i>Industrial Waste</i>	5
2.5.2.3 <i>Sludge</i>	5
2.5.2.4 <i>Recyclable Materials</i>	5
2.5.2.5 <i>Other Special Wastes</i>	6
2.5.2.6 <i>Household Hazardous Waste</i>	6
2.5.2.6.....	6
3.0 SOLID WASTE MANAGEMENT SYSTEM.....	7
3.1 COLLECTION.....	7
3.1.1 <i>Residential Waste and Recycling</i>	7
3.1.1.1 <i>City of Martinsville</i>	7
3.1.1.2 <i>Henry County</i>	7
3.1.1.3 <i>Town of Ridgeway</i>	7
3.1.2 <i>Commercial Institutions and Industries</i>	7
3.2 DISPOSAL	8
3.2.1 <i>Municipal Solid Waste</i>	8
3.2.2 <i>Industrial Waste</i>	8
3.2.3 <i>Sludge</i>	8
3.3 RECYCLING.....	8
3.4 WASTE TREATMENT	9
3.5 PUBLIC EDUCATION	9
3.6 PUBLIC/PRIVATE PARTNERSHIPS	9
3.7 SOLID WASTE ARCHIVE.....	10
3.8 EVALUATION OF SOLID WASTE COLLECTION SYSTEMS	10
4.0 HIERARCHY.....	10
4.1 SOURCE REDUCTION	10
4.2 REUSE	10
4.3 RECYCLING.....	11
4.4 RESOURCE RECOVERY (WASTE-TO-ENERGY)	11
4.5 LANDFILL.....	11
5.0 OBJECTIVES.....	12

6.0	PLAN IMPLEMENTATION	12
6.1	SOURCE REDUCTION	13
6.2	REUSE	13
6.3	RECYCLING.....	13
6.4	RESOURCE RECOVERY (WASTE-TO-ENERGY)	14
6.5	LANDFILL.....	14
7.0	FUNDING AND CONSTRUCTION SCHEDULES.....	15
7.1	FUNDING	15
7.2	CONSTRUCTION SCHEDULES.....	15
8.0	PUBLIC PARTICIPATION	15
8.1	PUBLIC/PRIVATE PARTNERSHIPS	15
8.2	PUBLIC HEARINGS	16
9.0	CONCLUSION.....	16

APPENDICES

Appendix 1	Regional Map
Appendix 2	Population Projections
Appendix 3	Annual Waste Summary Report
Appendix 4	Solid Waste Projections
Appendix 5	Map of Active Waste Facilities in the Region
Appendix 6	List of All Solid Waste Facilities in the Region
Appendix 7	Local Recycling Rate Report Form
Appendix 8	Recycling Rate Estimates
Appendix 9	Public Hearing and Board/Council Documents

1.0 INTRODUCTION

1.1 SUMMARY

The purpose of this Solid Waste Management Plan (SWMP or “Plan”) is to meet the requirements of 9VAC20-130-10 *et seq.*, which are the Regulations for Solid Waste Management Planning, effective August 1, 2001. The Plan outlines the long-term strategy and goals set by the City of Martinsville, Henry County, and the Town of Ridgeway concerning solid waste management.

1.2 PLAN GOALS

The goal of this SWMP is to coordinate the efforts of the City of Martinsville, Henry County, and the Town of Ridgeway regarding solid waste management and planning. The Plan develops objectives for the management of solid wastes, including, at a minimum, all of the following elements: source reduction, reuse, recycling, resource recovery (waste-to-energy), landfilling and transfer stations. In addition, the Plan demonstrate how the goals and objectives for solid waste management will be met, as well as include a schedule for the implementation of these goals, as necessary.

2.0 PROJECTIONS AND WASTE QUANTITIES

2.1 SWMP COVERAGE AREA

The coverage area of this SWMP is the City of Martinsville (the City), Henry County (the County), and the Town of Ridgeway (the Town), herein called the Region. A Regional Map is provided in Appendix 1. The Region is located in the southern Piedmont region of Virginia, approximately 50 miles southeast of Roanoke and 40 miles north of Greensboro, North Carolina. The Region is surrounded by the Blue Ridge Mountains and borders North Carolina to the south.

The City of Martinsville, Henry County, and the Town of Ridgeway are members of the West Piedmont Planning District Commission (PDC), which also includes the Counties of Franklin, Patrick, and Pittsylvania; the City of Danville; and the Town of Rocky Mount. The majority of the residential growth in the Region is centered around the existing cities and along primary transportation routes. Major transportation arteries through the Region include United States (U.S.) Highways 57, 58, and 220, and State Route 174.

According to the Virginia Employment Commission (VEC), the September 2021 unemployment rates for the City of Martinsville and Henry County were 5.0% and 4.9%, respectively. These values are higher than the State of Virginia’s unemployment rate for September 2021, of 3.8%. Major employers (100± employees) in the Region currently include Springs Industries Inc., Georgia-Pacific Corporation, West Window Corporation, Local Net, King’s Grant, Multi-Wall Packaging, Texturing Services, Inc., Shenandoah Furniture, Inc., Lowe’s Home Improvement, Resurgence Properties LLC, WestRock, Stanleytown Health Care Ctr, Nautica, Applied Felts, Bassett Furniture, Hooker Furniture, Commonwealth Laminating, Solutia, Inc., O-I, Ebay Enterprise, Master Brand Cabinets, Inc., Prillaman & Pace, Inc., Warren Trucking Co, Nilit, Monogram Snacks, Drake Extrusion, Patrick Henry Community College, the City of Martinsville, and the Henry County Government.

2.2 POPULATION DATA AND PROJECTIONS

Population data and projections for the Region were obtained from the VEC, who in turn references the U.S. Census Bureau. Table 1 summarizes the population data and projections for the planning period of 2020 through 2040. Generally, the total population for the Region is projected to decrease

approximately 17.4% over the next twenty years. The population for the City is projected to decrease from 13,485 persons in 2020, to 11,573 persons in 2030, and then continue to decrease by approximately 13.3% for next two 10-year census periods for a total projected population of 10,038 persons in 2040. The population for the County is also projected to decrease over the next two 10-year census periods for a total projected population of 42,073 persons in 2040.

Table 1. Population by Jurisdiction.

Jurisdiction	2010	2020	2030	2040
City of Martinsville	13,821	13,485	11,573	10,038
Henry County*	54,151	50,948	46,764	42,073
Totals	67,972	64,433	58,337	52,111

*The population for Henry County includes the Town of Ridgeway.

The 2020 Census Population provided by VEC for the City, County, and Region, as well as projections for the next 20 years is provided in Appendix 2. General information regarding size, location, and general information for each jurisdiction is provided below.

2.2.1 City of Martinsville

The City of Martinsville is centrally located within Henry County and encompasses approximately 11 square miles. As shown in Table 1, the 2020 Census Population for the City of Martinsville was 13,485 persons. Primary travel throughout the City is provided by U.S. Highways 58 and 220 and State Route 57.

The City of Martinsville hosts many of the larger industries and employers in the Region including Hooker Furniture Company, Nationwide Homes, Southern Finishing, Inc., Virginia Mirror Co., The Lester Group, and Fanueil, Inc.

2.2.2 Henry County

Henry County is located in the southern Piedmont region of Virginia and is bordered by Patrick County to the west, Franklin County to the north, Pittsylvania County to the east, and North Carolina to the south. The County is approximately 382 square miles in size and includes the Town of Ridgeway. Other unincorporated communities within the County include Axton, Bassett, Chatmoss, Collinsville, Fieldale, Laurel Park, Spencer, and Stanleytown. In addition, Henry County is home to the Martinsville Speedway, which hosts the NASCAR Sprint Cup Racing Series, bringing thousands of visitors and tourists into the Region multiple times a year. The 2020 Census Population for Henry County was 50,948 persons (including the Town of Ridgeway population).

Generally, land use throughout the County consists primarily of small to medium residential areas, commercial business areas and industrial parks. The commercial business areas and industrial parks host some of the region's major employers including Eastman Chemical, Monogram Food Solutions, Springs Global US, Inc., Applied Felts, Bassett Furniture Industries, Bassett Mirror company, Inc., Drake Extrusion, Inc., Georgia Pacific, Multi-Wall Packaging, Stanley Furniture Co, West Window Corp, ALCOLA

The County and the surrounding Counties provide a variety of recreational activities to visitors year round, such as Fairystone State Park, Smith Mountain Lake, Smith River, and the Blue Ridge Parkway. U.S. Highways 58 and 220, and State Route 57 provide primary travel throughout the County.

2.2.3 Town of Ridgeway

The Town of Ridgeway is located in the southern portion of Henry County and is the only incorporated town within the County. The Town is approximately 0.94 square miles in size and had a 2020 Census Population of 752 persons.

2.3 COMPOSITION OF SOLID WASTE

All of the solid waste, except recyclables, collected within the City of Martinsville, Henry County, and the Town of Ridgeway is transported to the First Piedmont Transfer Station where the ultimate disposal will be determined. Based on the 2020 waste stream volumes recorded at the First Piedmont Transfer Station, solid waste from residents, businesses, and industries within the City of Martinsville accounts for approximately 36 percent of the waste collected. Residents, businesses, and industries in Henry County and the Town of Ridgeway generate the remaining 64 percent.

Of the waste accepted at the transfer station during 2020, residential/commercial waste represents 76 percent of the total waste collected within the Region. Industrial, construction demolition debris (CDD) and yard waste represents approximately 5 percent. Sludge, which is not accepted at the Transfer Station but rather hauled directly to Pittsylvania County Landfill in Dry Fork, Virginia, represents 15 percent. Recyclables accounts for the remaining 3.5 percent. Recyclables are collected separately from the solid waste and transferred to a local processing facility; thus, those values are reported in the upcoming sections of this report. A waste summary report for 2020 is presented in Appendix 3.

2.4 CURRENT MARKET CONDITIONS

The City of Martinsville and Henry County are continually investigating markets and providing recycling services to residents and businesses, as economically feasible based on the available recycle/reuse markets. Currently, there is no composting performed by the City or County. All yard waste is transported to the First Piedmont Transfer Station. Glass recycling was discontinued when it was determined to no longer be cost efficient. However, there are private companies within the region that accept this material for recycling. The City is recycling paper, cardboard, metals, plastic, tires, used oil, used antifreeze, batteries, paint, televisions and electronic waste. The County is recycling cardboard, newspaper, aluminum and tin cans, Nos. 1 and 2 plastics, and most basic household electrical items such as toasters, VCRs, DVD players, and televisions 20 inches or smaller. The County recycles used oil and reuses it to heat the County and Public Service Authority's maintenance complex. The City reuses oil to heat their garage complex. They also recycle wood waste into boiler fuel for use outside the Region. Milled pavement material is recycled/reused for roadway base and/or shoulder stone. Christmas trees are collected and ground to be reused as mulch in streetscape locations throughout the City and County. The current markets in the County and the surrounding region allow certain materials such as newspaper, cardboard, plastics, metal, and aluminum and tin cans to be cost-effectively collected and transferred to a local processing facility for recycling and/or reuse.

Unfortunately, based on the local and regional markets, it is currently not cost-effective for the City and the County to recycle textiles, glass, yard waste, electronics (except for those sited above), and abandoned automobiles. The City and County will continue to investigate the local and regional markets to determine if a cost-effective method of recycling these materials becomes available.

2.5 SOLID WASTE GENERATION AND FLOW PATTERNS

Currently, solid waste is collected from residences, businesses, and industries through curbside collection or private contractors. Convenience center sites are also provided throughout the Region.

2.5.1 Types of Waste Generated

Generally, the waste generated and handled within the Region consists of residential and commercial municipal solid waste (MSW), industrial waste, commercial demolition debris (CDD), sludge, vegetative and yard waste, and primary recyclable materials (PRM). PRM generally includes paper; cardboard; metal; plastic; glass; chipped or mulched waste wood; textiles; tires; used oil and oil filters; used antifreeze; batteries; electronics; and tree stumps greater than six inches in diameter. For the purposes of this report, waste will be presented in four (4) categories: MSW, Industrial, sludge and recyclables. MSW will include residential and commercial waste and Industrial will include industrial waste, CDD and yard waste. Based on the waste collection and disposal records for the Region in 2020, MSW, Industrial waste and sludge constitute approximately 76 percent, 5 percent and 15 percent respectively, of the solid waste generated and collected within the Region. The remaining 16 percent consists of primary recyclable materials (PRM). The percentages of these items and the composition of the waste generated in the Region are presented in Appendix 3.

2.5.2 Waste Stream Projections

Solid waste generation projections were calculated based on per day, per capita rates estimated from the waste quantities recorded at the First Piedmont Transfer Station and the local jurisdictions during 2020. Descriptions of the projection method for each of the major types of waste generated in the Region are presented in the sections below. Supporting calculations are presented in Appendix 4.

2.5.2.1 Municipal Solid Waste

The Environmental Protection Agency (EPA) Office of Solid Waste and Emergency Response published per capita municipal solid waste (MSW) rates for the U.S. in a report entitled *Advancing Sustainable Materials Management: Facts and Figures Report for 2018*. In 2018, Americans generated about 292 million tons of trash and recycled/composted 94 million tons of this material. On average, the per day, per capita MSW generation estimate for the U.S. was 4.90 pounds per person. The per capita rate for recycling was 1.16 pounds per person per day.

In order to determine if the average waste generation rate for the U.S. is applicable for the Region, the published per day, per capita value was compared to the estimated tons per day per capita based 2020 transfer station records. In 2020, a total of 35,281 tons of MSW was disposed at the transfer station. As presented in the population projections in Appendix 2, the population in 2020 was 64,433 persons. Using the formula presented below, the per capita tonnage of MSW (PCT_{MSW}) for the City of Martinsville, Henry County, and the Town of Ridgeway (the Region), is 1.50×10^{-3} tons per day, per capita or 3.00 pounds per day, per capita, as presented in the following calculation.

$$\begin{aligned} PCT_{MSW} &= 35,281 \text{ tons} \times (1 \text{ year}/365 \text{ days}) \times (1/64,433 \text{ persons}) \\ &= 1.500 \times 10^{-3} \text{ tons/day/capita} \\ &= 3.00 \text{ pounds/day/capita} \end{aligned}$$

The City of Martinsville, Henry County, and Town of Ridgeway MSW generation rate is approximately 40 percent less than the published U.S. MSW generation rate value of 4.9 pounds per day per person.

As a result, to be conservative, the 2020 average for Region of 3.00 pounds per day per capita was used to calculate the MSW generation projection for the planning period of 2020 through 2040. To calculate annual and cumulative MSW generation quantities, the per capita rate was then applied to the annual population projections for the Region. Recycling quantities were removed from the per capita rate since they will be calculated for the Region separately.

As presented in Appendix 4, it is estimated that approximately 669,797 tons of residential waste will be generated in the Region in the next 20 years.

2.5.2.2 Industrial Waste

Industrial waste is collected separately in the Region from residential waste, and hauled to the First Piedmont Transfer Station. Since there are no published per capita generation rates for these types of waste, projections were estimated by calculating the per day per capita generation rate based on the 2020 scale house records provided by First Piedmont Corporation. During 2020, approximately 27,417 tons of non-hazardous industrial waste was collected in the Region and disposed at the sanitary transfer station. Using an estimated population in 2020 for the Region of 64,433 persons, the per day per capita tonnage of industrial waste (PCT_{IW}) is 1.166×10^{-3} tons per day per capita or 2.33 pounds per day per capita, as presented in the following calculation.

$$\begin{aligned} PCT_{IW} &= 27,417 \text{ tons} \times (1 \text{ year}/365 \text{ days}) \times (1/64,433 \text{ Persons}) \\ &= 1.166 \times 10^{-3} \text{ tons/day/capita} \\ &= 2.33 \text{ pounds/day/capita} \end{aligned}$$

To calculate the total annual and cumulative non-hazardous industrial waste generation quantities, the PCT_{IW} was then applied to the annual population projections for the Region. Using this method, it is estimated that approximately 520,502 tons of industrial waste will be generated in the Region over the next twenty years. Calculations are presented in Appendix 4.

2.5.2.3 Sludge

The method used to calculate the industrial waste projections was also used to project the amount of sludge generated in the Region. During 2020, approximately 8,929 tons of sludge were hauled in the Region. Using a 2020 population of 64,433 persons, the per day per capita tonnage of sludge (PCT_{SLUDGE}) is 3.797×10^{-4} tons per day per capita or 0.759 pounds per day per capita, as presented in the following calculation.

$$\begin{aligned} PCT_{SLUDGE} &= 8,929 \text{ tons} \times (1 \text{ year}/365 \text{ days}) \times (1/64,433 \text{ persons}) \\ &= 3.797 \times 10^{-4} \text{ tons/day/capita} \\ &= 0.759 \text{ pounds/day/capita} \end{aligned}$$

It is estimated that approximately 169,519 tons of sludge will be generated in the Region in the next twenty years. Calculations are presented in Appendix 4.

2.5.2.4 Recyclable Materials

The recyclable materials projections were estimated using the per capita generation rate calculated from the 2020 population in the Region and the total amount of recyclable materials collected by the City of Martinsville, Henry County, and the Town of Ridgeway. For the purpose of this evaluation, recyclable materials were assumed to include paper, metal, plastic, waste wood, textiles, waste tires, used oil, used oil filters, used antifreeze, batteries, electronics, processed grease, and food waste.

The reported total quantity of recyclables collected in the Region in 2020 was 79,129 tons. Based on the population in 2020 of 64,433 persons, and the formula given below, a per capita tonnage of recyclable materials (PCT_R) for the Region of 4.194×10^{-3} tons per day per capita or 8.39 pounds per day per capita was calculated.

$$\begin{aligned} PCT_R &= 79,129 \text{ tons} \times (1 \text{ year}/365 \text{ days}) \times (1/64,433 \text{ persons}) \\ &= 3.365 \times 10^{-3} \text{ tons/day/capita} \\ &= 6.73 \text{ pounds/day/capita} \end{aligned}$$

To calculate the total recyclable material projections, this PCT_R was then applied to the annual population projections for the Region. Using this method, it is estimated that 1,502,236 tons of recyclable materials will be generated in the Region in the next 20 years. Calculations are presented in Appendix 4.

2.5.2.5 Other Special Wastes

2.5.2.5.1. Mining Wastes

Mining waste is not recorded separately from the commercial and industrial waste tonnages. As a result, mining waste projections cannot be broken out individually and are included in the industrial waste projections presented in Section 2.5.2.2.

2.5.2.5.2. Agricultural Wastes

Agricultural waste is not recorded separately from the industrial waste tonnages. As a result, agricultural waste projections cannot be broken out individually and are included in the industrial waste projections presented in Section 2.5.2.2.

2.5.2.5.3. Spill Residues

Spill residue waste is not recorded separately from the industrial waste tonnages. As a result, spill residue waste projections cannot be broken out individually and are included in the industrial waste projections presented in Section 2.5.2.2.

2.5.2.6 Household Hazardous Waste

Since household hazardous waste (HHW) is exempt from coverage under the hazardous waste regulation, the majority of residents dispose of these materials with the rest of their household garbage. The actual quantities of HHW are typically very small in comparison to general MSW; therefore, the projections of HHW are included in the MSW projections. Henry County, the City of Martinsville work jointly to sponsor Household Hazardous Waste Days during the year. At these events, City and County residents may dispose of such items as paint, motor oil, gas, antifreeze, batteries, computer parts and used cell phones. No business or commercial entities are allowed to participate.

3.0 SOLID WASTE MANAGEMENT SYSTEM

3.1 COLLECTION

3.1.1 Residential Waste and Recycling

Residential waste and recyclables are collected in the Region in three ways: (1) through convenience centers sites located throughout the County, (2) curbside collection programs, or (3) independent contracts with private haulers. A description of the residential collection for the City, County, and Town are presented below.

3.1.1.1 City of Martinsville

The solid waste collection needs for the majority of the residents in the City of Martinsville are handled by a City-run curbside waste collection program. The City collects residential waste once per week for transport to the First Piedmont Transfer Station. Many apartment complexes in the City supply dumpsters for their residents to use. In addition, residents may choose to transport/haul their waste directly to the transfer station, if they so desire. The City also provides bulk trash (such as furniture, refrigerators, and washers) and yard waste pick-up to residents of the City, but require scheduling in advance. Also, an annual bagged leaf collection is provided in the fall.

Residents may drop-off their recyclable materials at the City of Martinsville drop-off center, which is operated by the City. The drop-off center does not have a designated capacity, and will be operated for as long as economically feasible for the City, but at least for the next 20 years, or through the planning period.

3.1.1.2 Henry County

Henry County does not provide curbside residential waste collection services to its residents. Therefore, residents may choose to independently contract with a private contractor or haul their waste directly to the transfer station. In addition, the County provides convenience centers for residents to utilize. These convenience centers do not have set capacities and will be operated for as long as economically feasible for the County, but at least for the next 20 years, or through the planning period.

Henry County also provides recycling of cardboard, plastics, newspaper, and scrap metal at the convenience sites located throughout the County.

3.1.1.3 Town of Ridgeway

The Town of Ridgeway does not provide curbside residential waste collection services to its residents. Therefore, residents may choose to independently contract with a private contractor or haul their waste directly to the transfer station. In addition, residents within the Town may utilize the various green box drop-off collection sites and convenience centers located throughout Henry County.

3.1.2 Commercial Institutions and Industries

Commercial and industrial waste and recyclables are generally collected in two ways: (1) collection programs provided by the local jurisdiction or (2) independent contracts with private haulers such as Waste Management or First Piedmont. No containers are provided by City or County. All of the waste collected from businesses, commercial institutions, and industries within the Region is transported to

the First Piedmont Transfer Station for disposal. Waste delivered to the transfer station by private haulers is assessed a tip fee at the transfer station.

The City of Martinsville provides collection to many of the businesses and institutions throughout the City. The City has different collection routes for each day of the week; thus, the number of times the City picks up at each business varies. Many of the businesses and institutions in the City are provided with collection by City trucks numerous times in one week. Commercial institutions, business, and industries in Henry County and the Town of Ridgeway, as well as those within the City of Martinsville who are not provided waste collection services by the City, must contract individually with a private hauler for waste collection and disposal. However, all of this waste is transported to the First Piedmont Transfer Station where final disposal is determined.

3.2 DISPOSAL

There is currently not an active permitted solid waste landfill located in the Region. The permitted waste disposal capacity for the Martinsville Sanitary Landfill was consumed in 2006. Upon closure, the City of Martinsville contracted with First Piedmont Corporation to operate a transfer station located at the existing landfill site.

The First Piedmont Transfer Station transports all waste that the Martinsville Landfill previously accepted to other permitted facilities. The transfer station is located at 225 Arden Circle in Henry County, Virginia, approximately one mile northeast of the Martinsville City limits. The transfer station is a 16,000 square foot facility. A map indicating the location of this facility is provided in Appendix 5. A list of the solid waste facilities in the Region that have at one time received a permit from the Department of Environmental Quality (DEQ) is provided in Appendix 6.

3.2.1 Municipal Solid Waste

The First Piedmont Transfer Station accepts MSW, CDD, non-hazardous industrial waste that meets all of the requirements of the Virginia Solid Waste Management Regulations (VSWMR), yard waste, recyclables, and many other items. The transfer station does not accept polychlorinated biphenyls (PCBs), regulated medical waste, regulated hazardous waste, radioactive waste, friable asbestos, sewage, flammable liquids/solids, and liquid wastes. Sludge is not accepted at the transfer station but is instead hauled directly to the Pittsylvania County Landfill in Dry Fork, Virginia.

3.2.2 Industrial Waste

There are currently no active industrial waste or CDD landfills permitted in the Region. Thus, industrial waste, CDD and yard waste generated within the Region that is acceptable at the First Piedmont Transfer Station is transported to the First Piedmont landfill in Ringgold, VA. Waste that is not authorized for disposal is sent to a facility outside of the Region, which is permitted to accept those wastes.

3.2.3 Sludge

There are currently no active sludge disposal facilities permitted in the Region and this waste is not accepted at First Piedmont Transfer Station but is hauled and disposed of at the Pittsylvania County Landfill in Dry Fork, Virginia. Waste that is not authorized for disposal is sent to a facility outside of the Region, which is permitted to accept those wastes.

3.3 RECYCLING

As mentioned previously, the City of Martinsville, Henry County, and the Town of Ridgeway provide the collection of recyclables to their residents through convenience center sites located throughout the County, and drop-off sites for recyclables in the City of Martinsville. Recyclables, such as newspaper

and newspaper inserts, paper products, cardboard, metal, plastics, wood waste, waste tires, used oil, used oil filters, used antifreeze, batteries, processed grease, and food waste, are recycled by residents, commercial institutions, businesses, and industries in the Region. The composition of the recyclables collected within the Region in 2020 is presented in Appendix 8.

As shown in Chart 8.1, metal accounts for 85.81 percent of all of the materials recycled in the Region. Paper represent the next highest percentage of the recyclables collected in the Region with approximately 13.19 percent. Plastic, electronics and wood make up the remaining 1.26 percent.

3.4 WASTE TREATMENT

Currently, the City of Martinsville, Henry County, and the Town of Ridgeway do not perform any waste treatment processes. At this time, no waste treatment processes are proposed during the 20-year planning period; however, the City and County will continue to evaluate waste treatment processes throughout the planning period.

3.5 PUBLIC EDUCATION

Information about solid waste management programs and recycling is provided to residents and businesses through local information programs. Each jurisdiction's information program includes news releases and advertisements for both local and regional newspapers. Newsletters, brochures, flyers, and presentations are also used as necessary.

The City of Martinsville utilizes a local television channel to announce the times and dates of recycling collections, as well as what materials are collected for recycling. Henry County and the City of Martinsville organize household hazardous waste collection events, and provides educational materials to local residents of the City and the County regarding proper waste disposal and litter prevention. The Smith River Clean-Up event provides volunteers to collect trash that has accumulated along the banks of Smith River, and is organized by Dan River Basin Association.

The City of Martinsville and Henry County each impose fines to those that are caught littering or illegally disposing waste materials. The City and the County plan to continue these educational and litter prevention programs throughout the planning period. In addition, the City and the County plan to investigate and implement additional litter prevention programs, as economically feasible, throughout the planning period.

3.6 PUBLIC/PRIVATE PARTNERSHIPS

As mentioned in the previous sections, there are many partnerships between the local jurisdictions within the Region and private companies. Many homeowner organizations in the City of Martinsville and Henry County contract with a private hauler to provide curbside collection of residential waste to its members. In addition, many of the businesses and industries in the City, County, and Town contract independently with private haulers, such as Waste Management, Inc. and First Piedmont Corporation to provide waste collection and hauling services to the transfer station.

Henry County contracts with The City of Martinsville regarding their waste disposal. The City of Martinsville contracted with First Piedmont Corporation in 2005 for the operation of a transfer station to handle all Regional waste disposal needs when the Martinsville landfill closed.

The individual jurisdictions may seek and enter into additional public/private partnerships on an as-needed basis in the future to continue to provide cost-effective solid waste management services to their residents.

3.7 SOLID WASTE ARCHIVE

Records and documentation for the First Piedmont Transfer Station, owned and operated by the First Piedmont Corporation, are stored on-site in the main office, and have been submitted to the Director of the DEQ or his/her designee. A record of the waste quantities billed to the City by First Piedmont Transfer Station, and the waste quantities from the drop-off facility owned and operated by the City, are filed at the County's Administration Building. The City submits annual recycling reports, as required.

Records for the closed County solid waste landfills are stored at the office of the Director of Regulatory Compliance and Technical Applications. Finally, records related to the closed El DuPont Incinerator and Landfill are retained by DuPont. The DEQ has been informed of the associated contact and archive location for these facilities, as well as the other facilities presented on the list in Appendix 6, but not mentioned here. Any new solid waste disposal sites will be documented and a copy will be submitted to the Director of the DEQ or his/her designee.

3.8 EVALUATION OF SOLID WASTE COLLECTION SYSTEMS

Each year, the City of Martinsville and Henry County evaluate the cost of providing solid waste collection services to local residents against the funding available through rates/fees. In addition, the City and the County investigate additional recycle and reuse markets. Based on these evaluations, the City and the County determine what solid waste services it can cost-effectively provide to local residents and businesses.

4.0 HIERARCHY

The Virginia Waste Management Board Regulations for Solid Waste Management Planning, Amendment 1, 9 VAC 20-130-10 *et seq.*, require the Plan to develop comprehensive and integrated solid waste management plans that consider, at a minimum, all components of the following hierarchy: (1) source reduction; (2) reuse; (3) recycling; (4) resource recovery (waste-to-energy); (5) incineration; and, (6) landfilling. A general description of each of the components is presented in the sections below. Implementation of each component of the hierarchy is presented in Section 6.0 of the Plan.

4.1 SOURCE REDUCTION

The purpose of source reduction is to reduce the amount of waste generated at the point of generation, or at the source. Source reduction may mean a change in a method of packaging or a change in a process design to eliminate or reduce waste. In most cases, packaging of a product influences the buyer either to purchase or not to purchase the product. As this is the case, controls will need to be placed on packaging from the state or federal level. In order to quantify source reduction, a full-scale regional study would need to be performed, which is beyond the scope of this SWMP update.

4.2 REUSE

Reuse is the use of a solid waste material without processing or changing the material's form, for the same or another end use. Some examples of reusable items are glass soft drink bottles, bricks, and some wood products.

At this time, there are very few markets for reusable waste products. In the majority of cases, a manufacturer uses all new materials when manufacturing a product. Additionally, many waste products are not reusable until cleaned or disinfected. These processes require time and money, which most manufacturers are not willing to expend.

4.3 RECYCLING

Recycling is the process of separating a waste material from the waste stream and processing it so that it is used again as a raw material for another product, which may or may not be similar to the original product. Recycling involves the separation of a waste material from the waste stream, collection, processing, marketing, sale, and utilization as a raw material.

There are several positive aspects to recycling. Recycling removes products from the waste stream resulting in less waste disposed. Less waste disposed reduces transfer station hauling costs. Recycling also removes, in most cases, materials that are non-biodegradable and would not decompose in a landfill, even if they were disposed. Recycling helps in the conservation of natural resources by utilizing materials that have already been processed, rather than using virgin materials. The use of recycled products rather than the use of virgin materials does not generally affect the usability of a manufactured product, but in some case could affect the quality of a manufactured product.

4.4 RESOURCE RECOVERY (WASTE-TO-ENERGY)

A resource recovery system is defined as a solid waste management system that uses solid waste as an input material to create output materials. The goal of resource recovery is to reduce the amount of waste that must be disposed by landfilling. This is often achieved by incineration, which can reduce waste volume by as much as 90% and may include the disposal of non-recoverable waste residues.

Incineration, as a waste management process, is the controlled combustion of solid waste. The end product generated from the combustion of the waste is ash, another waste product, and the primary purpose of incineration is to reduce the quantity of waste to be managed or disposed.

The two major types of resource recovery facilities are (1) the refuse-derived fuel (RDF) facility and (2) the mass burn facility. RDF systems utilize a classification process that separates waste into combustible and non-combustible fractions. The non-combustible material may be collected and sold as inert fill material. The combustible material is processed into pellets or fluff (RDF) and sold or used by the manufacturer as a fuel for combustion. Revenue results from the sale of both the non-combustible material, as well as the RDF itself.

Mass burn facilities typically do not utilize a separation process. All municipal solid waste is fed directly into the incinerator, which burns the waste at a high temperature. The resulting heat may be used to generate steam or electricity. Mass burning of municipal solid waste results in the production of both air emissions and ash. The air emissions are regulated by state and federal agencies, and the ash must be landfilled as waste. This being the case, the locality must still plan for the disposal of a waste product, although the volume of waste to be disposed will be greatly decreased.

4.5 LANDFILL

A landfill facility is permitted to accept waste materials for placement and burial. There are no active solid waste landfills located in the Region, and all waste is transferred to other regions for disposal. Generally, a transfer station is a facility that is permitted to accept waste materials for transport to a permitted landfill, incinerator, recycling center, or other waste disposal facility. Municipal and private trucks collect waste and haul it to a transfer station for temporary deposition. Transfer stations can be equipped with material recovery processes to remove recyclables from the waste stream. When a region does not possess the resources to develop and operate a solid waste landfill, a transfer station is a feasible and economical method of solid waste management.

5.0 OBJECTIVES

The primary objective of this SWMP is to coordinate the efforts of the City of Martinsville, Henry County, and the Town of Ridgeway regarding solid waste management and planning. To accomplish this goal, each jurisdiction should continue to develop and implement budgets and funding strategies, as well as maintain a solid waste archive.

A second objective of this SWMP is to enlist public participation for solid waste management. To accomplish this objective, each jurisdiction should continue to develop education programs to increase public awareness and provide information to residents regarding locations of recyclable collection areas and materials accepted at the areas. In addition, each jurisdiction should continue to promote the importance of recycling to their residents, as well as provide incentives to businesses who participate in the recycling program.

The third and final objective of this SWMP is to maintain regulatory compliance with the Virginia Solid Waste Management Planning Regulations, Virginia Solid Waste Management Regulations, and additional state regulations, federal regulations, and local ordinances. This will be done by consistently providing regular updates and necessary amendments, as required by 9VAC20-130-10 *et seq.*

6.0 PLAN IMPLEMENTATION

A description of how each component of the hierarchy is currently implemented in the Region and a schedule of future component implementation, as applicable, is presented in the sections below. An implementation schedule of activities to be performed by the City, County, and/or the Town during the next 20 years, concentrating on implementing the related hierarchy items, is presented below:

<u>Year(s)</u>	<u>Activity</u>
2005	Contracted with First Piedmont Corporation to construct the transfer station at the landfill site.
2005 – 2007	Identified methods to increase reuse and recycling of collected materials. Investigated local markets for recyclable materials.
2006 – 2007	Closed the City of Martinsville Landfill and update the SWMP.
2011	Submit SWMP 5-Year Update Plan.
2011 – 2030	Evaluate emerging technologies designed to promote source reduction, reuse, and recycling.
2016	Submit SWMP 5-Year Update Plan.
2016 – 2035	Continue evaluating emerging technologies designed to promote source reduction, reuse, and recycling.
2021	Submit SWMP 5-Year Update Plan

6.1 SOURCE REDUCTION

As mentioned previously, at this time, it is not believed that viable source reduction can occur on a local level; thus, there is currently no active plan to implement source reduction programs in this SWMP.

During the planning period, the City of Martinsville, Henry County, and the Town of Ridgeway will identify and evaluate regional or local programs that utilize and encourage practices that minimize waste generation. The City and the County will also promote to consumers the benefits of purchasing items in bulk and with less packaging. Through the public awareness program, the City and the County will achieve source reduction at the consumer level. Further investigation is needed to fully understand and quantify source reduction programs that are occurring within the Region at the local businesses and industries.

6.2 REUSE

Currently, there are few markets for reusable waste products within the Region. As mentioned previously, most industrial facilities in the Region use new materials when manufacturing a product. Additionally, many waste products are not reusable until cleaned or disinfected, which require time and money, which most manufacturers are not willing to expend. However, the City is currently reusing wood waste, milled asphalt, and used motor oil.

Reuse typically occurs on an industrial level and cannot be controlled at this time by the local jurisdictions within the Region. During the planning period, the City of Martinsville, Henry County, and the Town of Ridgeway will identify and evaluate regional or local programs that utilize and encourage practices that reuse materials. The City and the County provide educational programs and materials to the residents, businesses, and industries that promote the benefits of reusing materials, through direct donations between user and re-user and/or packaging.

6.3 RECYCLING

To determine the existing level of recycling that is occurring in the Region, the adjusted recycling rate for 2020 was calculated. From this, the need for additional recycling programs can be determined and implemented, as necessary. The recycling rate is defined as the sum of the quantity of Principal Recyclable Material (PRM) and Total Number of Credits (Recycling Residue, Solid Waste Reused, Non=MSW Recycled) divided by the sum of the quantity of PRM recycled, credits granted, and total MSW disposed, multiplied by 100, as shown in the following equation:

$$\frac{\text{Total PRM} + \text{Total Credits}}{\text{Total PRM} + \text{Total Credits} + \text{Total MSW Disposed}} \times 100$$

A sample of the Locality Recycling Rate Report Form that each jurisdiction is required to complete and submit to the DEQ is provided in Appendix 7. Using the information collected by each jurisdiction within the Region, the parameters in the recycling rate equation are as follows:

Total PRM Recycled = 79,129 tons
Total Credits (Solid Waste Reused) = 0
Total MSW Disposed = 35,281 tons

Using these values, the above calculation yields an adjusted recycling rate of 69.2 percent.

This recycling rate exceeds the minimum recycling rate of 25 percent required by the Virginia Regulations for the Development of Solid Waste Management Plans. Supporting calculations are provided in Appendix 8. The average recycling rate for Virginia for 2020 was 45.5%.

The City of Martinsville, Henry County, and the Town of Ridgeway plan to continue to successfully achieve and maintain a countywide recycle rate of at least 25 percent. To do this, the City, County, and the Town will continue to evaluate the need for additional services or methods that will help to increase the recycling rate. An implementation schedule of activities to be performed by the City, the County, and/or the Town during the next 20 years is presented in Section 6.0.

Currently, the City is operating a drop-off collection site for recyclables, and the County is operating several convenience centers for residents to deliver their recyclables, such as paper, metals, plastic, used tires, used oil, and used anti-freeze. The City and the County will continue to provide these services, and investigate adding additional services when economically feasible. In addition, the City will also investigate expanding their recycling services to items such as electronics and textiles. Currently, the markets in the region do not allow these materials to be recycled cost-effectively.

In addition, the City of Martinsville and Henry County will continue to encourage businesses to actively recycle. Currently, businesses are requested to provide solid waste generation and recycling levels every year. Businesses will be educated on what materials can be reused and/or recycled; more efficient use of paper; or using recyclable paper rather than new paper. The City and the County will investigate providing incentives to businesses that are actively participating in the recycling program. Educating students in the Martinsville City Public School system and the Henry County Public School system, starting as early as kindergarten and continuing through high school levels, is also an effective way of informing future adults of proper solid waste management, as well as informing parents and the community. Students often become the biggest advocates of recycling, ensuring that recycling is occurring in the schools as well as in their homes. Therefore, the City and the County will investigate expanding their existing educational program into the school system, thereby increasing student awareness and involvement in the recycling program.

For recycling to be completely successful, participation must be obtained from governments, businesses, and residents, such that recycling is a part of people's daily routine. On-going educational programs and publications are vital to obtain a countywide recycle rate greater than the state mandated rate of 25 percent. The City and the County should provide every effort to adequately educate the public about recycling programs, make these programs conveniently available, and consider incentives that promote source reduction, reuse, and recycling. Since many find it easier to dispose of their waste rather than recycle, residents must be directly encouraged in a positive way to participate or be provided with incentives to do so.

6.4 RESOURCE RECOVERY (WASTE-TO-ENERGY)

Currently, a waste-to-energy or incineration facility is not economically feasible for the Region due to the high capital cost and the low volume of waste. The City of Martinsville, Henry County, and the Town of Ridgeway may investigate participating in a waste-to-energy or incineration facility, if so desired in the future.

6.5 LANDFILL

As a result of costs and the amount of waste generated in the Region, other than recycling, landfilling is not the most feasible of the solid waste disposal alternatives available to the Region; thus, it has not been selected as the primary component of the hierarchy to provide solid waste management for the Region.

As mentioned previously, the Martinsville Sanitary Landfill was closed in 2006 once the permitted capacity was consumed. Now that the landfill is closed, the City of Martinsville and Henry County have contracted with First Piedmont Corporation to operate a transfer station located at the existing landfill site. FPC utilizes two landfill sites for ultimate disposal of most of the waste collected within the Region.

FPC's Industrial landfill operates under the Virginia Department of Environmental Quality (DEQ) Permit #65 and encompasses approximately 250 acres. At the end of 2021, the remaining capacity for the facility was approximately 3,956,785 tons. Based on the current waste acceptance rate, the anticipated life of the facility is 19 years. The remaining capacity is sufficient to manage waste during this update period and will be evaluated further during the 2026 SWMP update. Currently, the landfill's regular operating hours are 7:00 am to 4:15 pm Monday through Friday, and from 7:00 am to 11:45 am on Saturday. The landfill is closed on Sundays and on New Year's Day, Thanksgiving Day, and Christmas Day.

The UPL facility operates under the North Carolina Department of Environmental Quality (NCDNR) Permit Number 73-04. The gross capacity of the facility is approximately 8.5 million cubic yards. The annual capacity is approximately 240,900 tons per year and the anticipated life of the facility is 25 years (at its current rate of waste acceptance). The landfill's regular operating hours are 8:00 am to 5:00 pm Monday through Friday, and from 8:00 am to 12:00 pm on Saturday. The landfill is closed on Sundays and on the New Year's Day, Thanksgiving Day, and Christmas Day

7.0 FUNDING AND CONSTRUCTION SCHEDULES

7.1 FUNDING

As presented in Section 3.0 of this Plan, each jurisdiction within the Region possesses its own mechanisms to provide waste services to their residents and businesses. Residents and businesses within the City of Martinsville are assessed a fee for their waste collection services, and are directly billed by the City. Henry County funds its solid waste management services through general tax funds. Services that are provided to residents, businesses, or industries by private haulers are direct billed by those private contractors.

The closed Martinsville Landfill facility is required by DEQ to maintain adequate funds to ensure post-closure care of the landfill. In 2020, it was estimated that approximately \$3.3 million is required for post-closure care. Post-closure care costs include landfill gas monitoring, groundwater monitoring, leachate management (if necessary), routine maintenance and mowing, and vector control.

7.2 CONSTRUCTION SCHEDULES

No construction is anticipated in the next 5 years.

8.0 PUBLIC PARTICIPATION

8.1 PUBLIC/PRIVATE PARTNERSHIPS

As mentioned in Section 3.5 of this Plan, there are many public and private partnerships in the Region concerning solid waste management. It is anticipated that these partnerships will continue throughout the planning period, as necessary, to provide cost-effective services to the residents of each jurisdiction.

Commercial and business establishments are required by the Region to submit information on waste generated and recycled. With this information, generation quantities and waste types can be more accurately determined. In addition, potential expansions in solid waste services provided to businesses and industries within the Region can be investigated.

8.2 PUBLIC HEARINGS

Public hearings are scheduled to be held by the City of Martinsville and Henry County in accordance with the public participation requirements outlined in 9VAC20-130-130. A copy of the notices published in the local and regional newspapers and the minutes of the public hearings are provided in Appendix 9.

Copies of the Solid Waste Management Plan will be posted at various locations in the City of Martinsville and Henry County for public review prior to the public hearings.

9.0 CONCLUSION

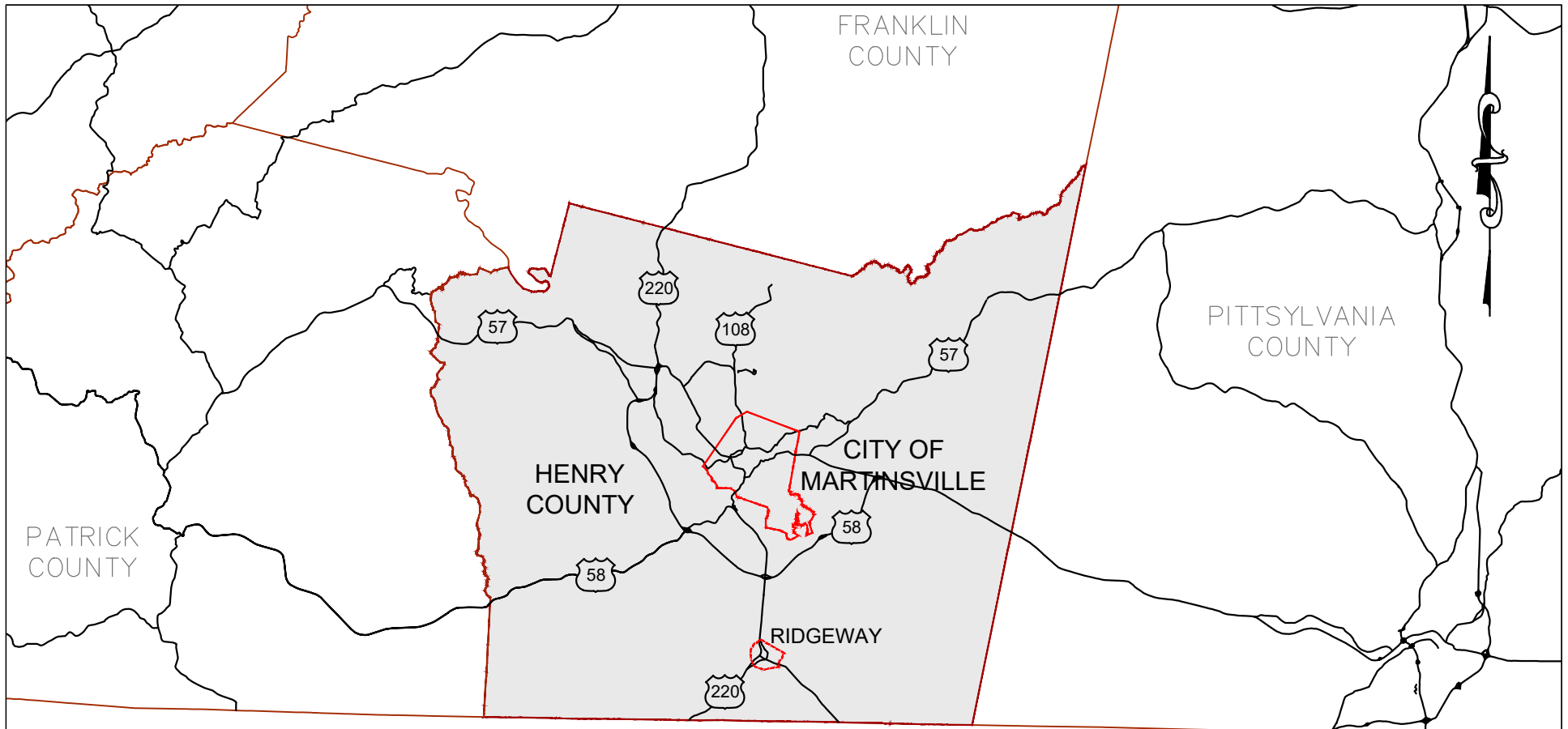
The purpose of this Plan is to provide the City of Martinsville, Henry County, and the Town of Ridgeway with goals for the long-term management of solid waste. For the Plan to succeed, the full participation of all of the residents, businesses, and industries of the Region must be acquired.

Based on the information provided by the Region, recyclables account more than 50% of the materials generated and handled within the Region, resulting in a 69.2 percent adjusted recycling rate being achieved by the residents and businesses in the Region. This exceeds the regulatory minimum rate of 25 percent. To maintain this recycling rate and regulatory compliance, each jurisdiction should continue to promote recycling and investigate providing incentives to businesses that actively participate in the recycling program.

In addition, the Region should continue to evaluate alternatives to landfilling whenever feasible and implement available alternatives when it is economically beneficial to the Region. Finally, the Plan should be updated, as necessary, to maintain regulatory compliance and consistency with the actual services and needs of the Region.

APPENDIX 1

Regional Map



NORTH CAROLINA

GRAPHIC SCALE



(MILES)

NOTE:
BASE MAP INFORMATION PROVIDED BY VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT).



400 S. TRYON STREET
CHARLOTTE, NC 28285
PHONE: (704) 376-6423
NC LICENSE # C-0430
labellapc.com © 2022 LaBella Associates

DRAWING NAME:

SOLID WASTE MANAGEMENT PLAN REGIONAL MAP

PROJECT NAME:

CITY OF MARTINSVILLE AND HENRY COUNTY
HENRY COUNTY, NORTH CAROLINA

ISSUED FOR:

REVIEW

DRAWN BY:

RWH

DATE:

01/14/22

PROJECT NO.:

2212773.01

DRAWING NUMBER:

1

APPENDIX 2

Population Projections

(2020- 2040)

[illegible]

*Population projections for Henry County include the Town of Ridgeway.

APPENDIX 3

Annual Waste Summary Report

City of Martinsville Solid Waste Management Plan 5-Yr Update

TABLE I
TOTAL WASTE STREAM BY GEOGRAPHIC AREA
JANUARY, 2020 - DECEMBER, 2020

Type of Waste	<u>CITY (tons)¹</u>	<u>% of City Waste</u>	<u>COUNTY (tons)²</u>	<u>% of County Waste</u>	<u>TOTAL (tons)³</u>	<u>% of WASTE</u>
Residential & Commercial MSW	8,224	38.37%	27,057	20.92%	35,281	23.40%
Industrial, CDD & Yard	3,064	14.30%	24,353	18.83%	27,417	18.19%
Sludge	8,929	41.66%	0	0.00%	8,929	5.92%
Recyclables	1217	5.68%	77,913	60.25%	79,129	52.49%
TOTALS	21,434		129,322		150,756	
% of total tons	14%		86%			
Avg. Tons/Day (City and County)	481.6					

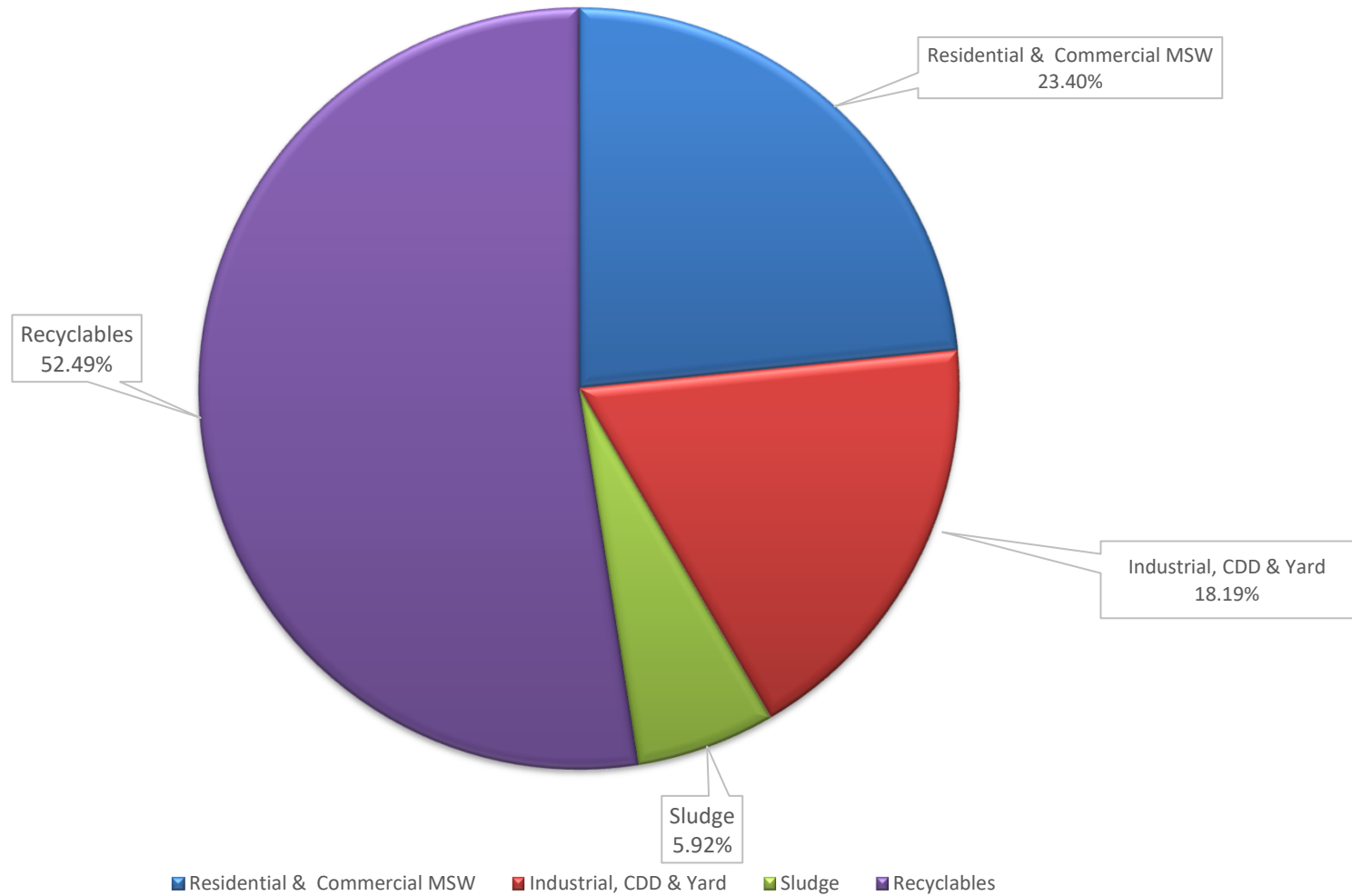
Notes:

¹. Includes waste tonnage of the City of Martinsville only.

². Waste tonnages of the County do not include tonnages of the City, only the surrounding areas which includes the Town of Ridgeway.

³. Total tonnage consists of combined tonnages from the City and County.

Chart 3.1: Waste Percentages of the Region



APPENDIX 4

Solid Waste Projections

**MUNICIPAL SOLID WASTE GENERATION PROJECTIONS FOR THE CITY OF MARTINSVILLE,
HENRY COUNTY, AND THE TOWN OF RIDGEWAY**

Given:

Total MSW Disposed in 2020 (tons) = 35,281
 Total Population in 2020 (persons) = 64,433
 Tons MSW/person/day = 1.50E-03
 Pounds MSW/person/day = 3.00

Year	Total Regional Population	Tons MSW/day	Annual MSW Needs (Tons)	Cumulative MSW Needs (Tons)
2020	64,433	97	35,281	35,281
2021	63,794	96	34,931	70,212
2022	63,161	95	34,585	104,797
2023	62,535	94	34,242	139,038
2024	61,916	93	33,903	172,941
2025	61,304	92	33,568	206,509
2026	60,698	91	33,236	239,745
2027	60,098	90	32,907	272,652
2028	59,505	89	32,583	305,235
2029	58,918	88	32,261	337,496
2030	58,337	88	31,943	369,439
2031	57,682	87	31,584	401,023
2032	57,034	86	31,230	432,253
2033	56,394	85	30,879	463,132
2034	55,761	84	30,533	493,665
2035	55,135	83	30,190	523,854
2036	54,516	82	29,851	553,705
2037	53,904	81	29,516	583,221
2038	53,300	80	29,185	612,406
2039	52,702	79	28,858	641,264
2040	52,111	78	28,534	669,797

**INDUSTRIAL WASTE GENERATION PROJECTIONS FOR THE CITY OF MARTINSVILLE,
HENRY COUNTY, AND THE TOWN OF RIDGEWAY**

Given:

Total Industrial Waste (IW) Disposed in 2020 (tons) =	27,417
Total Population in 2020 (persons) =	64,433
Tons Industrial Waste/person/day =	1.17E-03
Pounds Industrial Waste/person/day =	2.33

Year	Total Regional Population	Tons IW/day	Annual IW Needs (Tons)	Cumulative IW Needs (Tons)
2020	64,433	75	27,417	27,417
2021	63,794	74	27,145	54,562
2022	63,161	74	26,876	81,438
2023	62,535	73	26,609	108,047
2024	61,916	72	26,346	134,393
2025	61,304	71	26,086	160,479
2026	60,698	71	25,828	186,306
2027	60,098	70	25,572	211,879
2028	59,505	69	25,320	237,199
2029	58,918	69	25,070	262,269
2030	58,337	68	24,823	287,092
2031	57,682	67	24,544	311,637
2032	57,034	66	24,269	335,905
2033	56,394	66	23,996	359,902
2034	55,761	65	23,727	383,629
2035	55,135	64	23,461	407,089
2036	54,516	64	23,197	430,286
2037	53,904	63	22,937	453,223
2038	53,300	62	22,680	475,903
2039	52,702	61	22,425	498,328
2040	52,111	61	22,174	520,502

**SLUDGE GENERATION PROJECTIONS FOR THE CITY OF MARTINSVILLE,
HENRY COUNTY, AND THE TOWN OF RIDGEWAY**

Given:

Total Sludge Disposed in 2020 (tons) = 8,929
 Total Population in 2020 (persons) = 64,433
 Tons Sludge/person/day = 3.80E-04
 Pounds Sludge/person/day = 0.759

Year	Total Regional Population	Tons Sludge/day	Annual Sludge Needs (Tons)	Cumulative Sludge Needs (Tons)
2020	64,433	24	8,929	8,929
2021	63,794	24	8,841	17,770
2022	63,161	24	8,753	26,523
2023	62,535	24	8,666	35,189
2024	61,916	24	8,580	43,770
2025	61,304	23	8,496	52,265
2026	60,698	23	8,412	60,677
2027	60,098	23	8,329	69,006
2028	59,505	23	8,246	77,252
2029	58,918	22	8,165	85,417
2030	58,337	22	8,084	93,501
2031	57,682	22	7,994	101,495
2032	57,034	22	7,904	109,399
2033	56,394	21	7,815	117,214
2034	55,761	21	7,727	124,942
2035	55,135	21	7,641	132,582
2036	54,516	21	7,555	140,137
2037	53,904	20	7,470	147,607
2038	53,300	20	7,386	154,994
2039	52,702	20	7,304	162,297
2040	52,111	20	7,222	169,519

**RECYCLABLE MATERIALS GENERATION PROJECTIONS FOR THE CITY OF MARTINSVILLE,
HENRY COUNTY, AND THE TOWN OF RIDGEWAY**

Given:

Total Recycled in 2020 (tons) = 79,129
 Total Population in 2020 (persons) = 64,433
 Tons Recyclables/person/day = 3.36E-03
 Pounds Recyclables/person/day = 6.73

Year	Total Regional Population	Tons Recyclables/day	Annual Recyclable Needs (Tons)	Cumulative Recyclable Needs (Tons)
2020	64,433	217	79,129	79,129
2021	63,794	215	78,344	157,473
2022	63,161	213	77,567	235,040
2023	62,535	210	76,798	311,838
2024	61,916	208	76,038	387,876
2025	61,304	206	75,286	463,162
2026	60,698	204	74,542	537,705
2027	60,098	202	73,805	611,510
2028	59,505	200	73,077	684,587
2029	58,918	198	72,356	756,943
2030	58,337	196	71,643	828,586
2031	57,682	194	70,838	899,424
2032	57,034	192	70,042	969,466
2033	56,394	190	69,256	1,038,723
2034	55,761	188	68,479	1,107,202
2035	55,135	186	67,710	1,174,912
2036	54,516	183	66,950	1,241,862
2037	53,904	181	66,199	1,308,061
2038	53,300	179	65,457	1,373,517
2039	52,702	177	64,722	1,438,240
2040	52,111	175	63,997	1,502,236

**TOTAL SOLID WASTE GENERATION PROJECTIONS FOR THE CITY OF MARTINSVILLE,
HENRY COUNTY, AND THE TOWN OF RIDGEWAY**

Year	Annual Disposal Needs Less Recycling (Tons)	Cumulative Disposal Needs Less Recycling (Tons)	Cumulative Disposal Needs With Recycling (Tons)
2020	71,627	71,627	150,756
2021	70,917	142,544	300,017
2022	70,213	212,757	447,798
2023	69,517	282,275	594,113
2024	68,829	351,104	738,980
2025	68,149	419,253	882,415
2026	67,475	486,728	1,024,433
2027	66,808	553,536	1,165,046
2028	66,149	619,685	1,304,272
2029	65,496	685,182	1,442,125
2030	64,851	750,033	1,578,618
2031	64,122	814,155	1,713,579
2032	63,402	877,557	1,847,023
2033	62,691	940,248	1,978,971
2034	61,987	1,002,235	2,109,437
2035	61,291	1,063,526	2,238,438
2036	60,603	1,124,129	2,365,991
2037	59,923	1,184,052	2,492,112
2038	59,251	1,243,303	2,616,820
2039	58,586	1,301,889	2,740,129
2040	57,929	1,359,819	2,862,055

APPENDIX 5

Map of Active Waste Facilities in the Region

APPENDIX 6

List of All Solid Waste Facilities in the Region

SOLID WASTE FACILITIES IN THE CITY OF MARTINSVILLE, HENRY COUNTY, AND THE TOWN OF RIDGEWAY

<u>Facility Name</u>	<u>Permit Number</u>	<u>Type of Facility</u>	<u>Status</u>	<u>County/City</u>	<u>Year Permitted</u>	<u>Mail Address</u>	<u>Telephone</u>
El DuPont Incinerator	007	Incineration/Energy	Closed	Henry	1971	El DuPont, Martinsville, VA 24112	276-666-5000
El DuPont Landfill	008	Industrial	Closed	Henry	1971	El DuPont, Martinsville, VA 24112	276-666-5000
Henry County Sanitary Landfill	003	Sanitary	Closed	Henry	1971	Henry County, Collinsville, VA 24078	276-634-2540
Henry County Sanitary Landfill	320	Sanitary	Closed	Henry	1981	Henry County, Collinsville, VA 24088	276-634-2540
Patrick Henry Correctional Unit #28	PBR281	RMW (S)	Unknown	Henry	–	18155 AL Philpott Highway, Spencer, Va 24165	276-957-2234
Martinsville Sanitary Landfill	049	Sanitary	Closed	Martinsville	1972	City of Martinsville, Martinsville, VA 24114	276-403-5154
First Piedmont Corporation - Martinsville Transfer Station	PBR520	Transfer Station	Active	Martinsville	2005	P.O. Drawer 1069, Chatham, VA 24531	434-432-0211
Memorial Hospital of Martinsville and Henry County	PBR130	RMW (I)	Closed	Henry	1998	Memorial Hospital of Martinsville and Henry County, P.O. Box 4788, Martinsville, VA 24115	276-666-7200
Memorial Hospital of Martinsville and Henry County	PBR297	RMW (I&S)	Unknown	Martinsville	–	Memorial Hospital of Martinsville and Henry County, P.O. Box 4788, Martinsville, VA 24115	276-666-7200

Legend:

Incineration/Energy = Incineration/Energy Recovery Facility

Industrial = Industrial Landfill

RMW (I) = Regulated Medical Waste Incineration

RMW (I&S) = Regulated Medical Waste Incineration & Steam Sterilization

RMW (S) = Regulated Medical Waste Steam Sterilization

Sanitary = Sanitary Landfill

APPENDIX 7

Locality Recycling Rate Report Form

County of Henry

P.O. BOX 7
KINGS MOUNTAIN ROAD
COLLINSVILLE, VIRGINIA 24078-0007
www.henrycountyva.gov



Board of Supervisors

JIM ADAMS
CHAIRMAN
Blackberry District

RYAN ZEHR
Ridgeway District

T.J. "TOMMY" SLAUGHTER
Reed Creek District

Telephone (276) 634-4801

TIM HALL
County Administrator

DALE WAGONER
Deputy County Administrator

Board of Supervisors

DEBRA PARSONS BUCHANAN
VICE-CHAIRMAN
Horsepasture District

JOSEPH A. BRYANT
Collinsville District

J. DAVID MARTIN
Iriswood District

Fax (276) 634-4781

August 31, 2020

Jeff Gauldin
Martinsville City
PO Box 1112
Martinsville, VA 24114

Company Contact Person: Edward Gauldin Phone No. 276-403-5159

On behalf of Henry County Solid Waste Department and the Department Environmental Quality (DEQ), we are required by DEQ to have a mandated recycling report completed every 4 years. This report should show that we are recycling at least 25% of our waste stream. This also includes the City of Martinsville and Town of Ridgeway.

Without the help of the local businesses we cannot reach this goal. I want to thank you in advance for all the help you have given us over the years. I hope you will continue to help us again this year.

Enclosed with this letter, is a report for your company to fill in either in tons, lbs., gallons of the items that you recycle. Please circle the correct response and list the amount.

**PLEASE BE SURE THAT YOU ARE INDICATING IF YOU ARE REPORTING
IN TONS OR POUNDS.**

**This will be for the year 2020 only. I need to have this back to my office by
February 1, 2021.**

White Paper Tons/Lbs. 75 tons

Cardboard Tons/Lbs. 104.5 tons

Plastics Tons/Lbs. 43.5 tons

Metal Tons/Lbs. 1.5 Tons

Newspaper Tons/Lbs. 20 Tons

Aluminum Tons/Lbs. 700lbs

Mulch Tons/Lbs. 50 tons Asphalt Tons/Lbs. 20 Tons
Tin Cans Tons/Lbs. _____ Medical Supplies Tons/Lbs. _____
Paints Gallons. _____ Tires Tons/Lbs. _____
Motor Oil Gallons 35,000 Antifreeze Gallons 10,000
Electronics Tons/Lbs. 29 tons Cars Tons/Lbs. _____
Other items _____ Tons/Lbs./Gallons _____

Sincerely,

Michael S. Amos
Solid Waste Department Director
Phone (276) 634-2503
Fax (276) 634-2513



Commonwealth of Virginia
Locality Recycling Rate Report
 DEQ Form 50-30 (Revised September 2018)

REVISED

Date Submitted 4/19/21

Calendar Year CY2020

Solid Waste Planning Unit Henry County-Martinsville (City)
 Click on the adjacent cell for drop down menu

SWPU Web Page <https://henrycountyva.gov>

Contact 1

Contact 2

Name	Adam Roop		Tracy McKoy
Title	Refuse Manager		Beautification Coordinator
Address Line 1	PO Box 7		PO Box 7
Address Line 2	Collinsville, VA 24078		Collinsville, VA 24078
Address Line 3			
Phone Number	276-634-2503		276-634-4674
Email address	aroop@co.henry.va.us		tmckoy@co.henry.va.us
Total Population for SWPU	63,409	SWPU Population Density	160
Mandated Recycling Rate (% will auto calculate)	25%	Reporting Frequency (Will auto calculate)	Every 4 years
Sources for PRM Data <i>Example: Permit #112, County Landfill</i>	Henry County, Martinsville City, Transfer Station, First Piedmont, Waste Management		
Other Sources for collected data <i>Example: Walmart/Target</i>	Furniture Industry, Retail, and Manufacturing industry		
Comments:	MSW Disposed 35,281 includes Household and Commercial waste		

Enter tons (whole numbers only) in the yellow highlighted boxes for PRMs and MSW Disposed.Totals will auto calculate.

Principal Recyclable Materials (PRM)	
PRM Material	Tons recycled
Paper	10,441
Metal	67,900
Plastic	728
Glass	
Commingled	
Yard Waste	
Waste Wood	25
Textiles	
Waste Tires	
Used Oil	2
Used Oil Filters	
Used Antifreeze	
Batteries	0
Electronics	33
Inoperative Motor Vehicles	
Other Total (Specify Material and tonnage on Rows 24 - 39 to the right.)	0
Total PRM in Tons	79,129

MSW Disposed	
Household Waste	35,281
Commercial Waste	
Institutional Waste	
Other	
Total MSW	35,281

Specify Other PRMs for Row 39	
PRM Material	Tons recycled
Other Total	0

Credit for Source Reduction Program	
SRP does not apply enter "0". SRP does apply enter "2"	
0%	

Enter facility information and material in columns A and B. Enter tons (whole numbers only) in the yellow highlighted boxes. Totals will auto calculate.

Credits Recycling Residue		
Facility/Operation	Material	Tons
Total		0

Credits Solid Waste Reused		
Reuse Method	Material	Tons
Total		0

Credits Non-MSW recycled		
Recycling Method	Material	Tons
Total		0
CREDITS TOTAL		0

Recycling rates auto calculate.

Base Recycling Rate	69.2%
Adjusted Recycling Rate	69.2%
Adjusted Recycling Rate + SRP	69.2%
Credit Max Allowed Base +5	74.2%
Final Cycle Rate	69.2%

APPENDIX 8

Recycling Rate Estimates

**RECYCLING RATE ESTIMATES
FOR THE
CITY OF MARTINSVILLE, HENRY COUNTY, AND THE TOWN OF RIDGEWAY**

Principal Recycle Materials (PRM)

<u>Item</u>	<u>Quantity (Tons)</u>	<u>% of Total</u>
Paper	10,441.00	13.19%
Used Oil	2.00	0.00%
Plastic	728.00	0.92%
Electronics	33.00	0.04%
Wood	25.00	0.03%
Used Antifreeze	0.00	0.00%
Metal	67,900.00	85.81%
Other	0.00	0.00%
Total PRM	79,129	

Total Municipal Solid Waste (MSW) Disposed 35,281

Total Credits 0

Required Recycling Rate 25%

Base Recycling Rate * **69.2%**

Adjusted Recycling Rate** **69.2%**

*Base Recycling Rate = Total PRM / (Total PRM + Total MSW Disposed)

** Recycle Rate = (Total PRM+Credit)/(Total PRM + Total MSW Disposed + Credit)

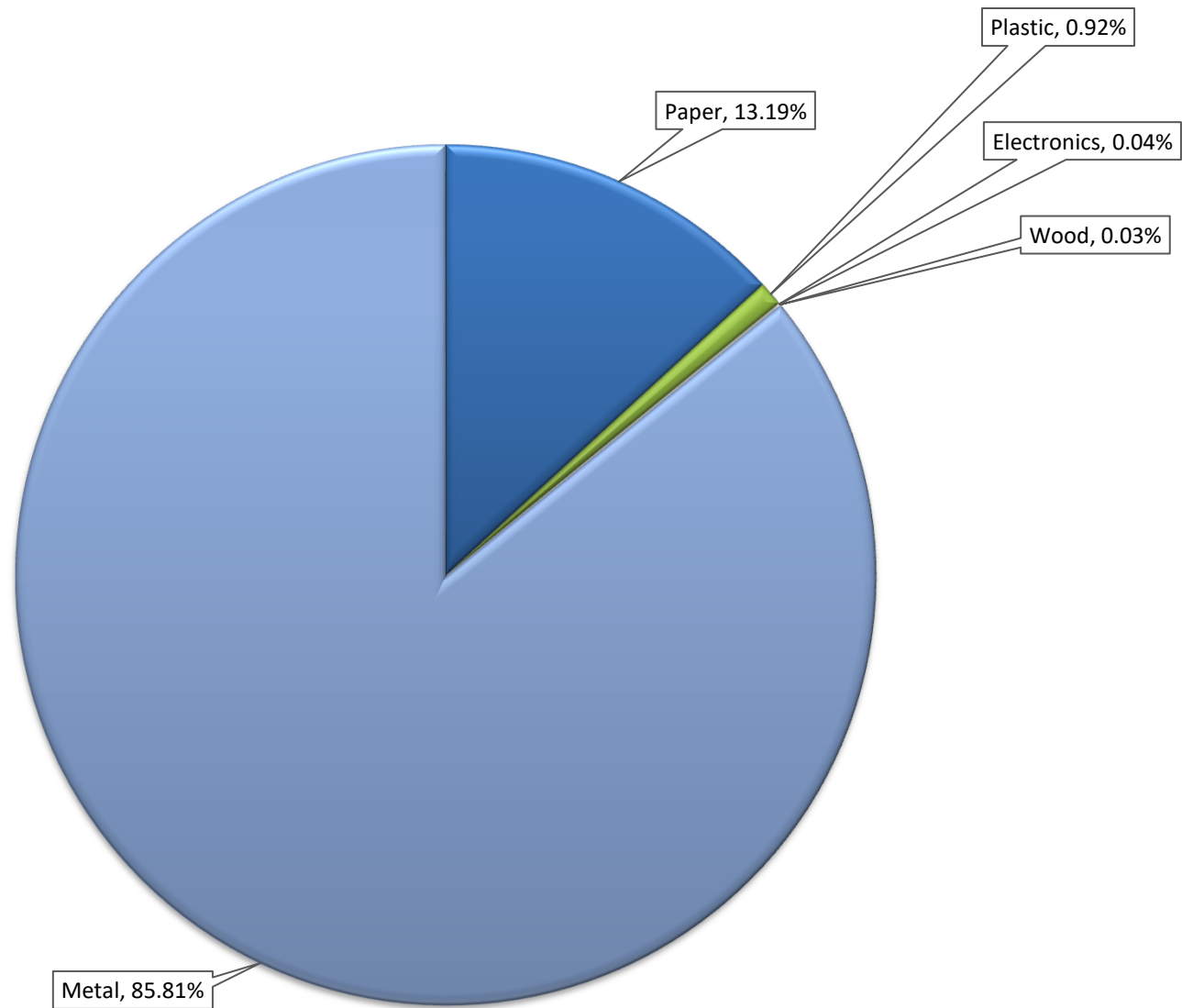


Chart 8.1: Recyclable Items

APPENDIX 9

Public Hearing and Board/Council Documents

