
Greater Rockingham Solid Waste Management Plan

Update 2015 - 2035

Prepared for submittal to the
Virginia Department of
Environmental Quality

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CHAPTER 1

INTRODUCTION

SUMMARY

Solid Waste Planning Regulations, 9 VAC 20-130-10 et seq., effective August 1, 2001, require each region in Virginia as well as each city, county and town not part of such a region to develop comprehensive and integrated solid waste management plans that, at a minimum, consider and address all components of the following hierarchy:

1. Source Reduction
2. Reuse
3. Recycling
4. Resource Recovery
5. Incineration
6. Landfilling

The purpose of the solid waste management plan is to establish minimum solid waste management standards and planning requirements for protection of the public health, public safety, the environment, and natural resources locally and regionally throughout the Commonwealth of Virginia.

These regulations require that each planning region maintain a current update of their plan. This update is required every 5 years. This report serves as the update of the Greater Rockingham Solid Waste Management Plan completed in October, 2010.

PLAN GOALS

The plan should meet the following goals:

1. Identify the solid waste management needs and objectives of the region for the next 20 years while seeking to protect the public health, public safety, environment, and natural resources of the region with the most effective and efficient use of available resources.
2. Produce an implementation and funding strategy to meet the needs and objectives identified in the plan.
3. Continue to develop the region's integrated waste management strategy, which includes source reduction, reuse, recycling, waste-to-energy, and landfill disposal.
4. Ensure that the region maintains or exceeds the minimum 15% recycling rate.
5. Provide a strategy to sustain or improve public education and information on source reduction, reuse, and recycling.
6. Consider public and private sector partnerships in the improvement of solid

waste management.

7. Ensure the documentation of all known closed, inactive, and active solid waste disposal sites.
8. Ensure continued monitoring and recording of the amount and type of solid waste produced annually within the region.

CHAPTER 2

AREA DATA, WASTE QUANTITIES, & PROJECTIONS

DESCRIPTION OF PLAN AREA

Geography

The Rockingham County-Harrisonburg area lies primarily within the Valley and Ridge Physiographic Province, which is characterized by gently rolling and hilly valleys, as well as gradual mountain slopes. The eastern edge of the County is within the Blue Ridge Physiographic Province, which is distinguished by sharp mountain peaks. The Massanutten ridge splits the wide valley and provides a dramatic backdrop to much of the County. The highest elevation in the County is 4,381 feet at Flagpole Knob on the western edge of the County in the Allegheny Mountains. By contrast, elevations in the valley range from 900 feet near the Page County line adjacent to the South Fork of the Shenandoah River, to approximately 1,500 feet (**Map 1**).

Soils in the valley range from carbonate and shale soils to alluvial soils along the rivers and streams. Colluvial soils derived from the weathering of sandstone and shale are found in the foothills paralleling the valley. The mountain areas are covered with shallow, rocky, excessively drained soils. The predominant geology underlying the Rockingham County-Harrisonburg area is a complex formation of limestone, calcareous shale, and dolomite, with smaller amounts of sandstone and conglomerate also present (**Map 2**).

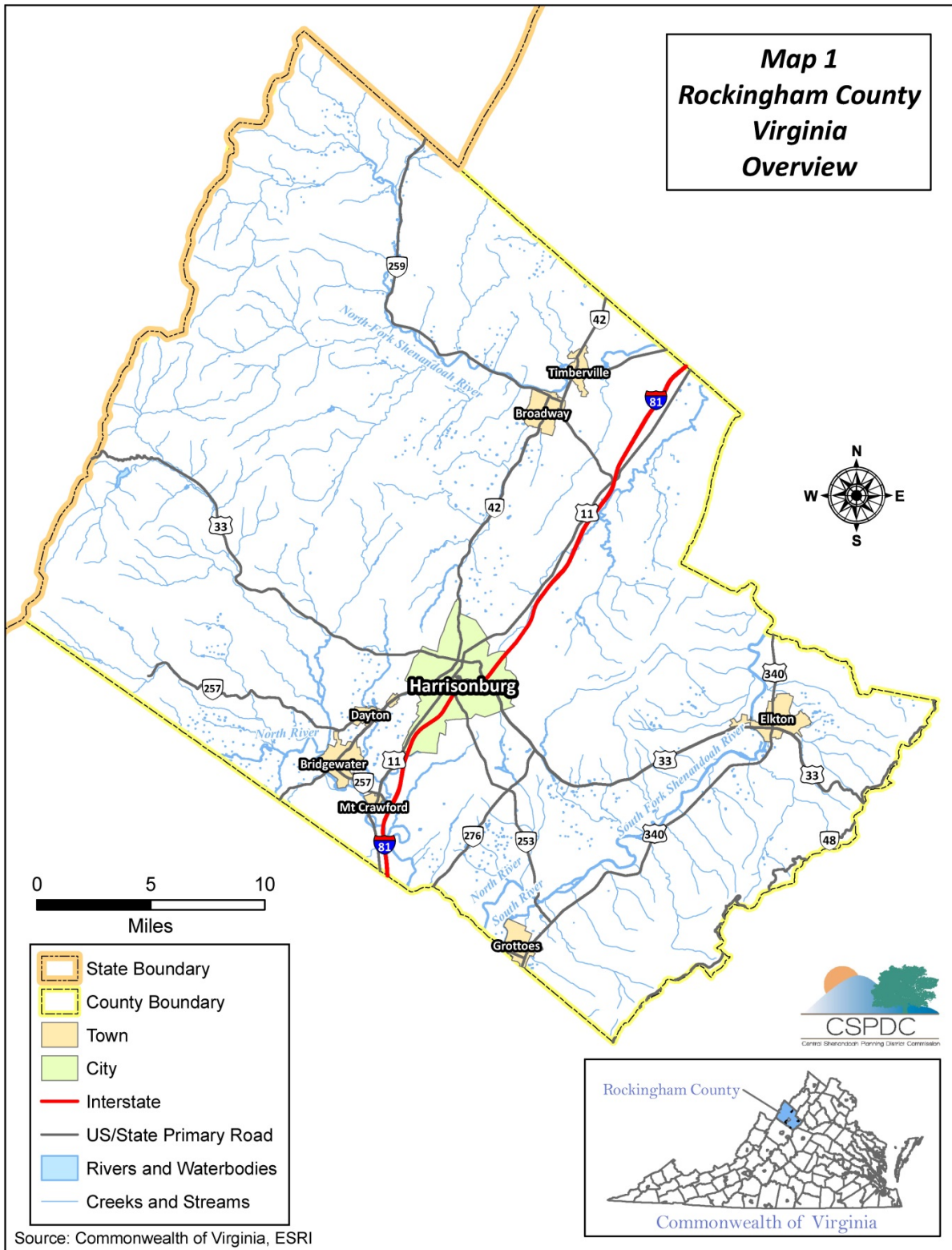
Economy

The work force in the Rockingham County-Harrisonburg Area is composed of persons working in many different sectors. While agriculture has long been the backbone of the Rockingham County economy, more and more people are engaged in nonagricultural employment. Manufacturing is a very important part of the Rockingham County-Harrisonburg area economy. In addition to the major manufacturing and industrial firms listed in **Table 1**, the area has many smaller firms (fewer than 15 employees).

Chart 1 shows average employment for all sectors between 2005 and 2015. Over all, average employment rose between 2005 and 2007. It fell from 2007 to 2009, but has gradually increased since that time to 2014 before decreasing slightly in 2015.

Chart 2 shows the real average weekly wage from 2005 to 2015. Average wages rose from \$567 to \$716 over that period. With the exception of 2010 and 2011, wages have risen at a minimum of 1% with a maximum occurring in 2008 at 5.49%.

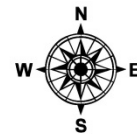
Map 1
Rockingham County
Virginia
Overview



Source: Commonwealth of Virginia, ESRI

Map 2 Rockingham County Virginia Geology

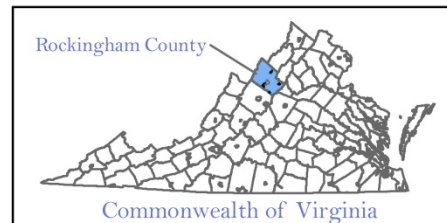
0 5 10
Miles



Formation/Group Name

- Beekmantown Group
- Brallier Formation
- Catoctin Formation - metabasalt
- Chemung Formation
- Chilhowee Group
- Conococheague Formation
- Edinburg Formation, Lincolnshire and New Market Limestones
- Elbrook Formation
- Hampshire Formation
- Juniata, Oswego, Martinsburg (Reedsville and Dolly Ridge), Eggleston Formation
- Keefer Sandstone, Rose Hill and Tuscarora Formations
- Marcellus Shale and Needmore Formation
- Martinsburg and Orando Formations
- Massanutten Sandstone
- Millboro Shale and Needmore Formation
- Pocono Formation
- Pumpkin Valley Shale and Rome Formation
- Ridgeley Sandstone, Helderberg and Cayuga Groups
- Waynesboro Formation
- basalt
- charnockite
- landslides with intact stratigraphic units - undivided
- layered pyroxene granulite

- State Boundary
- County Boundary



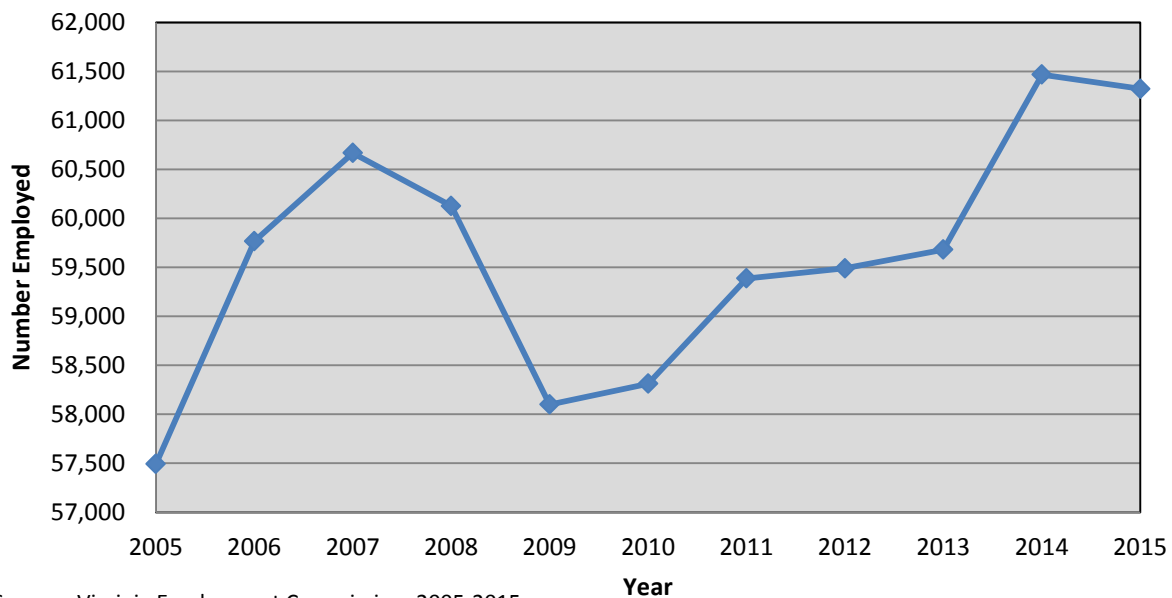
Source: Commonwealth of Virginia, USGS

Table 1
Harrisonburg - Rockingham Major Employers
Greater than 100 Employees

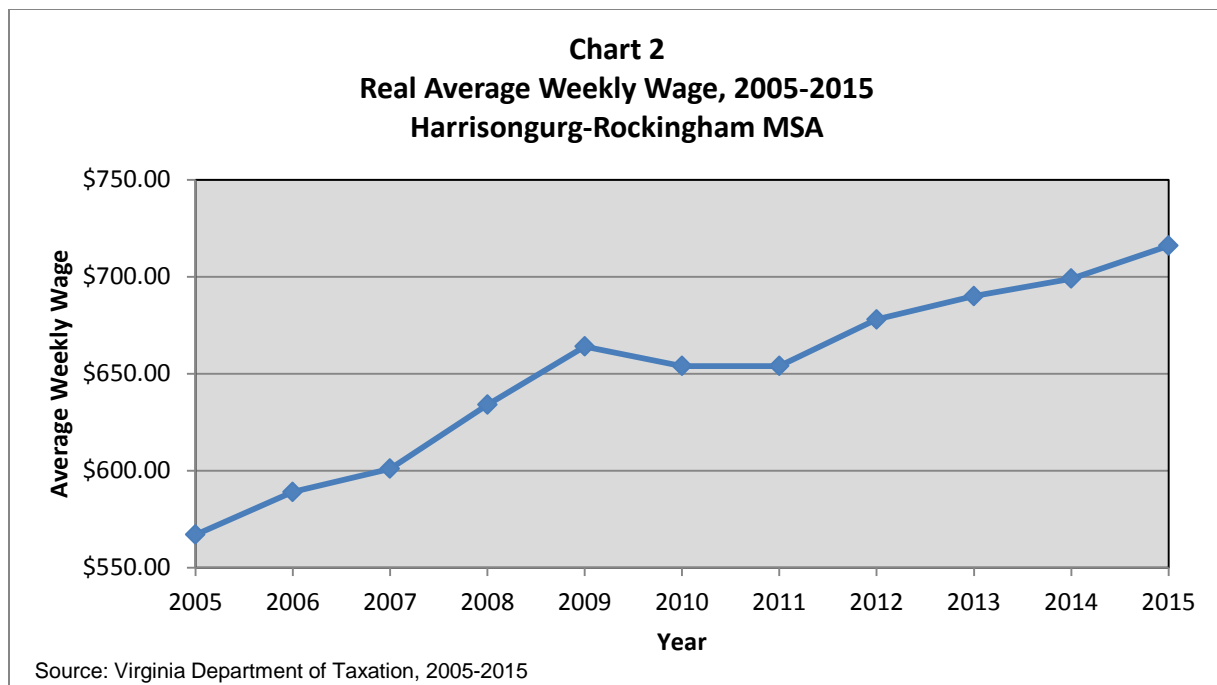
Company	Product/Service
ComSonic, Inc.	Telecommunications Equipment
Georges, Inc.	Poultry Processing
Graham Packaging Co.	Plastic Bottles
James Madison University	Higher Education
Marshalls	Retail Distribution
Merck & Company Inc.	Pharmaceuticals
MillerCoors Shenandoah Brewery	Malt Beverages
Perdue Farms, Inc.	Poultry Processing
Pilgrim's Pride Corporation	Poultry Processing
R. R. Donnelley & Sons Company	Book Printing
Rockingham Memorial Hospital	Health Care
Rosetta Stone	Language Learning Software
Serco	Patent Classification - Sciences
Tenneco Automotive Inc.	Motor Vehicle Parts
Tyson Foods, Inc.	Poultry Processing
Valley Blox, Inc.	Concrete Products
Wal Mart	Retail Distribution
WhiteWave Foods	Milk, Soy Products

Source: Virginia Economic Development Partnership

Chart 1
Average Employment- All Sectors, 2005-2015
Harrisonburg-Rockingham MSA



Source: Virginia Employment Commission, 2005-2015

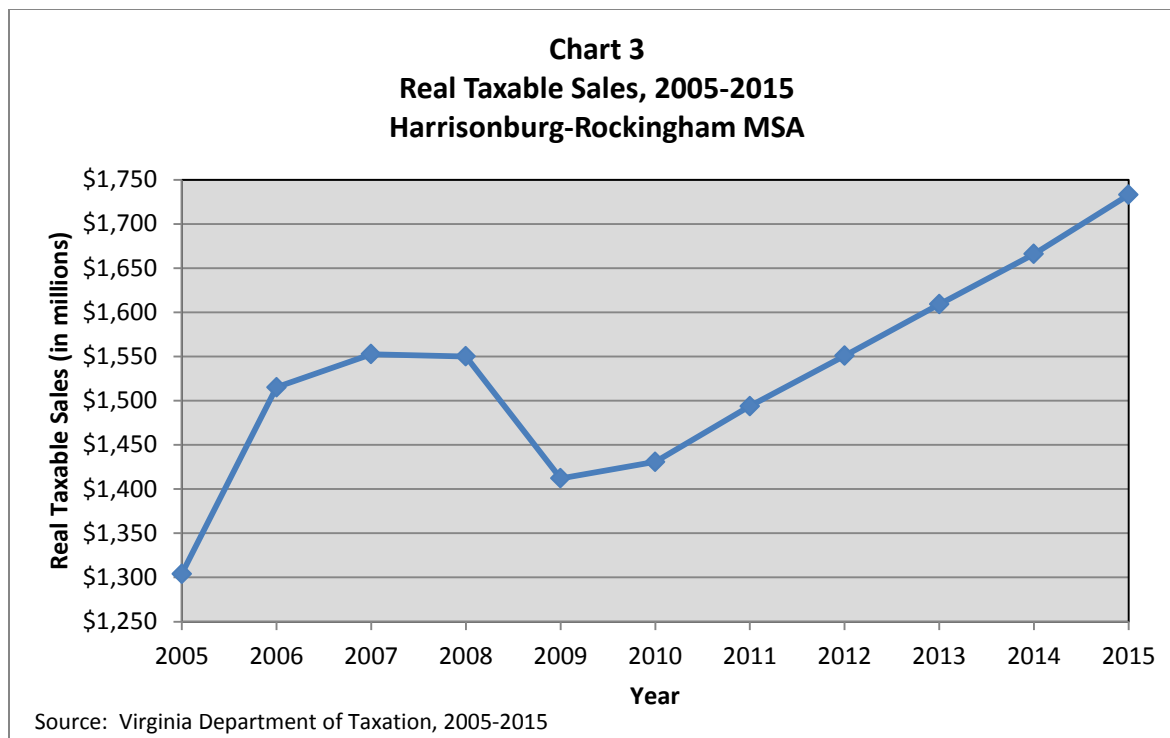


The largest governmental sector is the State government. This is due, in large part, to the employment of area residents by James Madison University. Local school systems are responsible, in part, for the large employment by the local government sector.

Tourism has always been a very important component of the local economy. In 2015, travelers spent more than \$310 million in the area. Travel-generated payroll topped \$59 million and accounted for 3,117 jobs. Local tax receipts based on tourism accounted for \$12.5 million. (Source: Virginia Tourism Corporation)

Rockingham County is the number one agricultural county in the State in terms of market value of products sold. In 2012, approximately 40 percent of the land in the County was classified as agricultural. There were 1,902 farms in Rockingham County in 2012. The average farm in the County was 117 acres and had an average value of land and buildings of \$1,566,498. In 2012, the approximate market value of agricultural products sold by Rockingham County farmers was \$659 million. Poultry, poultry products, and livestock accounted for most of the revenue from farm products. (Source: U.S. Census of Agriculture, 2012).

Taxable sales in the region rose between 2005 and 2007, while decreasing to 2009 before consistently increasing to 2015 (**Chart 3**). The total taxable sales rose from about \$1.3 billion in 2005 to \$1.7 billion in 2015.

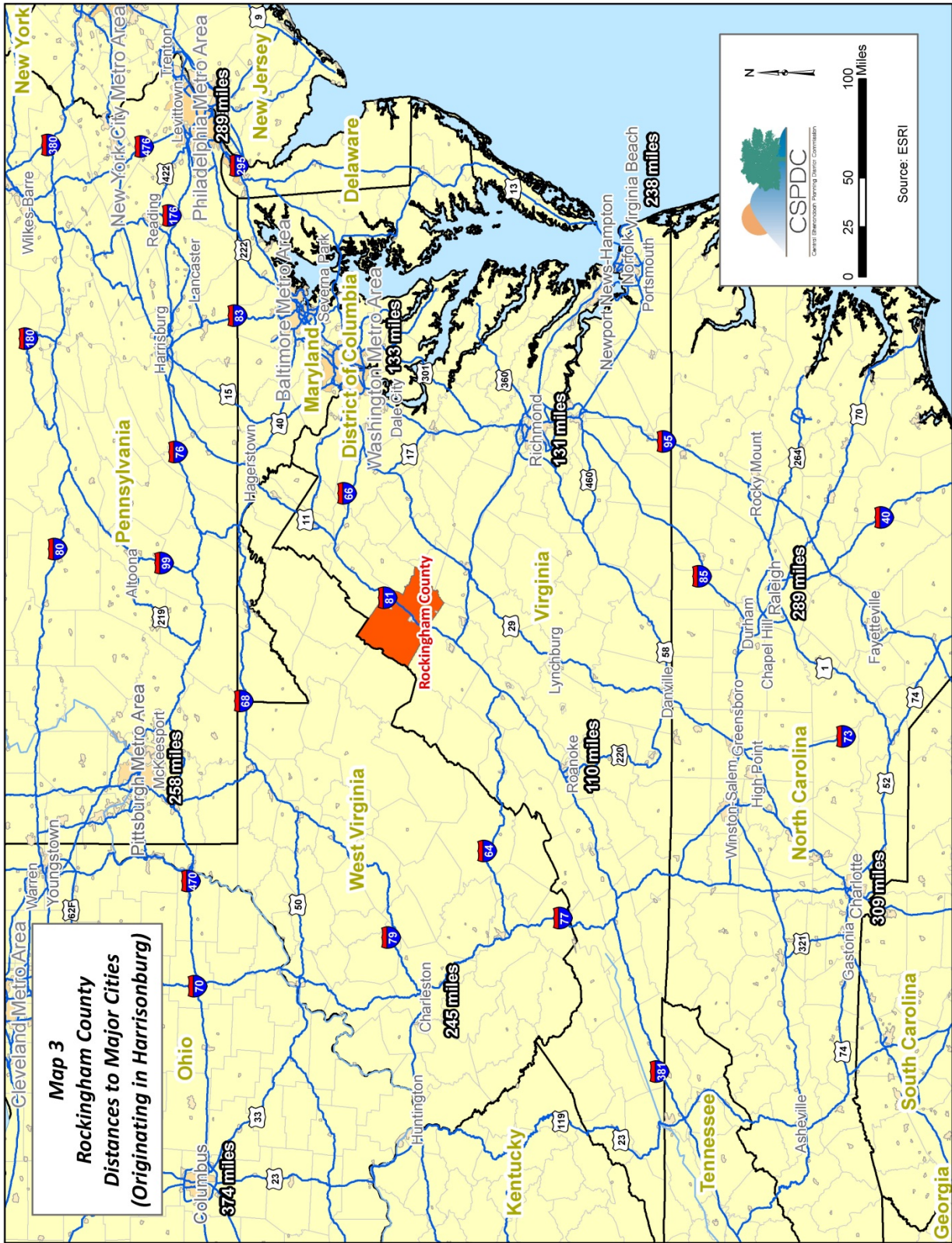


Transportation

The Rockingham County-Harrisonburg area is centrally located within the historic and scenic Shenandoah Valley in west-central Virginia. Harrisonburg, the county seat, is an important educational, industrial, retail, commercial, and governmental center. Harrisonburg is located approximately 110 miles north of Roanoke, Virginia; 125 miles northwest of Richmond, Virginia; and 125 miles southwest of Washington, D.C. Multi-state markets for area industries include Baltimore, Maryland, 150 miles; Greensboro, North Carolina, 210 miles; New York 395 miles; Cincinnati, Ohio, 485 miles; and Atlanta, Georgia, 505 miles. The Rockingham County-Harrisonburg area has immediate access to air, rail, and highway transportation. Transportation and Distances are shown on **Map 3**.

Interstate 81 (north-south) runs from Canada to Tennessee, bisecting Rockingham County and connecting the area with key markets to the north, south, east, and west. U.S. Routes 11 (north-south) and 33 (east-west) intersect in Harrisonburg. U.S. Route 340 originates in Augusta County and proceeds north through Grottoes and Elkton to its terminus in Maryland. Virginia Primary Highways 42, 211, 256, 257, 259, and 276 serve to interconnect the towns of Bridgewater, Broadway, Dayton, Elkton, Grottoes, Mount Crawford, and Timberville with the major highways.

The Rockingham County-Harrisonburg area is served by many motor freight carriers



with distribution facilities in Harrisonburg, Rockingham County, Augusta County, Staunton, and Waynesboro. Most of these firms are authorized for intrastate shipping to and from locations within the area, while others only provide interstate services. Several contract carriers are also available to provide service to industries and businesses in the area.

The Rockingham area is served by three railroad companies. The Norfolk and Western Railway (N&W), which is part of the Norfolk Southern Corporation, travels north to south and provides local freight service to Grottoes and Elkton on a daily or as-requested basis. The Chesapeake Western Railway supplies local freight service to Harrisonburg and Elkton daily and to Dayton on an as-requested basis. The Southern Railway, also part of the Norfolk Southern Corporation, provides daily service to Harrisonburg, Broadway, and Timberville. In addition, the Shenandoah Valley Railroad Company operates a shortline between Pleasant Valley and Staunton, with connections to CSX and Chesapeake Western. N&W operates trailer-on-flatcar (TOFC) loading facilities located in Roanoke.

The Port of Hampton Roads is located slightly more than 200 miles east of Rockingham County, easily accessible from Interstates 81 and 64. The ice-free port is capable of handling large volumes of nearly every category of cargo: breakbulk, containerized, heavy lift, LASH, liquid and dry bulk, and roll-on/roll-off. The Port of Hampton Roads is traditionally one of the largest export ports in the nation. More than 75 steamship lines link Hampton Roads with nearly 100 foreign countries through 251 ports.

The Virginia Inland Port (VIP) in Front Royal is less than one hour from Rockingham County. Containers hauled by truck to the VIP, which is convenient to Interstates 66 and 81, are then taken by train directly to the Port of Hampton Roads for shipment overseas.

POPULATION DATA AND PROJECTIONS

Population Trends

Rockingham County and the City of Harrisonburg, in particular, have grown rapidly in recent decades, with the area's population increasing more than 100 percent between 1970 and 2015 (see **Table 2**). The population of the area was 62,495 in 1970 and reached 133,009 in 2015. The fastest growth, outpacing the State rate, occurred between 1970 and 1980 and between 1990 and 2000, when the growth rate for both decades was 22.7 percent (**Chart 4**). The area's 2015 population accounted for 1.6 percent of the State's total population. Estimates produced in 2015 by the U.S. Census estimate Rockingham County's population to be 79,134 and the City of Harrisonburg to be 53,875 persons. The area has consistently grown at a faster rate than the state, over this period.

In 1983, Harrisonburg annexed 11.4 square miles and 4,984 people from Rockingham County. The City has continued to grow at a fast rate, with population increasing by

70% from 1983 to 2015. Consequently, Harrisonburg was among the Commonwealth's fastest growing cities during the 1990s. As identified in **Table 2**, the rate of growth for both jurisdictions has decreased during the period from 2000 to 2010 from the higher rates shown in the 1990s. **Map 4** depicts the population density for Rockingham.

The residents of the seven incorporated towns are included in the County figures. These towns and their 2015 Census population estimates are: Bridgewater (5,889), Broadway (3,807), Dayton (1,588), Elkton (2,809), Grottoes (2,758), Mt. Crawford (445), and Timberville (2,603).

Table 2
POPULATION TRENDS 1970 - 2015

Year	Rockingham	Harrisonburg	Total area	Virginia
1970	47,890	14,605	62,495	4,651,448
<i>% Change</i>	19.1%	34.7%	22.7%	14.9%
1970-1980				
1980	57,038	19,671	76,709	5,346,818
1983*	52,900	25,400	78,300	5,555,900
<i>% Change</i>	0.8%	56.1%	15.0%	15.8%
1980-1990				
1990	57,482	30,707	88,189	6,189,197
<i>% Change</i>	17.8%	31.8%	22.7%	14.4%
1990-2000				
2000	67,725	40,468	108,193	7,078,515
<i>% Change</i>	12.5%	20.9%	15.7%	13.0%
2000-2010				
2010	76,214	48,914	125,128	8,001,024
2015**	79,134	53,875	133,009	8,382,993

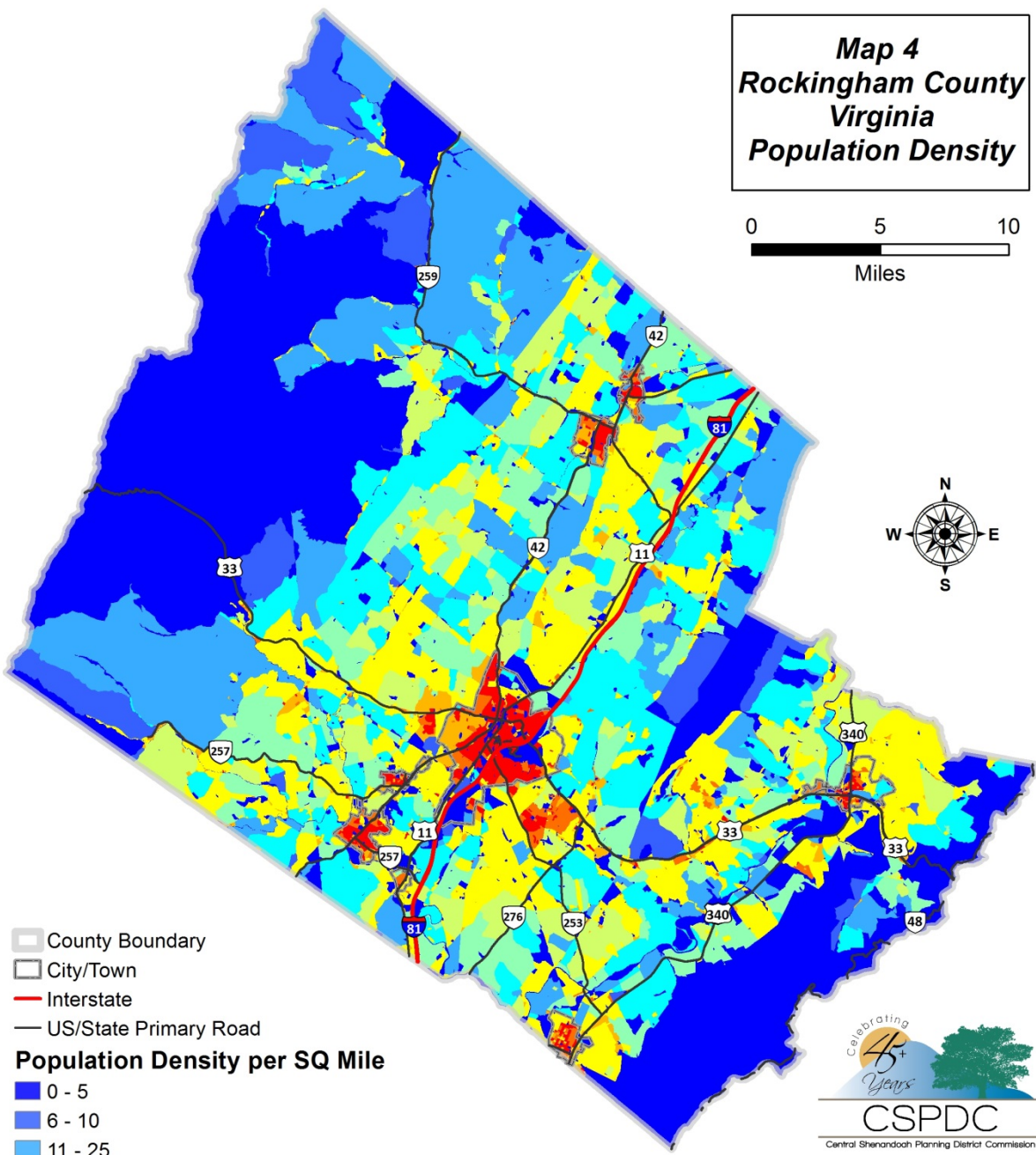
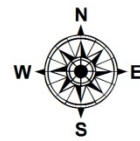
* Harrisonburg annexed a portion of Rockingham County in 1983.

**US Census 2015 Population Estimate

Source: U.S. Census.

**Map 4
Rockingham County
Virginia
Population Density**

0 5 10
Miles

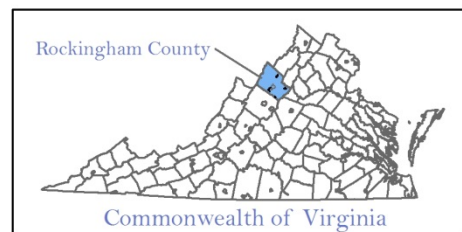


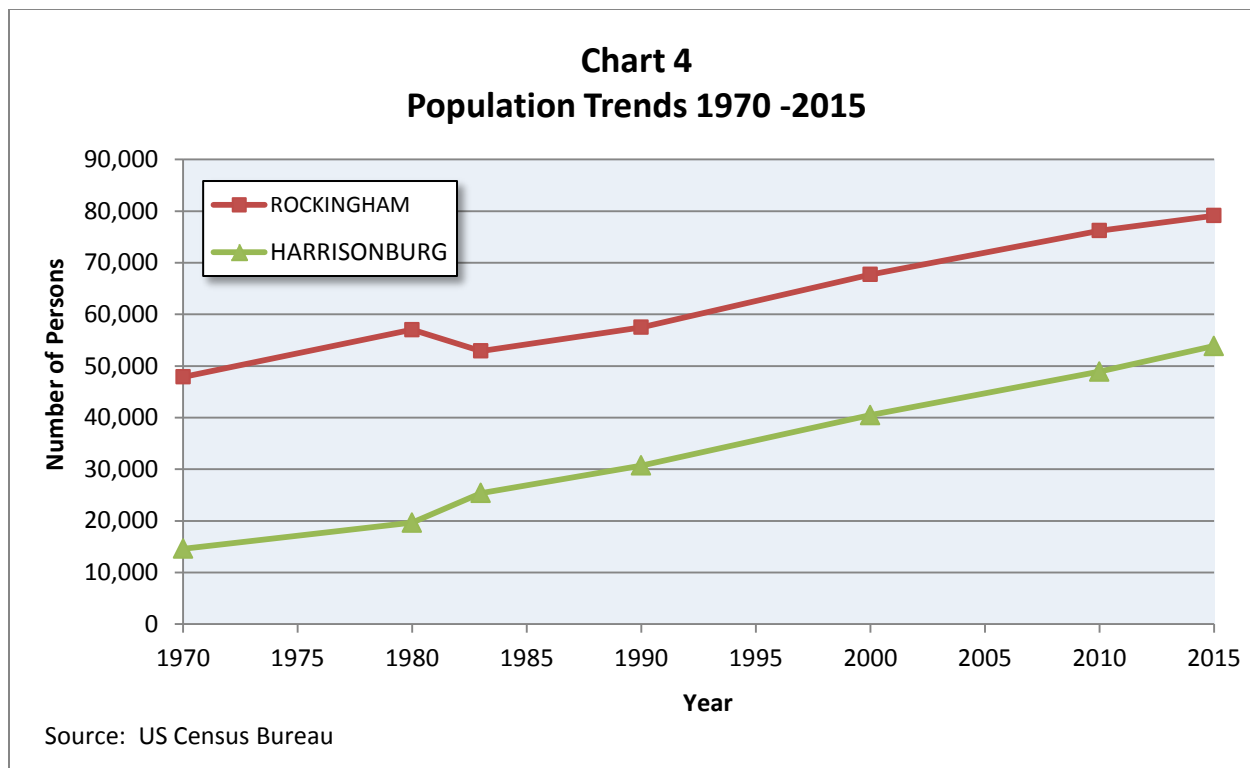
- County Boundary
- City/Town
- Interstate
- US/State Primary Road

Population Density per SQ Mile

- 0 - 5
- 6 - 10
- 11 - 25
- 26 - 50
- 51 - 75
- 76 - 100
- 101 - 500
- 501 - 1000
- 1001 - 2000
- 2001 +

Source: Commonwealth of Virginia, 2010 Census





Population Projections

Charts 5, 6, and 7, respectively, show Rockingham County, Harrisonburg, and Rockingham-Harrisonburg population trends from 1950 to 2010, along with three alternative projections:

1. Projection based on short-term trend: This analysis is based on the short-term trends between 2000 and 2015. With an average annual growth rate of 1.5 percent, this projection results in a Rockingham-Harrisonburg Area population of about 143,500 in 2020, 167,000 in 2030, and 180,000 in 2035.
2. Virginia Employment Commission Projections: This analysis is based on the Virginia Employment Commission's forecasts for 2020, 2030, and 2040. They were produced in 2012 and the latest available from the agency. This projection results in a Rockingham-Harrisonburg Area population of about 140,550 in 2020, 156,100 in 2030, and 172,250 in 2040.
3. Projection based on long-term trend: This analysis is based on the long-term trend from 1950 to 2015. With an average annual growth rate of 2.9 percent, this projection results in a Rockingham-Harrisonburg Area population of about 153,600 in 2020, 204,850 in 2030, and 236,600 in 2035.

Chart 5
Rockingham County
Population Trends and Projections

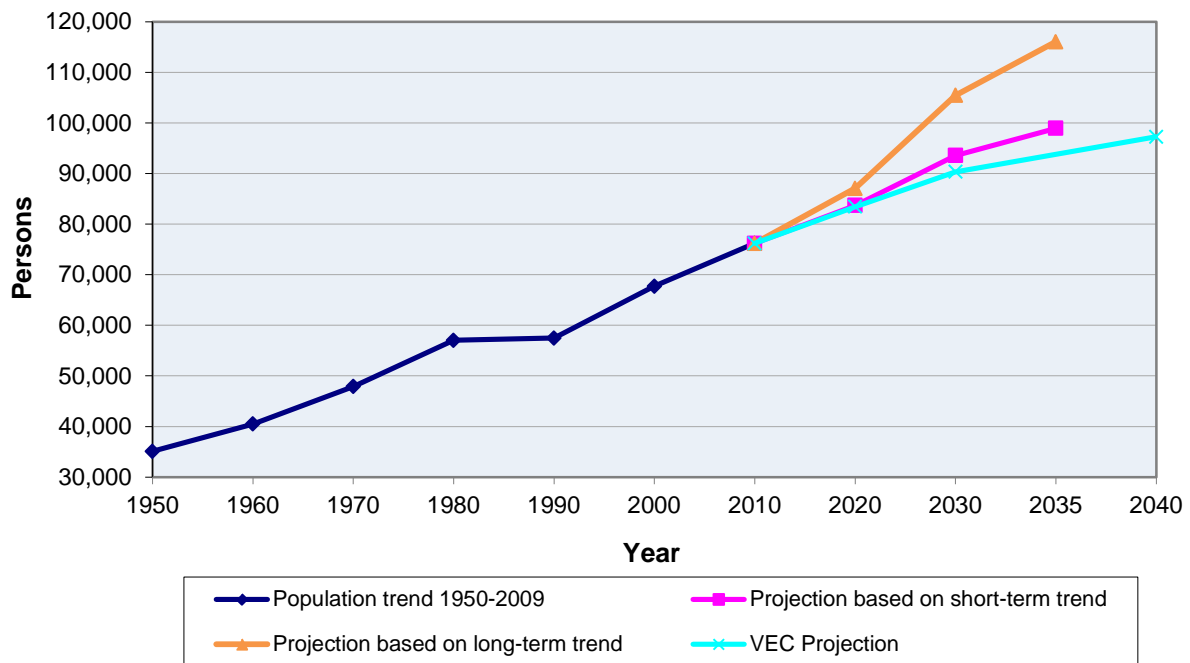
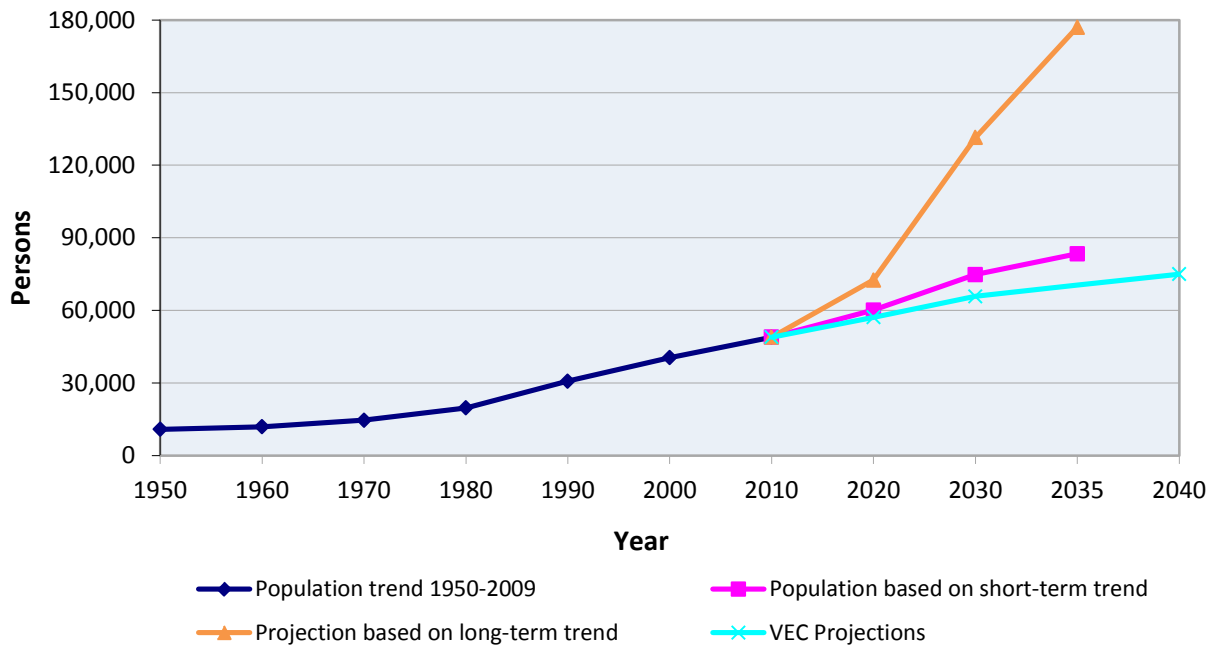
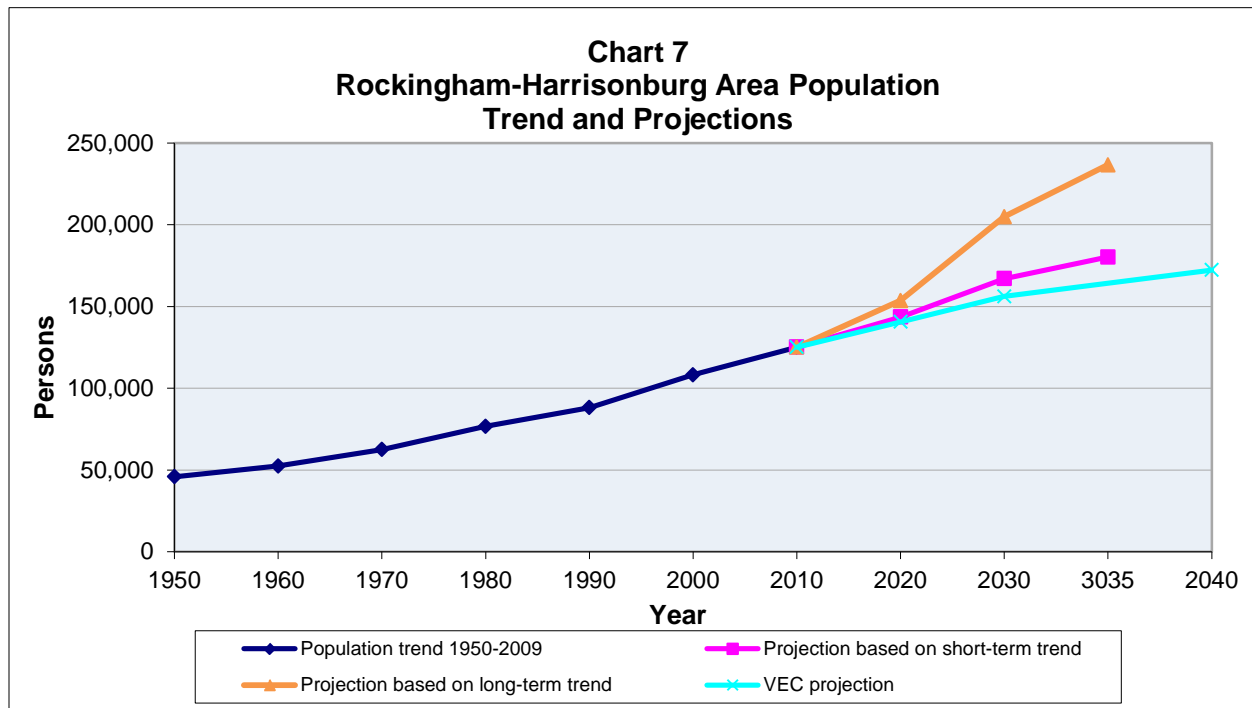


Chart 6
City of Harrisonburg
Population Trend and Projections





COMPOSITION OF SOLID WASTE

The following charts display waste composition in the Greater Rockingham region in 2015 based primarily on data in **Appendix A**, DEQ Form 50-25, Solid Waste Information and Assessment Program Reporting; and **Appendix B**, DEQ Form 50-30, Locality Recycling Rate Reports, for Rockingham County and the City of Harrisonburg:

- **Chart 8: Landfilled Material Composition** is as follows:
 - Municipal Waste – 67.31%
 - Construction and demolition debris – 19.1%
 - Other – 1.2%
 - Sludge – 0.53%
 - Industrial waste – 11.63%
 - Vegetative yard waste – 0.23%
- **Chart 9: Landfill Tonnage by Locality** is as follows:
 - Rockingham County – 113,652 tons (96%)
 - Harrisonburg – 5,145 (4%)

- **Chart 10: Recycled Material Composition Rockingham County:**
 - Paper – 25%
 - Metal – 49%
 - Supplemental Materials – 21% (wood, textiles, tires, used oil, batteries, electronics and used antifreeze)
 - Plastic and Glass – 5%
- **Chart 11, Total Waste Stream Composition (for Rockingham County, only):**
Household accounts for 38%, commercial 34%, and recycled 28%.

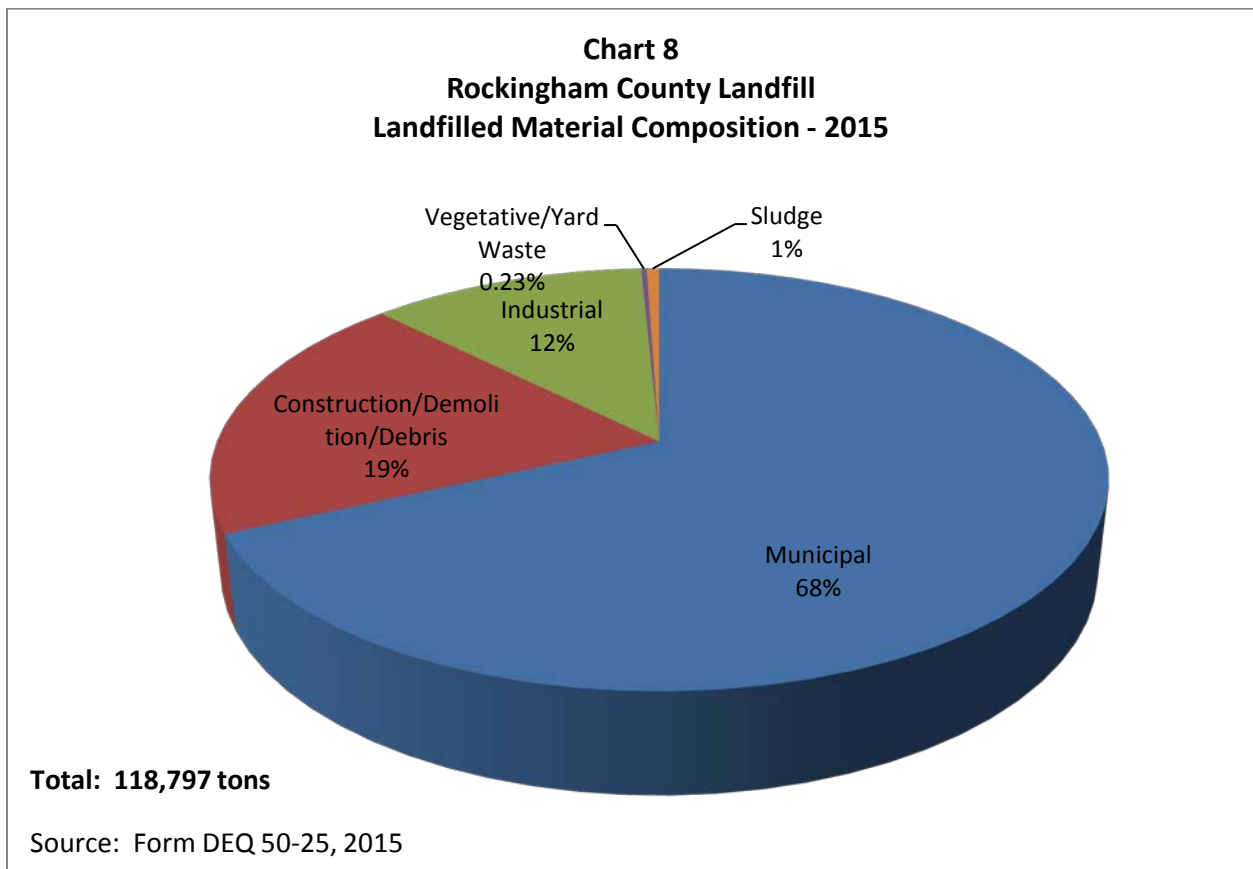
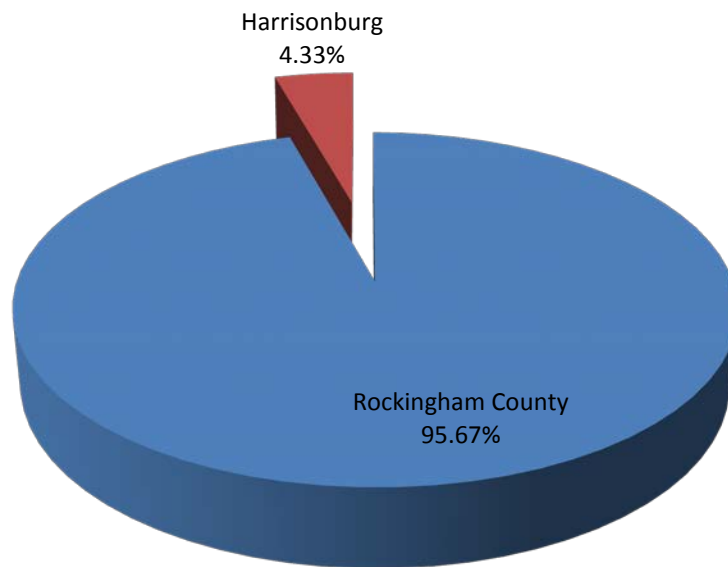
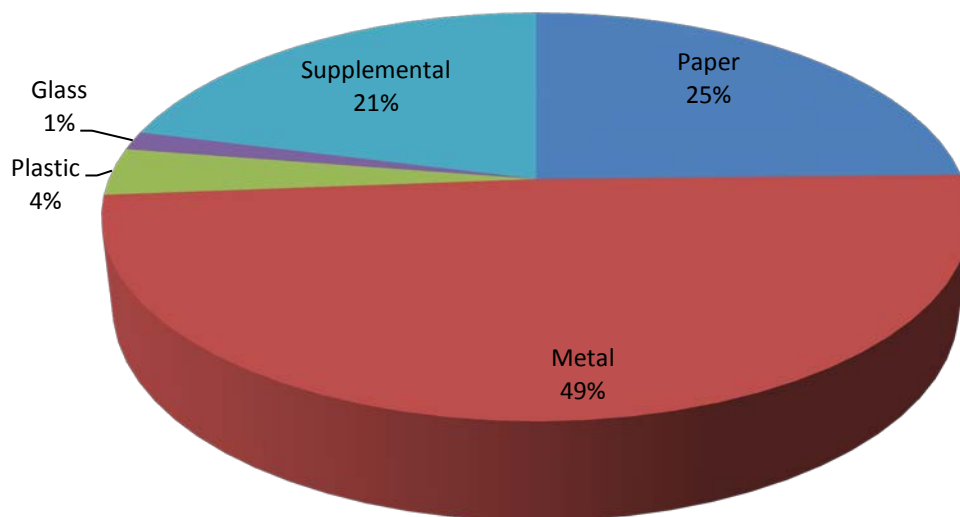


Chart 9
Rockingham County Landfill
Landfill Tonnages by Locality - 2015



Source: Rockingham County Landfill 2015 data

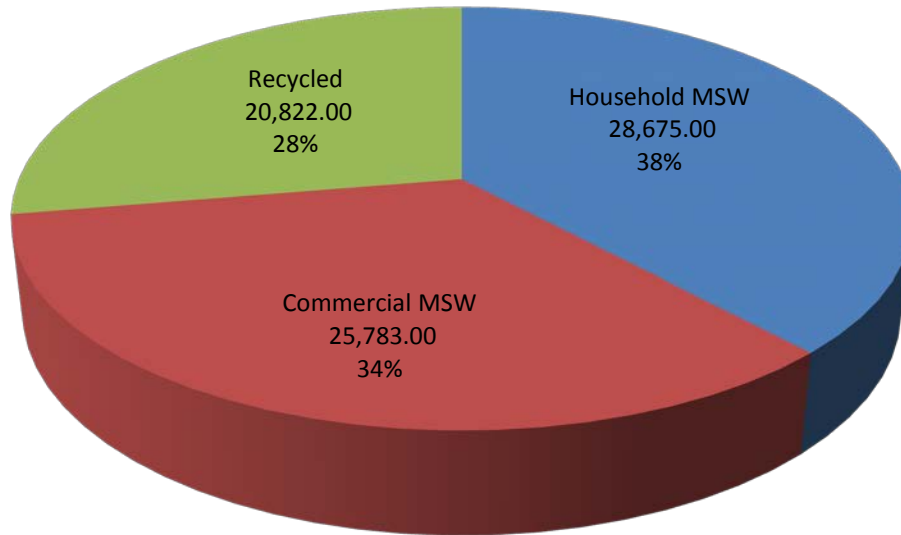
Chart 10
Rockingham County
Recycled Material - 2015



Total: 20,822 tons; 14.9% of total waste stream

Source: Form DEQ 50-30, 2015

Chart 11
Rockingham County
Total Waste Stream Composition - 2015



* This chart does not contain data for the City of Harrisonburg

Source: Form 50-30 Rockingham County - 2015

SOLID WASTE GENERATION PROJECTIONS AND FLOW PATTERNS

Currently, Rockingham County and all seven towns within Rockingham County dispose of all non-recycled waste in the Rockingham County Landfill. The City of Harrisonburg no longer makes regular use of the Rockingham County Landfill for household waste collected by the City, as of August 2015. Instead, the City administers a single-stream collection program. City trucks send waste to the former Resource Recovery Facility, which is now permitted as a transfer station (permit # RRF TBR513). The waste is then reloaded onto 40-yard open-top containers, and hauled by Waste Management trucks to Van der Linde Recycling, a Materials Resource Recovery Facility in Troy, Virginia. The City expects to operate the RRF as a transfer station until a new transfer station can be brought online, in approximately two years.

City of Harrisonburg continues to bring brush/yard debris and bulk item collections to the Landfill. Private haulers continue to bring City of Harrisonburg commercial and residential apartment complex refuse collections to the landfill. City residents may bring household bagged waste and recycling to the County Landfill at no charge. As depicted in **Chart 9**, approximately 4% of the current total tonnage in the landfill comes from the City of Harrisonburg. The remaining 96% originates in the County.

Projections and Assumptions

Chart 12 Displays projections of landfilled and recycled waste tonnages from Rockingham County and private City haulers from 2015 to 2035. In order to provide a reasonable estimate of future landfill tonnages, it is important to review historical tonnage data. Trends between 2006 and 2015, as reported to DEQ on annual Form 50-25, are depicted in **Chart 13**. Now that the Harrisonburg Resource Recovery Facility is no longer in operation, some of the waste that was once processed there is expected to shift to the landfill, and landfill tonnage will continue to increase in future years. The rate of increase is not a concern; however, as the City of Harrisonburg will be sending the waste it collects to a permitted facility outside of the region.

Population increases will also contribute to higher annual landfill tonnages. A 1.1% annual rate of growth for Rockingham County was factored into the waste and recycling projections, using 2015 data as the base tonnages. A 2.2% rate of growth was factored into the projection for waste from City of Harrisonburg sources. These population growth rates represent the short-term growth rates that were calculated based on population trends over the past 15 years. See **Chart 5** for the population projection.

Based on these assumptions, it is estimated that the total landfilled tonnage will increase by an annual average of approximately 1.29% between 2015 and 2035, from approximately 119,000 tons to approximately 150,000 tons.

The projections of recycled materials are presented in **Chart 12**. These projections are based on average population growth for Rockingham County to 2035, and the most current recycling rates. For Rockingham County, recycled tonnages are projected to increase from about 20,822 tons in 2015 to 25,915 tons in 2035, for an average annual increase of 1.22%.

Chart 12 displays the projections for landfilled material from County and City sources, as well as recycled tonnages from the County from 2015 to 2035. The average annual rate of increase for the waste stream is projected to be 1.28% which would result in an increase from 140,000 tons in 2015 to 175,000 tons in 2035.

Chart 12
Rockingham County
Waste Stream Projections

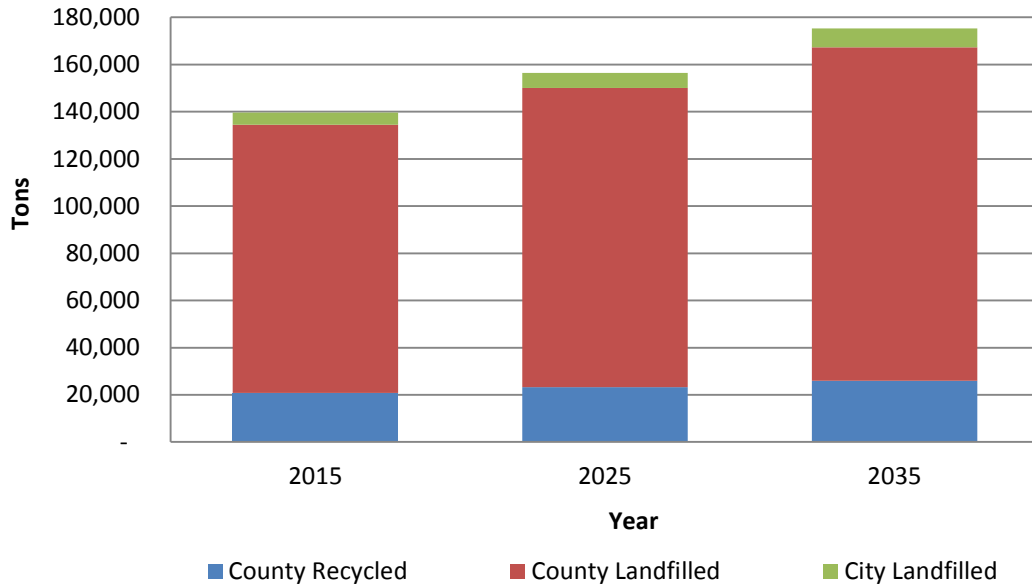
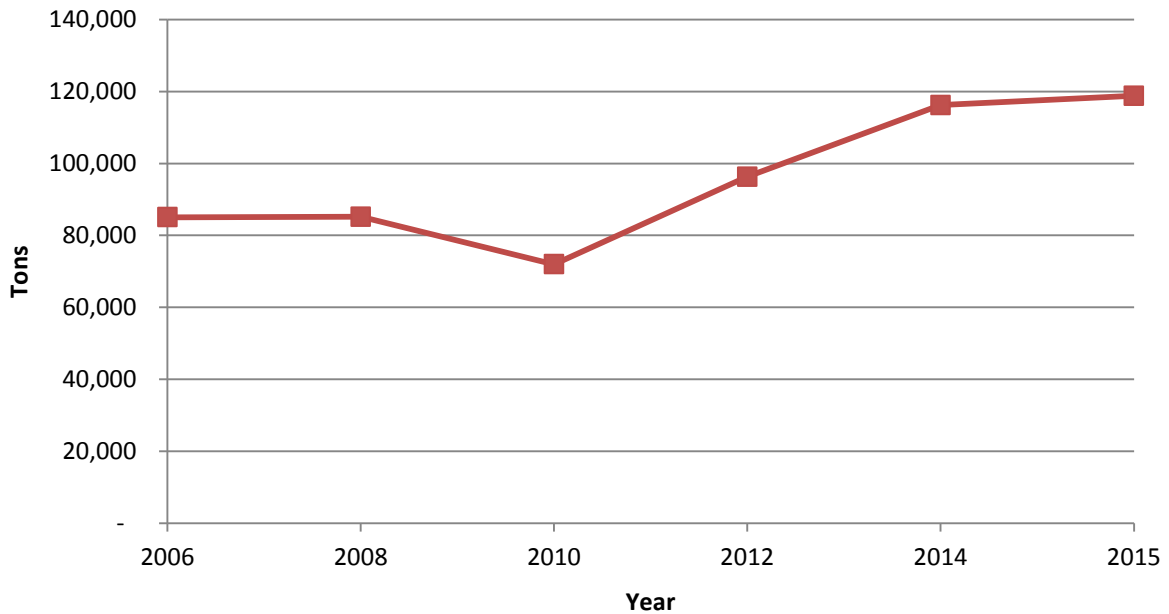


Chart 13
Rockingham County Landfill
Historic Tonnages Tons

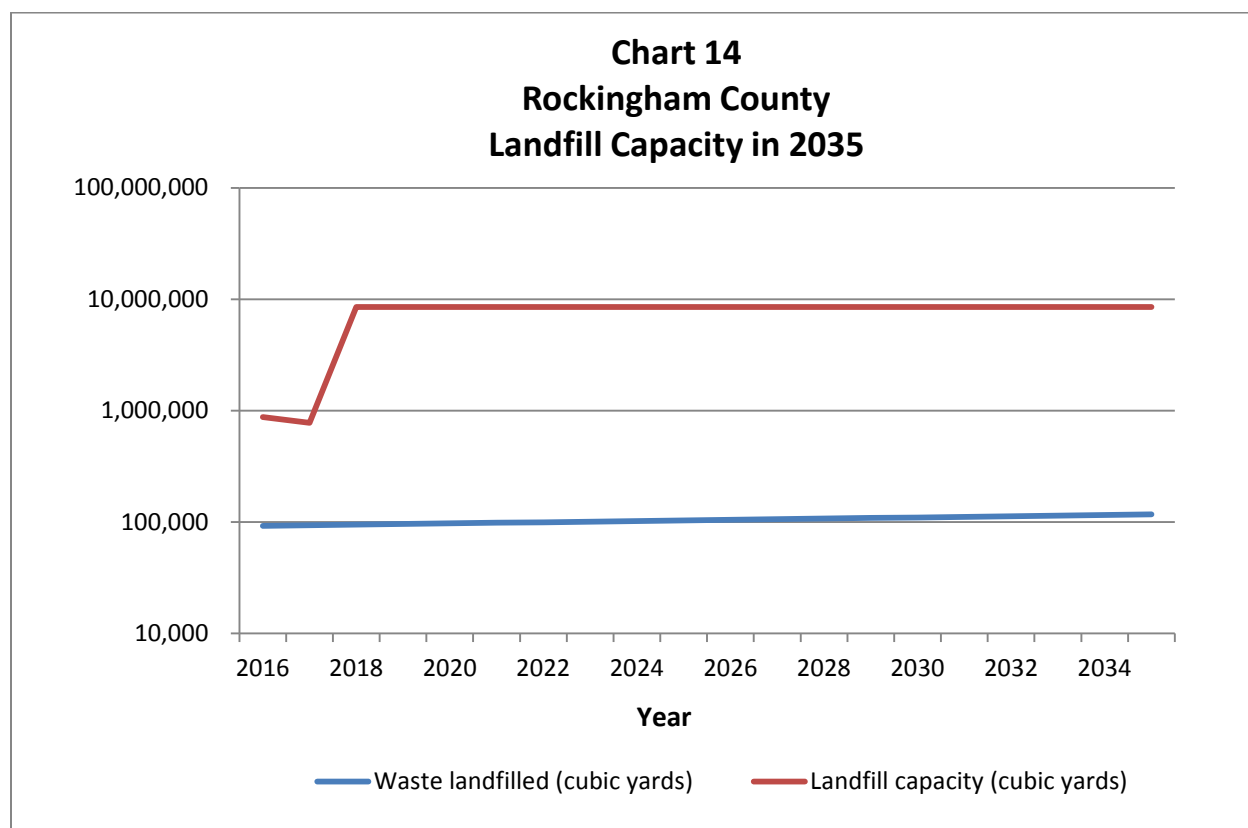


Source: Form 50-25 ; 2006 - 2015

WASTE DISPOSAL CAPACITY PROJECTIONS

Available capacity and capacity projections for the Rockingham County Landfill are based upon SCS Engineers' Remaining Capacity Method (RCM), which utilizes data obtained from annual flyovers to estimate landfill usage. According to the method, the airspace utilization rate between March 29, 2015 and January 11, 2016 was 1,342 pounds per cubic yard, implying a compaction factor, based on the tonnage received at the landfill during that time period. The method uses this conversion factor to estimate that Phases I – IV have approximately 586,790 tons (or 874,500 cubic yards) of remaining capacity, and at the current rate of disposal, the remaining life of Phases I – IV is 4.3 years, ending in April 2020.

Construction on Phase V of the landfill will begin in 2017, and will have a capacity of 8,559,000 cubic yards. Over the planning horizon of 20 years, the available capacity of the landfill is 9,145,790 cubic yards, inclusive of the remaining capacity in Phases I – IV as of January 2016, and Phase V. Based on the waste projections discussed in this chapter, between 2016 and 2035, a cumulative total of 1,972,749 cubic yards of waste will be landfilled. Thus, the remaining landfill capacity in 2035, will be 7,173,041 cubic yards, if no other plans have been made that affect waste streams or disposal. Chart 14 compares landfill capacity and waste landfilled between 2016 and 2035.



CHAPTER 3

AREA SOLID WASTE MANAGEMENT SYSTEM

COLLECTION

Rockingham County

Rockingham County has five transfer stations for citizens to deposit their garbage. Citizens must transport their own garbage to these transfer stations. The five stations are located at Bergton, Mauzy, Elkton, Waggy's Creek, and Grottoes. **Map 5** shows the location of the transfer stations and landfill in Rockingham County. See **Appendix C** for list of transfer station equipment.

The Landfill is open Monday-Saturday from 7am to 4:30 pm. Container Sites are open Monday to Saturday and Bergton, Grottoes, and Waggy's Creek (Ottobine) container sites and recycling centers are closed on Wednesdays. All sites are closed on major holidays.

Several waste collection companies serve residents and businesses in the greater Rockingham region. These companies include Cave Hill Mechanical, Long Enterprises, LLC, Allied Waste, Green Earth, Efficient Rolloff, Great Eastern, Waste Management, Trash and Treasure, and Diehl.

James Madison University contracts with Waste Management to collect and transport about half of its waste, while the university itself provides collection and transportation for the other half. Eastern Mennonite University collects and transports waste using its own equipment and trucks. Bridgewater College contracts with Waste Management for collection and hauling service. James Madison and Eastern Mennonite have about 65% of their non-recyclable waste hauled to the County Landfill.

Towns in Rockingham County

Rockingham County has seven incorporated towns. **Table 3** describes the collection service each town receives as of 2015. Many of the towns perform occasional heavy item pick up with their own equipment to supplement regular trash pick-up.

Table 3
Town Collection Services

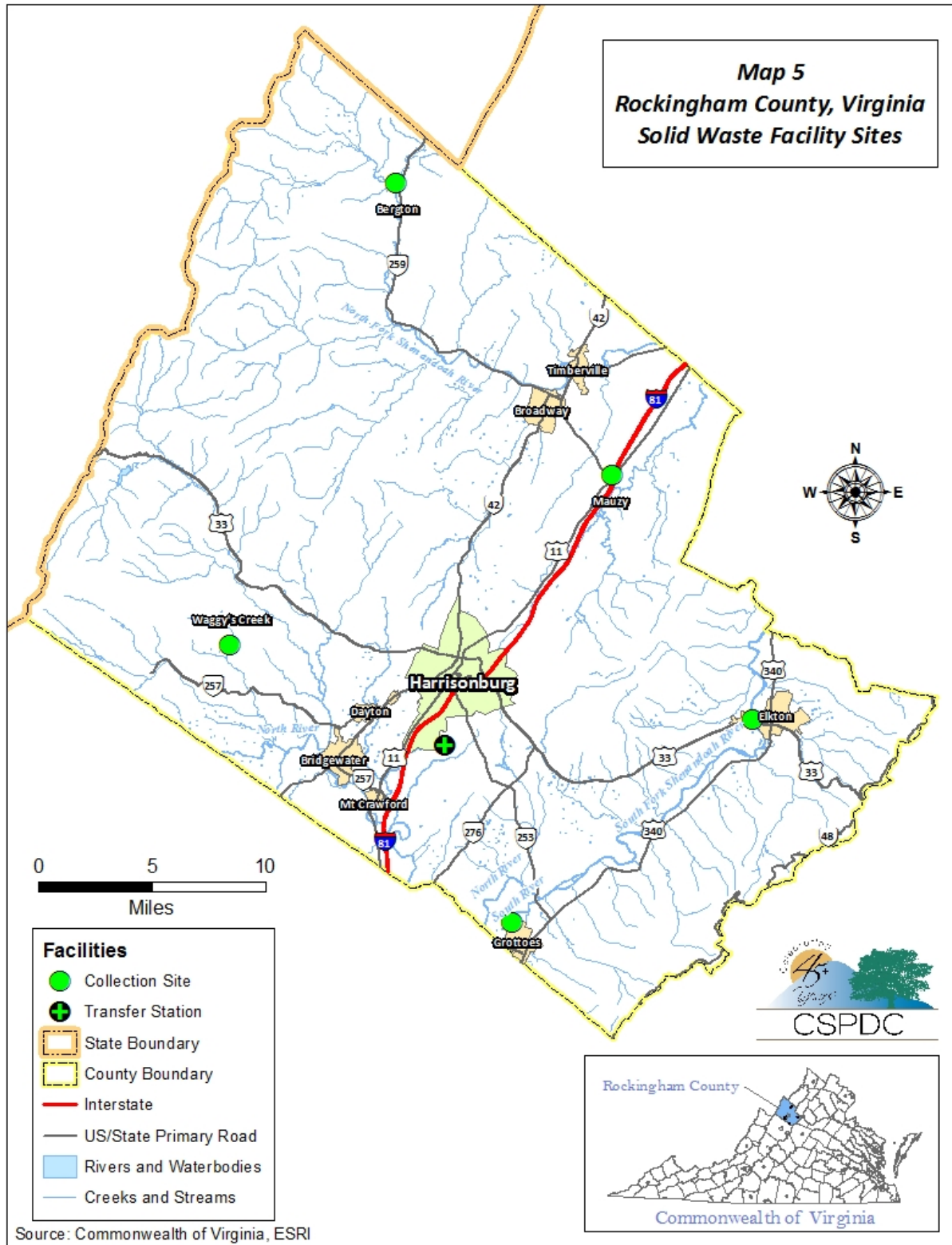
Town	Vendor	Price (per month)	Pickup Schedule	Service to Businesses	Bulk Collection Offered?
Bridgewater	Town	\$15.75 for refuse \$4.37 for recycling.	Every Tuesday & Friday	Town services some businesses, others use individual haulers	Yes 1 st Monday of each month
Broadway	Waste Management	\$12.25	Every Monday	Individual haulers	Yes 1 st Monday in January, April July, October
Dayton	Waste Management	\$18.00	Every Friday	Town services some businesses, others use individual haulers	Yes 1 st Tuesday of each month
Elkton	Long Enterprises, LLC	\$12.89	Every Friday	Individual haulers	Yes; \$30/load 1 st Wednesday of each month
Grottoes	Long Enterprises, LLC	\$24.42 bi-monthly	Monday or Tuesday, depending on location	Town services some businesses, others use individual haulers	No
Mount Crawford	Waste Management	\$12.50	Every Friday	Individual haulers	No
Timberville	Long Enterprises, LLC	\$12.00 per month.	Every Thursday	Individual haulers	Yes April & October

Source: Towns, personal communication, 2015.

LANDFILL DISPOSAL

The Rockingham County Landfill is located at 2400 Grassy Creek Road (Rt. 711) near the intersection of Grassy Creek Road and Ridgedale Road (Rt. 710), just to the southeast of the City of Harrisonburg (see **Map 5**). The total acreage of the site is 240.8 acres. Phases I and II of the landfill have been closed. Phases III and IV cells were constructed in 2006; these are the active portion of the landfill, currently. Cell V is scheduled for construction in 2016. The remaining permitted capacity of the landfill is 1,045,000 cubic yards. Its expected remaining permitted life is five years (DEQ Form

Map 5
Rockingham County, Virginia
Solid Waste Facility Sites



50-25, 2014). **Appendix C** lists the current equipment at the County Landfill and approximate ages, as known.

Current landfill charges for County and City haulers are \$52 per ton for residential, commercial and industrial, and \$58 per ton for construction/demolition/debris and livestock. Disposal of general household trash, recycling, and brush is not charged for County and City residents. County and City residents may dispose of brush and tree limbs not over 6" diameter and 8' in length for free; County and City residents are charged \$14.50 per ton for stumps. Dead animals may also be disposed of for \$58.00 per ton, by appointment only, 7 am to 11 am, Monday through Friday. Customers must call the landfill in advance, to dispose of dead animals.

Table 4
Landfill charges for tires

Tire Type	Charge Amount
County and City small, off rim	\$2.00
County and City large, off rim	\$3.00
County and City Tire on rim	\$5.00
Per ton of tires larger than 18 in.	\$125.00/ton
Per ton for 15 or more tires (any size or rim)	\$125.00/ton

Table 5
Landfill charges for brush

Resident Type	Charge Per Ton
County resident	N/A
County business	\$25.00
City resident	N/A
City business	\$25.00
Stumps - County and City	\$14.50 per ton

Other waste is accepted for the following charges:

- Dead animals - We only accept appointments for dead animals on Monday through Friday from 7:00 am to 11:00 am. The charge is \$58 per ton.
- White goods - no charge.
- Freon appliances - no charge.
- Bulk glass - City/County businesses - \$14.50 per ton.

SPECIAL WASTE

Desper Hauling, LLC from Goshen, Virginia, currently takes the tires from the County Landfill. Desper provides 48' trailers, and takes tires with rims and without rims (**See Table 5**). A hauler transports oversized tires from loader and pan to West Virginia, where the tires are shredded and used at a landfill as daily cover. The larger heavy equipment tires are buried. Passenger car and truck tires are sent to a recycling facility in Appomattox; in turn the tires are sent to a cogen plant that uses the tires for electricity. Also, 2" chips are being used for installation of septic tanks, and a firm in North Carolina is making rubber mats out of the tires. Desper reports that 95% of the tires the company receives from the County are recycled. The County currently pays Desper \$120.00/Ton for tire removal.

E-Waste is recycled through Recycle Management, LLC in Harrisonburg, VA. Recycle Management then sells the scrap metal, electronics, and e-waste to Berry Iron and Metal Company from Chilhowie, VA. Berry Iron and Metal Company has their shredder located at Recycle WV in Princeton, West Virginia.

Debris and brush from disasters are handled under normal tipping fees (**See Table 5**). Brush is being processed by Medek Tree Service, Inc. from Mechanicsville, VA and used with dirt as daily cover.

RECYCLING / REUSE

In addition to the Rockingham County Landfill Recycling Area, County citizens may recycle at all five transfer station locations. Items that can be recycled are listed on the County's Public Works webpage. There are many innovative ways in which Rockingham County recycles materials, as described below.

The County mixes ground brush with soil for daily ground cover at the landfill. In addition, the County also processes vegetative matter into mulch on site to be used for ground stabilization during inclement weather, and for coverage with composting of large animals.

Rockingham County's plastic pesticide container recycling operating plan, established in 2004, encourages annual recycling of plastic pesticide containers and other agricultural chemical containers (such as crop oil, surfactant, adjuvant, fertilizer, and micro nutrient) made of HDPE (Type 2) plastic to reduce the amount of refuse disposed of in the landfill. Containers are accepted at the Rockingham County Landfill, Monday through Friday 9:00 am - 4:00 pm from May 1st to September 30th of each year. Appointment times needs to be pre-arranged with the landfill before bringing out containers for inspection and disposal. A 53-foot locked trailer is currently at this location for the storage of the containers. All containers are inspected by County personnel; containers not properly rinsed will not be accepted. This program is operated in cooperation with the Virginia Department of Agriculture and Consumer Services. A Memorandum of Agreement between the County and VDACS can be found in **Appendix D**.

There are several locations in Rockingham County where County residents can take their used Christmas trees and wreaths through the end of January, each year. Locations include the landfill, and the Rockingham County Refuse and Transfer Stations in Bergton, Mauzy, Elkton, and Waggy's Creek (Ottobine). They may also be disposed of in the Grottoes area behind the Grottoes Maintenance Facility.

Table 6 displays processors, prices, and end markets for recycled material in Rockingham County.

Table 6
Rockingham County
Recyclables Prices and End Markets

Recyclables	Prices*	Processor	End Market
Newspaper, magazines, phone books, and greeting cards	\$35.00 per ton	Valley Paper Recycling, Inc.	Domestic or foreign paper mills
Cardboard (OCC) and Chipboard	\$35.00 per ton	Valley Paper Recycling, Inc.	Paper mill or construction material facility
All Numbered Plastics	n/a	Sonoco	Gulf Stream Services (broker)
Plastic Bags	n/a	Valley Paper Recycling, Inc.	Trex in Winchester to be made into plastic lumber decking boards
Aluminum beverage cans	\$0.50 - \$0.60 per pound	Wise Recycling, LLC - Harrisonburg	New aluminum cans
Scrap Metal	Half of current market rate, due to type of items in containers	Payne's Body Shop – Fulks Run, VA	Different brokers to be shredded
Steel & Bi-metal cans	n/a	Sonoco	Sold to various brokers to be made back into metal items
Used motor oil & Antifreeze	Market rate at the time of resale	Spirit Services, Inc - Williamsport, MD	½ of antifreeze is reprocessed into antifreeze, other ½ sent to Resource Reformers in North Carolina; motor oil processed into #4 RFO fuel oil
Electronics	No charge/No pay	Recycle Management, LLC	Various vendors in State
Household Batteries	n/a	Recycle Management, LLC	Beri Recycling, Ohio
Nickel Cadmium & Lithium Ion Batteries	\$0.04 & \$0.02 per pound	Recycle Management, LLC	Beri Recycling, Ohio
Computers & Computer Towers	\$5-\$7/tower	Recycle Management, LLC	Vendor in California
Refrigerators, Freezer & Air Conditioners	Current scrap rate at time of delivery	Recycle Management, LLC	Vendor out of state

*As of 2015.

Source: Rockingham County Public Works Department.

Towns in Rockingham County

Six of the seven towns in Rockingham County have their own recycling service. The following tables describe each town's service. Citizens in the Town of Grottoes can recycle at the Rockingham County Refuse and Transfer Stations located there.

Bridgewater

Vendor: Town

Fee: \$4.37/month

Pickup Schedule: Every Thursday; Vegetative Waste - Wednesdays

Items accepted	Processor	End Market
Plastics # 1 through 7	Green Earth, LLC	Gulf Stream Services, Boca Raton, Fl (Broker)
Paper	Green Earth, LLC	Sonoco (Broker)
Cardboard	Green Earth, LLC	West Rock Paper Mill, West Point, Va
Aluminum, tin cans	Green Earth, LLC	Recycle Management, Harrisonburg, Va (Broker)
Vegetative waste	Town	Rockingham County Landfill

Broadway

Vendor: Waste Management

Fee: Included with trash pick up (\$24.50 bi-monthly)

Pickup Schedule: Mondays; Vegetative Waste – 1st Tuesday of month

Items accepted	Processor	End Market
Plastic # 1 through 3	Sonoco	Sorted in Raleigh, NC and sold to various processors
Glass (clear, brown, & green)	Sonoco	Reflective Recycling, NC
Paper	Sonoco	Sold to various processors for pulp
Aluminum, steel, & bi-metal cans	Sonoco	Sold to various metal processors in Virginia
Vegetative waste	Waste Management	Rockingham County Landfill

Dayton**Vendor:** Long Enterprises**Fee:** Included with trash pick up (\$18.00/mo.)**Pickup Schedule :** Every Wednesday

Items accepted	Processor	End Market
Plastic # 1 through 7	Southern Scrap	Made into carpet, bottles, and clothes
Glass (clear, brown, & green)	Southern Scrap	Made back into glass bottles and marbles
Paper, newspaper, magazines & phone books	Southern Scrap	Made back into newsprint and paper towels
Cardboard & paperboard	Southern Scrap	Made back into cardboard and paper towels
Aluminum	Southern Scrap	Brokers - sent to be made back into can
Bi-metal cans	Southern Scrap	Sent to a foundry for resale
Vegetative waste	Town	Rockingham County Landfill or local farmer

Elkton**Vendor:** Green Earth, LLC**Fee:** Included with trash pick up (\$12.89/mo.)**Pickup Schedule:** First and third Fridays; Vegetative Waste – must arrange pick up with town

Items accepted	Processor	End Market
Plastics # 1 through 7	Green Earth, LLC	Gulf Stream Services, Boca Raton, FL (Broker)
Paper	Green Earth, LLC	Sonoco (Broker)
Aluminum, tin, and bi-metal cans	Green Earth, LLC	Recycle Management, Harrisonburg, Va (Broker)
Vegetative waste	Town	Mulched or burned

Mount Crawford**Vendor:** Waste Management**Fee:** Included in trash fee (\$12 .50/mo.)**Pickup Schedule:** Every other Monday

Items accepted	Processor	End Market
Plastic # 1 through 3	Sonoco	Sorted in Raleigh, NC and sold to various processors
Glass (clear, brown, & green)	Sonoco	Reflective Recycling, NC
Paper	Sonoco	Sold to various processors for pulp
Aluminum, steel, & bi-metal cans	Sonoco	Sold to various metal processors in Virginia

Timberville**Vendor:** Long Enterprises**Fee:** included in trash fee (\$12 per month)**Pickup Schedule:** 2nd and 4th Thursdays

Items accepted	Processor	End Market
Plastics # 1 through 7	Southern Scrap	Made into carpet, bottles, and clothes
Glass (clear, brown, & green)	Southern Scrap	Made back into glass bottles and marbles
Aluminum	Southern Scrap	Brokers - sent to be made back into can
Steel & bi-metal cans	Southern Scrap	Sent to a foundry for resale
Cardboard	Southern Scrap	Made back into cardboard and paper towels
Vegetative waste	Green Earth	Wood chip and compost, local

All three major higher institutions of learning provide recycling opportunities for their students and personnel. James Madison University, Eastern Mennonite University, and Bridgewater College provide containers for recyclables.

LITTER CONTROL AND DUMPING

The Rockingham County Code covers regulations on illegal dumping. The Community Development Department handles cases involving landowners who dump on their own land; if unresolved, the County Attorney handles the case.

PUBLIC EDUCATION

Each year during the month of September, all elementary schools are offered a free recycling and littering assembly. In 2015, 18 assemblies were held between September 14th and October 6th, 2017. The title of the assembly was "Critters Don't Need Litter," and was presented by the Wildlife Center of Virginia. The total cost of all assemblies was \$3,507.21, which was paid for from the Litter Control and Recycling Grant from Rockingham County.

PUBLIC/PRIVATE PARTNERSHIPS

Rockingham County and the City of Harrisonburg held four household hazardous waste collections at the City of Harrisonburg Recycling Facility located at 2055 Beery Rd., Harrisonburg, Virginia. Residents of the City and County can bring a limit of 5 units per household of items such as solvents, paints, fuels, oils, lead acid and dry cell batteries, motor oil and antifreeze, and many other hazardous wastes generated by households. The City and County contract with a 3rd party to recycle or dispose of the waste in a safe and legal way.

Four more of these events are scheduled for 2015. The first one is for April 18, 2015. Rockingham County also hosts two Clean-up Days per year for county residents, only. No commercial or business haulers are admitted. On clean-up days, the County landfill accepted refuse, such as torn down buildings, yard waste, remodeling debris, and furniture, at no cost. Limited disposal of tires is also allowed.

CHAPTER 4

SUMMARY OF INTEGRATED WASTE MANAGEMENT HIERARCHY

An integrated waste management plan includes a comprehensive list of methods for dealing with solid waste. The system aims to conserve resources while disposing of unrecoverable wastes in a safe and efficient manner. Below is a summary of the Greater Rockingham Area's hierarchy of solid waste management.

SOURCE REDUCTION

- Rockingham County source reduction activities are included in public education efforts, which discuss ways to reduce waste at its source.
- With the exception of the Bergton transfer station, there is a Goodwill collection container at each of the five transfer stations. This keeps gently used items out of the waste stream. Other "classified" tools such as Craigslist, newspapers, and Facebook "for sale" groups serve the same purpose.

REUSE

- The County mixes ground brush and fly ash from the University of Virginia with soil, and crushed glass with soil for daily ground cover at the landfill. In addition, the County processes vegetative matter into mulch at the landfill.
- Christmas trees are recycled and reused as mulch.

RECYCLING

- Rockingham County citizens may recycle at the Rockingham County Landfill and all five transfer station locations.
- Six of the seven towns contract with private collection contractors to offer recycling services for residents and some businesses.

RESOURCE RECOVERY

- Rockingham County currently operates a waste-to-energy practice involving the Rockingham County Landfill. A gas collection system was installed to capture the gasses that are created by the decomposition of waste in the landfill. A portion of the methane gas collected through the network of wells is sent to the

Rockingham Memorial Hospital, where it is used in boilers to produce steam. During the colder months of the year, it is expected that the hospital will be able to use most of the gas produced by the landfill. Any excess is burned off by a flare system at the landfill.

LANDFILL

- The total acreage of the Rockingham County Landfill is 240.8 acres. Phases I and II of the landfill remain active. Phases III and IV were constructed in 2006 and are also active. Phase V is scheduled to be constructed in 2017. According to SCS Engineers' Remaining Capacity Method (RCM), as of January 11, 2016, Phases I – IV have an estimated 586,790 tons (or 874,500 cubic yards) of capacity remaining. The expected remaining permitted life of Phases I – IV is 4.3 years, ending in April 2020. The permitted capacity of Phase V is 8,559,000 cubic yards. According to waste projections discussed in Chapter 2, the capacity of the landfill in 2035 will be 7,173,041 cubic yards.
- Rockingham County has five transfer stations for citizens to deposit their garbage. Citizens must transport their own garbage to these transfer stations. The five stations are located at Bergton, Mauzy, Elkton, Grottoes and Waggy's Creek (Ottobine).

CHAPTER 5

SOLID WASTE MANAGEMENT OBJECTIVES

The Greater Rockingham Solid Waste Management Citizen Advisory Committee met twice in 2004 to discuss the current and future conditions regarding solid waste management in the Greater Rockingham area. Program objectives were formulated at that time, and updated, as needed. Below are the current objectives.

GREATER ROCKINGHAM SOLID WASTE MANAGEMENT OBJECTIVES

1. Continue existing public education efforts on reduction, reuse, and recycling, with a focus on educating youth and adults about recycling and other outlets for disposal.
2. Improve cost effectiveness of recycling.
3. Continue with phased permitting of new cells in the County Landfill.
4. Continue to find ways to increase the life of the County Landfill.

CHAPTER 6

IMPLEMENTATION PLAN

From the solid waste management objectives listed in Chapter 5, the following describes the implementation plan for each objective, which includes key implementation steps, time frames, responsible parties, and funding sources.

ROCKINGHAM COUNTY OBJECTIVES

1. Continue existing public education efforts on reduction, reuse, and recycling, with a focus on educating youth and adults about recycling and other outlets for disposal.			
IMPLEMENTATION STEPS	TIME FRAME	RESPONSIBLE PARTY	FUNDING
► Evaluate current methods of public education, with a focus on educating youths & adults about recycling and other outlets for disposal.	On-going		Minimal—Local budgets.
► Examine most effective ways to educate public including: internet, newspaper articles/ads, public school curricula, TV or radio media, etc.	On-going	Recycling Committee and Public Works	Minimal—Local budgets.
► Choose mix of public education methods and implement them.	On-going		\$24,474—DEQ Recycling Grant.
2. Improve cost effectiveness of recycling.			
IMPLEMENTATION STEPS	TIME FRAME	RESPONSIBLE PARTY	FUNDING
► Increase and improve public education in order to collect more and better sorted material.	2004 and beyond		\$24,474 per year—DEQ Recycling Grant (See Objective #1).
► Continue with efforts on high volume/high tonnage material and higher value material.	Ongoing		Minimal—County budget
► Improve transportation of collected material.	2004 and beyond	Public Works & Recycling Committee	Minimal—County budget
► Seek out other markets for collected material for better prices and closer markets.	2004 and beyond		Minimal—County budget
► Work more with private haulers, brokers, and processors.	2004 and beyond		Minimal—County budget

3. Continue with phased permitting of new cells of the Rockingham County Landfill.

IMPLEMENTATION STEPS	TIME FRAME	RESPONSIBLE PARTY	FUNDING
► Phase III & IV cell construction.	2006	Public Works/Landfill Operations	\$4,250,000 — Landfill Budget
► Closure of Old Fill areas 1 & 2..	2010		\$2,000,000 — Landfill Budget
► Phase III & IV cell closure.	2020		\$3,000,000 — Landfill Budget
► Phase V cell construction.	2017		\$8,000,000 — Landfill Budget

4. Continue to find ways to increase the life of the Rockingham County Landfill.

IMPLEMENTATION STEPS	TIME FRAME	RESPONSIBLE PARTY	FUNDING
► Continue to compact material as much as possible.	Ongoing	Public Works/Landfill Operations	Minimal—Landfill budget.
► Utilize alternative materials for daily cover to avoid using dirt, thereby decreasing volume.	Ongoing		Minimal—Landfill budget.

Appendix A
Department of Environmental Quality Form 50-25 (2015)

[General Instructions](#) [Help](#)[Log Out](#)

SOLID WASTE INFORMATION AND ASSESSMENT PROGRAM REPORTING TABLE - FORM DEQ 50-25
Note: Submission deadline is March 31st for the reporting period. Today's Date: 02/22/2016

Annual Reporting Period											
1 Facility Name		Rockingham County of - Sanitary Landfill									
2 Permit Number		SWP062		3 Date Last Submitted		02/22/2016		4 Annual Reporting Period		2015	
5 Preparer's First Name		Lenora		Middle Initial		L		Last Name		McMahan	
6 Preparer's Telephone Number		(540)564-3									
7 Preparer's Email Address		lmcman@rockinghamcountyva.gov									
An email address will be used to contact you in case of questions about this form submission											
Has there been a change to the Annual Fee Billing Contact, Address or Telephone Number? <input type="radio"/> Yes <input checked="" type="radio"/> No Please select Yes or No.											
8 Contact First Name		Barry		Contact Last Name		Hertzler		Contact Phone		(540)564-3020	
Contact Address		20 East Gay Street		Contact Email Address		bhertzler@rockinghamcount					
City		Harrisonburg		State		Virginia		Zip Code		22802	
9A and 9B Landfills only		9A Remaining Permitted Capacity		905081.0000		Cubic Yards		9B Expected Remaining Permitted Life		4.1	
10 Does facility use active scales? <input checked="" type="radio"/> Yes <input type="radio"/> No											
Landfills not using active scales - Enter the total amount landfilled in cubic yards (sum of all jurisdictions)											
11 Originating Jurisdiction		VA - Virginia									
11A Statement of Economic benefits submitted? <input type="radio"/> Yes <input checked="" type="radio"/> No											
12 Facilities landfilling VA incineration ash: Received from (Permit No, Facility Name)											
PBR173, US Central Intelligence Agency - George Bush Cntr											
PBR197, US Department of Defense - Pentagon											
PBR500, Wheelabrator Portsmouth Inc - Waste to Energy Fac											
PBR503, John C Nordt Company Incorporated											
PBR545, Covanta Fairfax Incorporated											
PBR551, Covanta Alexandria Arlington Incorporated											
SWP297, Hampton City - NASA Steam Plant											
Waste amounts measured in: <input checked="" type="radio"/> Tons or <input type="radio"/> Cubic Yards											
Waste Management - Report Amount by weight or volume (Reporting units must be consistent for all fields of a particular waste type).											
Waste Type		Total Amount of Waste Received (a)		Mined Materials (b)		On-site Management of Waste				Sent Off-Site to be: (i)	
						Landfilled (c)		Recycled (d)		Composted (e)	
						Incinerated (f)		Mulched (g)		Other (h)	
										Recycled	
										Treated, Stored, Disposed	
13	Municipal Solid Waste	8795.15250		79964.6150	7556.2000						430.7100
14	Construction / Demolition / Debris	22689.9900		22689.9900							
15	Industrial Waste	13814.6400		13814.6400							
16	Regulated Medical Waste										
17	Vegetative / Yard Waste	2006.8550		273.0550	1733.8000						
18	Incineration Ash										
19	Sludge	625.3700		625.3700							
20	Tires	215.8900									228.5900
21	White Goods	51.4700									49.9700
22	Friable Asbestos										
23	Petroleum Contaminated Soil										
24	Enter a total of all other wastes on this line; list other types and their amounts in the comments area Other Waste	1443.7350		1429.3200							14.4150
25	Total Do not enter values	128799.4750		118796.9900	9290.0000						723.6850
Facility Comments:											
Used Oil= 12.028 tons; Used Antifreeze = 2.387 tons; Soil= 1429.32 tons; cows = 333.04 tons											
DEQ Comments:											

Annual Reporting Period

Clear Submit

[Print This Page](#)

Appendix B
Department of Environmental Quality Form 50-30 Recycling Rate
Reports



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Molly Joseph Ward
Secretary of Natural Resources

Street, Richmond, Virginia 23219

1105, Richmond, Virginia 23218

Street address: 629 East Main

Mailing address: P.O. Box

David K. Paylor
Director

(804) 698-4020
1-800-592-5482

www.deq.virginia.gov

June 28, 2016

Ms. Linda Zirkle
County of Rockingham
P.O. Box 1252
Harrisonburg, Virginia 22803

Dear Ms. Zirkle:

The Virginia Department of Environmental Quality (DEQ) has completed its review of the Central Virginia Waste Management Authority's 2015 Recycling Rate Report submitted pursuant to The Virginia Regulations for Solid Waste Management Planning - 9VAC-20-130-165 (the regulations). Virginia Code §10.1-1411 and section 120.B of the regulations require each city, county, town or region to maintain a minimum recycling rate and to report the data for the previous calendar year to DEQ by April 30 of each year. The members of the Solid Waste Planning Unit were to meet or exceed a 15% mandated recycling rate based upon the criteria established in 2006.

We accept your data as submitted, and your regional calculated recycling rate for CY2015 will be reported as 27.7%. This information will be forwarded to DEQ's Office of Waste Permitting and Compliance for consideration during their reviews of the Solid Waste Management Plans.

If you have any questions you may contact me at virginia.butler@deq.virginia.gov or (804) 698-4053. A summary of your report is attached.

Sincerely,

Virginia Butler
Office of Land Protection and Revitalization

Enclosure
Cc: RRR file



Commonwealth of Virginia Locality Recycling Rate Report For Calendar Year 2015

Contact Information

Reporting Solid Waste Planning Unit: Rockingham County

Person Completing This Form: Linda B. Zirkle

Title: Recycling Coordinator

Address: 20 East Gay Street Harrisonburg VA 22802
 Street/P.O. Box City State Zip

Phone #: (540) 564-3008 Fax #: (540) 564-3048

Email Address: lzirkle@rockinghamcountyva.gov

Member Governments (The local governments identified in your regional solid waste management plan and whose data is included in this report):

Towns of Bridgewater, Broadway, Dayton, Elkton, Grottoes,

Mt. Crawford and Timberville

Due to the complexity and difficulty in obtaining data, this report reflects the best efforts of the solid waste planning unit to represent its recycling efforts for **CY 2015**. Data in this report was collected from our recycling and solid waste facilities, and from other recycling sources, including non-governmental entities. I certify that I have personally examined and am familiar with the information submitted in this form and any attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. These records will be made available for auditing purposes, if requested.


 Authorized Signature

County Administrator
 Title

2/10/16
 Date

Return completed form by April 30, 2016 to: Virginia DEQ, Attn: Recycling Rates, P.O. Box 1105, Richmond, VA 23218.

Jan. 25. 2017 10:14AM

Locality Recycling Rate Report**For Calendar Year 2015**

PART A: Recycling Rate Calculation - Using the formulae provided below and the information reported on Pages 3, 4 and 5 to calculate your recycling rates.

Step 1: [(PRMs) / (PRMs + MSW Disposed)] X 100 = Base Recycling Rate %

$$\begin{array}{c} \boxed{20,822.00} \\ \text{TONS} \end{array} / \begin{array}{c} \boxed{20,822.00} \\ \text{TONS} \end{array} + \begin{array}{c} \boxed{54,458.00} \\ \text{TONS} \end{array} \times 100 = \boxed{28} \%$$

Step 2: CREDITS calculation

- a. Total Recycling Residue _____ tons
 b. Total Solid Waste Reused _____ tons
 c. Total Non-MSW Recycled _____ tons
 CREDITS _____ tons

Step 3: [(PRMs + CREDITS) / (PRMs + CREDITS + MSW Disposed)] X 100 = ^{Adjusted} Recycling Rate #1*

$$\begin{array}{c} \boxed{} \\ \text{TONS} \end{array} + \begin{array}{c} \boxed{} \\ \text{TONS} \end{array} / \begin{array}{c} \boxed{} \\ \text{TONS} \end{array} + \begin{array}{c} \boxed{} \\ \text{TONS} \end{array} + \begin{array}{c} \boxed{} \\ \text{TONS} \end{array} \times 100 = \boxed{} \%$$

Step 4: ☐ Source Reduction Credit does not apply; or

☐ Adjusted Recycling Rate #1 + 2% SRP Credit = Adjusted Recycling Rate #2*

$$\boxed{} \% + 2\% = \boxed{} \%$$

Step 5: Final Recycling Rate* for Solid Waste Planning Unit = 28 %

* Total credits resulting from Steps 3 and 4 may not exceed 5 percentage points above the Base Recycling Rate achieved by the Solid Waste Planning Unit.

Jan. 25. 2017 10:14AM

Locality Recycling Rate Report
PART B: DATA

For Calendar Year 2015

Part I: Principal Recyclable Materials (PRMs): Report only PRM material generated within the reporting SWPU and recycled, NOT imported PRMs for recycling.

<u>PRM TYPE</u>	<u>RECYCLED AMOUNT (TONS)</u>	
Paper	5,129	(no decimals please,
Metal	10,227	round to whole tons)
Plastic	779	
Glass	309	
Commingled (also known as Single Stream)		
Yard Waste (composted or mulched)		
Waste wood (chipped or mulched)	851	
Textiles	74	
Tires	1,288	
Used Oil	97	
Used Oil Filters	0	
Used Antifreeze	5	
Batteries	1,919	
Electronics	144	
Inoperative Motor Vehicles (see guidance)		
Other (specify: _____)		
Other (specify: _____)		
TOTAL PRMs	20,822	(PRMs)
(Enter Total on Page 2, Step 1)		

Listing of sources for PRM data (consider only Virginia generated waste material)

1. Permitted solid waste facilities from which MSW disposed/recycled data was collected:
 - a. _____ (Example: Permit# 112, County landfill)
 - b. _____
 - c. _____
 - d. _____
 - e. _____
 - f. _____
 - g. _____
 - h. _____
 - i. _____
2. Other facilities/operations (not included in #1 above) from which MSW disposed/recycled data was collected:
 - a. _____ (Example: Walmart/Target)
 - b. _____
 - c. _____
 - d. _____ (This area is not intended to be all-inclusive, but representative.
 - e. _____ Example: scrap dealers, retail
 - f. _____ grocers, paper shredding firm,
 - g. _____ etc. Other example: Materials
 - h. _____ Recycling Facility (name).)
 - i. _____

Locality Recycling Rate Report

For Calendar Year 2015

Part II: Credits by Category (see Credits Worksheet, Page 5)

A. Recycling Residue – “Recycling residue” means the (i) nonmetallic substances, including but not limited to plastic, rubber, and insulation, which remain after a shredder has separated for purposes of recycling the ferrous and nonferrous metal from a motor vehicle, appliance, or other discarded metallic item and (ii) organic waste remaining after removal of metals, glass, plastics and paper which are to be recycled as part of a resource recovery process for municipal solid waste resulting in the production of a refuse derived fuel. (§ 10.1-1400 of the *Code of Virginia*) (use only SWPU generation)

<u>MATERIAL DESCRIPTION</u>	<u>FACILITY/OPERATION</u>	(no decimals please, round to whole tons) <u>TONS OF MATERIAL</u>
_____ from _____	_____	_____
_____ from _____	_____	_____
_____ from _____	_____	_____
TOTAL RECYCLING RESIDUE		<u>0</u>
(Enter Total on Page 2, Step 2 a)		

B. Solid Waste Re-Used

<u>MATERIAL DESCRIPTION</u>	<u>REUSE METHOD</u>	(no decimals please, round to whole tons) <u>TONS OF MATERIAL</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
TOTAL SOLID WASTE REUSED		<u>0</u>
(Enter Total on Page 2, Step 2 b)		

C. Non-Municipal Solid Waste (MSW) Recycled

<u>MATERIAL DESCRIPTION</u>	<u>RECYCLING METHOD</u>	(no decimals please, round to whole tons) <u>TONS OF MATERIAL</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
TOTAL NON-MSW RECYCLED		<u>0</u>
(Enter Total on Page 2, Step 2 c)		

Locality Recycling Rate Report

For Calendar Year 2015

D: A credit of two (2) percentage points may be added to the Adjusted Recycling Rate #1 if the Solid Waste Planning Unit has implemented a Source Reduction Program (SRP). Examples of SRPs include Grass-cycling, Home Composting, Clothing Reuse, Office Paper Reduction (duplexing), Multi-Use Pallets, or Paper Towel Reduction. The SRP must be included in the Solid Waste Management Plan on file with the Department:

SRP description: _____

SRP description: _____

SRP description: _____

(Certify on Page 2, Step 4)

Exclusions: For the purposes of this report, the following materials are not considered solid wastes, and should not be included in any of the data categories utilized in calculating the recycling rate.

1. Biosolids – industrial sludge, animal manures; or, sewage sludge (unless composted)
2. Automobiles – unless part of the Inoperable Vehicle Program (DMV)
3. Leachate
4. Soils – contaminated soils, soil material from road maintenance
5. Household hazardous waste
6. Hazardous waste
7. Medical waste
8. Rocks or stone
9. Woody waste derived from land clearing for development, VDOT or easement tree trimming/clearing.

Part III: Total Municipal Solid Waste (MSW) Disposed - Report only MSW generated within the reporting jurisdiction(s), NOT imported wastes or industrial wastes.**

<u>MSW TYPE</u>	<u>TOTAL AMOUNT of MSW DISPOSED (TONS)</u>
Household	28,675 (no decimals please,
Commercial	25,783 round to whole tons)
Institutional	_____
Other (DO NOT INCLUDE INDUSTRIAL WASTES)	_____
TOTAL MSW DISPOSED	54,458
	(Enter Total on Page 2, Step 1 and Step 3)

Note: MSW DISPOSED for the purpose of this report means delivered to a permitted sanitary landfill, delivered to a waste-to-energy facility, or managed at a transfer station for transport to a landfill or waste-to-energy facility.

Locality Recycling Rate Report

For Calendar Year 2015

Credits Worksheet

I. Reuse of any Solid Waste

<input checked="" type="checkbox"/>	Material description	Tons	
<input type="checkbox"/> PRM			(no decimals please, round to whole tons)
<input type="checkbox"/> PRM			
<input type="checkbox"/> PRM			
<input type="checkbox"/> Industrial			
<input type="checkbox"/> Construction			
<input type="checkbox"/> Demolition			
<input type="checkbox"/> Debris			
<input type="checkbox"/> Other			
<input type="checkbox"/> Other			
<input type="checkbox"/> Other			
	TOTAL TONS	<u>0</u>	(enter data on Page 4, Solid Waste Re-Used)

II. Recycling of any Non-Municipal Solid Waste

<input checked="" type="checkbox"/>	Material description	Tons	
<input type="checkbox"/> Industrial			(no decimals please, round to whole tons)
<input type="checkbox"/> Construction			
<input type="checkbox"/> Demolition			
<input type="checkbox"/> Debris			
<input type="checkbox"/> Other			
<input type="checkbox"/> Other			
<input type="checkbox"/> Other			
	TOTAL TONS	<u>0</u>	(enter data on Page 4, Non-MSW Recycled)

III. Inoperable Vehicles Removed and Demolished – include number of vehicles that the localities received reimbursement from DMV under §46.2-1207 of the Code of Virginia.

# of vehicles removed/reimbursement received		
Average tonnage per vehicle	<u>X</u> 1 Ton each	
Total Tons	<u>0</u>	(enter data on Page 3, PRMs, Inoperative Motor Vehicle Program)

NOTE: Check "Exclusions" on Page 5 to avoid listing of those materials on this worksheet and/or in the data fields of this report.



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

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Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4020
1-800-592-5482

February 13, 2015

Ms. Linda Zirkle
County of Rockingham
P.O. Box 1252
Harrisonburg, Virginia 22803

Dear Ms. Zirkle:

We have completed our review of Rockingham County's 2014 Recycling Rate Report submitted pursuant to The Virginia Regulations for Solid Waste Management Planning (9VAC-20-130-165). State law (10.1-1411) and section 120.B. of the regulations require each city, county, town or region to maintain a minimum recycling rate and to report the data for the previous calendar year to DEQ by April 30 of each year. The Rockingham County was to meet or exceed a 15% mandated recycling rate based upon the criteria established in 2006.

We accept your data as submitted, and your calculated recycling rate for CY 2013 will be reported as 27.8 %. This information has been forwarded to DEQ's Office of Waste Permitting and Compliance for consideration during their reviews of the Solid Waste Management Plans.

Attached for your review and filing is our worksheet that shows the DEQ review of your report. Please contact me with any questions.

Sincerely,

G. Stephen "Steve" Coe

G. Stephen Coe
Environmental Specialist - Recycling
Office of Land Protection & Revitalization

Enclosure
Cc: RRR file

2014 Recycling Rate Reporting			SWPU Name		Date
PRMs (MSW materials)	Tons	DEQ Use	Rockingham County		2/13/15
			Submitted RR:	28.0%	DEQ Use
Paper	4969.28		DEQ Adjusted RR:	27.8%	
Metal	13265.59				
Plastic	1085.19				
Glass	299.34		Calculations:	SWPU	DEQ
Commingled	0		PRMs/(PRMs + M) x 100	27.8%	#DIV/0!
Yard Waste	0				
Waste Wood	1020.5				
Textiles	79.94				
Tires	390.33		(PRMs+C)/(PRMs+C+M) x 100	27.8%	#DIV/0!
Used Oil	83.89				
Used Oil Filters	0				
Used Antifreeze	5.79				
Batteries	1129.35		M = MSW		
Electronics	3.51		C = Credits		
Inoperative Motor Vehicles	0				
Other grease	31.86				
Other	0				
Total:	22364.57	0			
MSW:					
Household	34665.47				
Commercial	23291.28				
Institutional	0				
Other (no industrial material)	0		Base Recycling Rate	27.8%	#DIV/0!
Total:	57956.75	0			
Credits:					
Recycling Residue	0				
			Adjusted RR # 1	27.8%	#DIV/0!
Solid Waste Reused	0				
			Adjusted RR # 2	27.8%	#DIV/0!
Non MSW Recycled	0				
			(Max of 5%) Credits:	27.8%	#DIV/0!
Credits Total Tons	0	0			
			Final RR:	27.8%	#DIV/0!
Source Reduction Credit (2%)	0.00%	0.00%			
Notes:					



**Commonwealth of Virginia
Locality Recycling Rate Report
For Calendar Year 2014**

Contact Information

Reporting Solid Waste Planning Unit: Rockingham County

Person Completing This Form: Linda B. Zirkle

Title: Recycling Coordinator

Address: 20 East Gay Street Harrisonburg VA 22802
Street/P.O. Box **City** **State** **Zip**

Phone #: (540) 564-3008 **Fax #:** (540) 564-3048

Email Address: lzirkle@rockinghamcountyva.gov

Member Governments (The local governments identified in your regional solid waste management plan and whose data is included in this report):

Towns of Bridgewater, Broadway, Dayton, Elkton, Grottoes,

Mt. Crawford and Timberville.

Due to the complexity and difficulty in obtaining data, this report reflects the best efforts of the solid waste planning unit to represent its recycling efforts for **CY 2014**. I certify that I have personally examined and am familiar with the information submitted in this form and any attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. These records will be made available for auditing purposes, if requested.


Authorized Signature

County Administrator
Title

2/9/15
Date

Return completed form by April 30, 2015 to: Virginia DEQ, Attn: Recycling Rates, P.O. Box 1105, Richmond, VA 23218.

Locality Recycling Rate Report

For Calendar Year 2014

PART A: Recycling Rate Calculation - Using the formulae provided below and the information reported on Pages 3, 4 and 5 to calculate your recycling rates.

Step 1: $[(PRMs) / (PRMs + MSW Disposed)] \times 100 = \text{Base Recycling Rate } \%$

$$\boxed{22,364.57} / \boxed{22,364.57} + \boxed{57,956.75} \times 100 = \boxed{28} \%$$

Step 2: CREDITS calculation

a. Total Recycling Residue _____ tons
 b. Total Solid Waste Reused _____ tons
 c. Total Non-MSW Recycled _____ tons
 CREDITS -0- tons

Step 3: $[(PRMs + CREDITS) / (PRMs + CREDITS + MSW Disposed)] \times 100 = \text{Adjusted Recycling Rate \#1}^*$

$$\boxed{} + \boxed{} / \boxed{} + \boxed{} + \boxed{} \times 100 = \boxed{} \%$$

Step 4: ☐ Source Reduction Credit does not apply; or

☐ Adjusted Recycling Rate #1 + 2% SRP Credit = Adjusted Recycling Rate #2*

$$\boxed{} \% + 2\% = \boxed{} \%$$

Step 5: Final Recycling Rate* for Solid Waste Planning Unit = 28 %

* Total credits resulting from Steps 3 and 4 may not exceed 5 percentage points above the Base Recycling Rate achieved by the Solid Waste Planning Unit.

Locality Recycling Rate Report
PART B: DATA

For Calendar Year 2014

Part I: Principal Recyclable Materials (PRMs): Report only PRM material generated within the reporting SWPU and recycled, NOT imported PRMs for recycling.

<u>PRM TYPE</u>	<u>RECYCLED AMOUNT (TONS)</u>
Paper	4,969.28
Metal	13,265.59
Plastic	1,085.19
Glass	299.34
Commingled (also known as Single Stream)	-0-
Yard Waste (composted or mulched)	-0-
Waste wood (chipped or mulched)	1,020.50
Textiles	79.94
Tires	390.33
Used Oil	83.89
Used Oil Filters	-0-
Used Antifreeze	5.79
Batteries	1,129.35
Electronics	3.51
Inoperative Motor Vehicles (see guidance)	-0-
Other (specify: Grease)	31.86
Other (specify:)	
TOTAL PRMs	22,364.57 (PRMs)
	(Enter Total on Page 2, Step 1)

Part II: Credits by Category (see Credits Worksheet, Page 5)

A. Recycling Residue – “Recycling residue” means the (i) nonmetallic substances, including but not limited to plastic, rubber, and insulation, which remain after a shredder has separated for purposes of recycling the ferrous and nonferrous metal from a motor vehicle, appliance, or other discarded metallic item and (ii) organic waste remaining after removal of metals, glass, plastics and paper which are to be recycled as part of a resource recovery process for municipal solid waste resulting in the production of a refuse derived fuel. (§ 10.1-1400 of the *Code of Virginia*) (use only SWPU generation)

<u>MATERIAL DESCRIPTION</u>	<u>FACILITY/OPERATION</u>	<u>TONS OF MATERIAL</u>
_____ from _____	_____	_____
_____ from _____	_____	_____
_____ from _____	_____	_____
TOTAL RECYCLING RESIDUE		-0-
		(Enter Total on Page 2, Step 2 a)

Locality Recycling Rate Report

For Calendar Year 2014

B. Solid Waste Re-Used

MATERIAL
DESCRIPTION

REUSE METHOD

TONS OF MATERIAL

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

TOTAL SOLID WASTE REUSED

-0-

(Enter Total on Page 2, Step 2 b)

C. Non-Municipal Solid Waste (MSW) Recycled

MATERIAL
DESCRIPTION

RECYCLING METHOD

TONS OF MATERIAL

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

TOTAL NON-MSW RECYCLED

-0-

(Enter Total on Page 2, Step 2 c)

D: A credit of two (2) percentage points may be added to the Adjusted Recycling Rate #1 if the Solid Waste Planning Unit has implemented a Source Reduction Program (SRP). Examples of SRPs include Grass-cycling, Home Composting, Clothing Reuse, Office Paper Reduction (duplexing), Multi-Use Pallets, or Paper Towel Reduction. The SRP must be included in the Solid Waste Management Plan on file with the Department:

SRP description: _____

SRP description: _____

SRP description: _____

(Certify on Page 2, Step 4)

Exclusions: For the purposes of this report, the following materials are not considered solid wastes, and should not be included in any of the data categories utilized in calculating the recycling rate.

1. Biosolids – industrial sludge, animal manures; or, sewage sludge (unless composted)
2. Automobiles – unless part of the Inoperable Vehicle Program (DMV)
3. Leachate
4. Soils – contaminated soils, soil material from road maintenance
5. Household hazardous waste
6. Hazardous waste
7. Medical waste
8. Rocks or stone

Locality Recycling Rate Report

For Calendar Year 2014

<u>MSW TYPE</u>	<u>TOTAL AMOUNT DISPOSED (TONS)</u>
Household	<u>34,665.47</u>
Commercial	<u>23,291.28</u>
Institutional	<u> </u>
Other (DO NOT INCLUDE INDUSTRIAL WASTES)	<u> </u>
TOTAL MSW DISPOSED	<u>57,956.75</u> (Enter Total on Page 2, Step 1 and Step 3)

****MSW DISPOSED** for the purpose of this report means delivered to a permitted sanitary landfill, transfer station, or waste incinerator for disposal.

Locality Recycling Rate Report

For Calendar Year 2014

Credits Worksheet

I. Reuse of any Solid Waste

✓	Material description	Tons
___ PRM	_____	_____
___ PRM	_____	_____
___ PRM	_____	_____
___ Industrial	_____	_____
___ Construction	_____	_____
___ Demolition	_____	_____
___ Debris	_____	_____
___ Other	_____	_____
___ Other	_____	_____
___ Other	_____	_____
TOTAL TONS		-0-

(enter data on Page 4,
Solid Waste ReUsed)

II. Recycling of any Non-Municipal Solid Waste

✓	Material description	Tons
___ Industrial	_____	_____
___ Construction	_____	_____
___ Demolition	_____	_____
___ Debris	_____	_____
___ Other	_____	_____
___ Other	_____	_____
___ Other	_____	_____
TOTAL TONS		-0-

(enter data on Page 4,
Non-MSW Recycled)

III. Inoperable Vehicles Removed and Demolished – include number of vehicles that the localities received reimbursement from DMV under §46.2-1207 of the Code of Virginia.

of vehicles removed/reimbursement received
Average tonnage per vehicle

X 1 Ton each

Total Tons

-0-

(enter data on Page 3,
PRMs, Inoperative
Motor Vehicle
Program)

NOTE: Check “Exclusions” on Page 4 to avoid listing of those materials on this worksheet and/or in the data fields of this report.



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

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Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4020
1-800-592-5482

July 2, 2014

Ms. Linda Zirkle
County of Rockingham
P.O. Box 1252
Harrisonburg, Virginia 22803

Dear Ms. Zirkle:

We have completed our review of Rockingham County's 2013 Recycling Rate Report submitted pursuant to The Virginia Regulations for Solid Waste Management Planning (9VAC-20-130-165). State law (10.1-1411) and section 120.B. of the regulations require each city, county, town or region to maintain a minimum recycling rate and to report the data for the previous calendar year to DEQ by April 30 of each year. The Rockingham County was to meet or exceed a 15% mandated recycling rate based upon the criteria established in 2006.

We accept your data as submitted, and your calculated recycling rate for CY 2013 will be reported as 31.1 %. This information has been forwarded to DEQ's Office of Waste Permitting and Compliance for consideration during their reviews of the Solid Waste Management Plans.

Attached for your review and filing is our worksheet that shows the DEQ review of your report. Please contact me with any questions.

Sincerely,

G. Stephen "Steve" Coe

G. Stephen Coe
Environmental Specialist - Recycling
Office of Land Protection & Revitalization

Enclosure

Cc: RRR file



**Commonwealth of Virginia
Locality Recycling Rate Report
For Calendar Year 2013**

Contact Information

Reporting Solid Waste Planning Unit: Rockingham County

Person Completing This Form: Linda B. Zirkle

Title: Recycling Coordinator

Address: 20 East Gay Street Harrisonburg VA 22802
Street/P.O. Box City State Zip


Phone #: (540) 564-3008 Fax #: (540) 564-3048

Email Address: lzirkle@rockinghamcountyva.gov

Member Governments (The local governments identified in your regional solid waste management plan and whose data is included in this report):

Towns of Bridgewater, Broadway, Dayton, Elkton, Grottoes,
Mt. Crawford and Timberville.

Due to the complexity and difficulty in obtaining data, this report reflects the best efforts of the solid waste planning unit to represent its recycling efforts for **CY 2013**. I certify that I have personally examined and am familiar with the information submitted in this form and any attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. These records will be made available for auditing purposes, if requested.

 County Administrator 3/6/14
Authorized Signature Title Date

Return completed form by April 30, 2014 to: Virginia DEQ, Attn: Recycling Rates, P.O. Box 1105, Richmond, VA 23218.

Locality Recycling Rate Report

For Calendar Year 2013

PART A: Recycling Rate Calculation - Using the formulae provided below and the information reported on Pages 3, 4 and 5 to calculate your recycling rates.

Step 1: [(PRMs) / (PRMs + MSW Disposed)] X 100 = Base Recycling Rate %

$$\boxed{23,018.01} / \boxed{23,018.01} + \boxed{50,725.05} \times 100 = \boxed{31} \%$$

Step 2: CREDITS calculation

- a. Total Recycling Residue _____ tons
- b. Total Solid Waste Reused _____ tons
- c. Total Non-MSW Recycled _____ tons

CREDITS -0- tons

Step 3: [(PRMs + CREDITS) / (PRMs + CREDITS + MSW Disposed)] X 100 = ^{Adjusted} Recycling Rate #1*

$$\boxed{} + \boxed{} / \boxed{} + \boxed{} + \boxed{} \times 100 = \boxed{} \%$$

Step 4: ☐ Source Reduction Credit does not apply; or

☐ Adjusted Recycling Rate #1 + 2% SRP Credit = Adjusted Recycling Rate #2*

$$\boxed{} \% + 2\% = \boxed{} \%$$

Step 5: Final Recycling Rate* for Solid Waste Planning Unit = 31 %

* Total credits resulting from Steps 3 and 4 may not exceed 5 percentage points above the Base Recycling Rate achieved by the Solid Waste Planning Unit.

Locality Recycling Rate Report
PART B: DATA

For Calendar Year 2013

Part I: Principal Recyclable Materials (PRMs): Report only PRM material generated within the reporting SWPU and recycled, NOT imported PRMs for recycling.

<u>PRM TYPE</u>	<u>RECYCLED AMOUNT (TONS)</u>
Paper	4,055.97
Metal	13,176.09
Plastic	1,149.59
Glass	321.50
Commingled (also known as Single Stream)	
Yard Waste (composted or mulched)	13.91
Waste wood (chipped or mulched)	1,070.50
Textiles	68.05
Tires	1,527.58
Used Oil	88.79
Used Oil Filters	5.38
Used Antifreeze	9.72
Batteries	1,477.31
Electronics	0.05
Inoperative Motor Vehicles (see guidance)	
Other (specify: <u>Grease</u>)	53.57
Other (specify: _____)	
TOTAL PRMs	23,018.01 (PRMs)
	(Enter Total on Page 2, Step 1)

Part II: Credits by Category (see Credits Worksheet, Page 5)

A. Recycling Residue – “Recycling residue” means the (i) nonmetallic substances, including but not limited to plastic, rubber, and insulation, which remain after a shredder has separated for purposes of recycling the ferrous and nonferrous metal from a motor vehicle, appliance, or other discarded metallic item and (ii) organic waste remaining after removal of metals, glass, plastics and paper which are to be recycled as part of a resource recovery process for municipal solid waste resulting in the production of a refuse derived fuel. (§ 10.1-1400 of the *Code of Virginia*) (use only SWPU generation)

<u>MATERIAL DESCRIPTION</u>	<u>FACILITY/OPERATION</u>	<u>TONS OF MATERIAL</u>
_____ from _____	_____	_____
_____ from _____	_____	_____
_____ from _____	_____	_____
TOTAL RECYCLING RESIDUE		-0-
		(Enter Total on Page 2, Step 2 a)

Locality Recycling Rate Report

For Calendar Year 2013

B. Solid Waste Re-Used		
<u>MATERIAL DESCRIPTION</u>	<u>REUSE METHOD</u>	<u>TONS OF MATERIAL</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
TOTAL SOLID WASTE REUSED		-0-

(Enter Total on Page 2, Step 2 b)

C. Non-Municipal Solid Waste (MSW) Recycled		
<u>MATERIAL DESCRIPTION</u>	<u>RECYCLING METHOD</u>	<u>TONS OF MATERIAL</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
TOTAL NON-MSW RECYCLED		-0-

(Enter Total on Page 2, Step 2 c)

D: A credit of two (2) percentage points may be added to the Adjusted Recycling Rate #1 if the Solid Waste Planning Unit has implemented a Source Reduction Program (SRP). Examples of SRPs include Grasscycling, Home Composting, Clothing Reuse, Office Paper Reduction (duplexing), Multi-Use Pallets, or Paper Towel Reduction. The SRP must be included in the Solid Waste Management Plan on file with the Department:

SRP description: _____

SRP description: _____

SRP description: _____

(Certify on Page 2, Step 4)

Exclusions: For the purposes of this report, the following materials are not considered solid wastes, and should not be included in any of the data categories utilized in calculating the recycling rate.

1. Biosolids – industrial sludge, animal manures; or, sewage sludge (unless composted)
2. Automobiles – unless part of the Inoperable Vehicle Program (DMV)
3. Leachate
4. Soils – contaminated soils, soil material from road maintenance
5. Household hazardous waste
6. Hazardous waste
7. Medical waste
8. Rocks or stone

Locality Recycling Rate Report

For Calendar Year 2013

<u>MSW TYPE</u>	<u>TOTAL AMOUNT DISPOSED (TONS)</u>
Household	<u>33,372.94</u>
Commercial	<u>17,352.11</u>
Institutional	<u> </u>
Other (DO NOT INCLUDE INDUSTRIAL WASTES)	<u> </u>
TOTAL MSW DISPOSED	<u>50,725.05</u> (Enter Total on Page 2, Step 1 and Step 3)

****MSW DISPOSED** for the purpose of this report means delivered to a permitted sanitary landfill, transfer station, or waste incinerator for disposal.

Locality Recycling Rate Report

For Calendar Year 2012

Credits Worksheet

I. Reuse of any Solid Waste

√	Material description	Tons	
___ PRM	_____	_____	
___ PRM	_____	_____	
___ PRM	_____	_____	
___ Industrial	_____	_____	
___ Construction	_____	_____	
___ Demolition	_____	_____	
___ Debris	_____	_____	
___ Other	_____	_____	
___ Other	_____	_____	
___ Other	_____	_____	
	TOTAL TONS	-0-	(enter data on Page 4, Solid Waste ReUsed)

II. Recycling of any Non-Municipal Solid Waste

√	Material description	Tons	
___ Industrial	_____	_____	
___ Construction	_____	_____	
___ Demolition	_____	_____	
___ Debris	_____	_____	
___ Other	_____	_____	
___ Other	_____	_____	
___ Other	_____	_____	
	TOTAL TONS	-0-	(enter data on Page 4, Non-MSW Recycled)

III. Inoperable Vehicles Removed and Demolished – include number of vehicles that the localities received reimbursement from DMV under §46.2-1207 of the Code of Virginia.

# of vehicles removed/reimbursement received	_____	
Average tonnage per vehicle	X 1 Ton each	
Total Tons	-0-	(enter data on Page 3, PRMs, Inoperative Motor Vehicle Program)

NOTE: Check "Exclusions" on Page 4 to avoid listing of those materials on this worksheet and/or in the data fields of this report.



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

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Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

March 1, 2013

Ms. Linda Zirkle
County of Rockingham
P.O. Box 1252
Harrisonburg, Virginia 22803

Dear Ms. Zirkle:

We have completed our review of Rockingham County's 2012 Recycling Rate Report submitted pursuant to The Virginia Regulations for Solid Waste Management Planning (9VAC-20-130-165). State law (10.1-1411) and section 120.B. of the regulations require each city, county, town or region to maintain a minimum recycling rate and to report the data for the previous calendar year to DEQ by April 30 of each year. The Rockingham County was to meet or exceed a 15% mandated recycling rate based upon the criteria established in 2006.

We accept your data as submitted, and your calculated recycling rate for CY 2012 will be reported as 27.3 %. This information has been forwarded to DEQ's Office of Waste Permitting and Compliance for consideration during their reviews of the Solid Waste Management Plans.

Attached for your review and filing is our worksheet that shows the DEQ review of your report. Please contact me with any questions.

Sincerely,

G. Stephen "Steve" Coe

G. Stephen Coe
Environmental Specialist - Recycling
Office of Land Protection & Revitalization

Enclosure

Cc: RRR file



Commonwealth of Virginia Locality Recycling Rate Report For Calendar Year 2012

Contact Information

Reporting Solid Waste Planning Unit: Rockingham County

Person Completing This Form: Linda B. Zirkle

Title: Recycling Coordinator

Address: P.O. Box 1252 Harrisonburg VA 22803
Street/P.O. Box City State Zip

Phone #: (540) 564-3008 Fax #: (540) 564-3048


Email Address: lzirkle@rockinghamcountyva.gov

Member Governments (The local governments identified in your regional solid waste management plan and whose data is included in this report):

Towns of Bridgewater, Broadway, Dayton, Elkton, Grottoes, Mt. Crawford

and Timberville.

Due to the complexity and difficulty in obtaining data, this report reflects the best efforts of the solid waste planning unit to represent its recycling efforts for **CY 2012**. I certify that I have personally examined and am familiar with the information submitted in this form and any attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. These records will be made available for auditing purposes, if requested.


Authorized Signature

County Administrator
Title

2/20/13
Date

Return completed form by April 30, 2013 to: Virginia DEQ, Attn: Recycling Rates, P.O. Box 1105, Richmond, VA 23218.

Locality Recycling Rate Report

For Calendar Year 2012

PART A: Recycling Rate Calculation - Using the formulae provided below and the information reported on Pages 3, 4 and 5 to calculate your recycling rates.

Step 1: $[(PRMs) / (PRMs + MSW Disposed)] \times 100 = \text{Base Recycling Rate } \%$

$$\boxed{24,323.04} / \boxed{24,323.04} + \boxed{64,643.88} \times 100 = \boxed{27} \%$$

Step 2: CREDITS calculation

- a. Total Recycling Residue _____ tons
- b. Total Solid Waste Reused _____ tons
- c. Total Non-MSW Recycled _____ tons

CREDITS _____ tons

Step 3: $[(PRMs + CREDITS) / (PRMs + CREDITS + MSW Disposed)] \times 100 = \text{Adjusted Recycling Rate \#1}^*$

$$\boxed{} + \boxed{} / \boxed{} + \boxed{} + \boxed{} \times 100 = \boxed{-0-} \%$$

Step 4: ☐ Source Reduction Credit does not apply; or

☐ Adjusted Recycling Rate #1 + 2% SRP Credit = Adjusted Recycling Rate #2*

$$\boxed{-0-} \% + 2\% = \boxed{-0-} \%$$

Step 5: Final Recycling Rate* for Solid Waste Planning Unit = 27 %

* Total credits resulting from Steps 3 and 4 may not exceed 5 percentage points above the Base Recycling Rate achieved by the Solid Waste Planning Unit.

Locality Recycling Rate Report
PART B: DATA

For Calendar Year 2012

Part I: Principal Recyclable Materials (PRMs): Report only PRM material generated within the reporting SWPU and recycled, NOT imported PRMs for recycling.

<u>PRM TYPE</u>	<u>RECYCLED AMOUNT (TONS)</u>
Paper	7,179.69
Metal	8,235.29
Plastic	1,075.95
Glass	493.93
Commingle (also known as Single Stream)	-0-
Yard Waste (composted or mulched)	-0-
Waste wood (chipped or mulched)	5,020.50
Textiles	23.39
Tires	654.69
Used Oil	97.04
Used Oil Filters	4.61
Used Antifreeze	9.67
Batteries	1,414.12
Electronics	10.07
Inoperative Motor Vehicles (see guidance)	-0-
Other (specify: <u>Food</u>)	103.58
Other (specify: <u>Shoes</u>)	0.51
TOTAL PRMs	24,323.04 (PRMs)
	(Enter Total on Page 2, Step 1)

Part II: Credits by Category (see Credits Worksheet, Page 5)

A. Recycling Residue – “Recycling residue” means the (i) nonmetallic substances, including but not limited to plastic, rubber, and insulation, which remain after a shredder has separated for purposes of recycling the ferrous and nonferrous metal from a motor vehicle, appliance, or other discarded metallic item and (ii) organic waste remaining after removal of metals, glass, plastics and paper which are to be recycled as part of a resource recovery process for municipal solid waste resulting in the production of a refuse derived fuel. (§ 10.1-1400 of the *Code of Virginia*) (use only SWPU generation)

<u>MATERIAL DESCRIPTION</u>	<u>FACILITY/OPERATION</u>	<u>TONS OF MATERIAL</u>
_____ from _____	_____	_____
_____ from _____	_____	_____
_____ from _____	_____	_____

TOTAL RECYCLING RESIDUE

-0-

(Enter Total on Page 2, Step 2 a)

Locality Recycling Rate Report

For Calendar Year 2012

B. Solid Waste Re-Used

**MATERIAL
DESCRIPTION**

REUSE METHOD

TONS OF MATERIAL

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

TOTAL SOLID WASTE REUSED

-0-

(Enter Total on Page 2, Step 2 b)

C. Non-Municipal Solid Waste (MSW) Recycled

**MATERIAL
DESCRIPTION**

RECYCLING METHOD

TONS OF MATERIAL

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

TOTAL NON-MSW RECYCLED

-0-

(Enter Total on Page 2, Step 2 c)

D: A credit of two (2) percentage points may be added to the Adjusted Recycling Rate #1 if the Solid Waste Planning Unit has implemented a Source Reduction Program (SRP). Examples of SRPs include Grasscycling, Home Composting, Clothing Reuse, Office Paper Reduction (duplexing), Multi-Use Pallets, or Paper Towel Reduction. The SRP must be included in the Solid Waste Management Plan on file with the Department:

SRP description:

SRP description:

SRP description:

(Certify on Page 2, Step 4)

Exclusions: For the purposes of this report, the following materials are not considered solid wastes, and should not be included in any of the data categories utilized in calculating the recycling rate.

1. Biosolids – industrial sludge, animal manures; or, sewage sludge (unless composted)
2. Automobiles – unless part of the Inoperable Vehicle Program (DMV)
3. Leachate
4. Soils – contaminated soils, soil material from road maintenance
5. Household hazardous waste
6. Hazardous waste
7. Medical waste
8. Rocks or stone

Locality Recycling Rate Report

For Calendar Year 2012

<u>MSW TYPE</u>	<u>TOTAL AMOUNT DISPOSED (TONS)</u>
Household	<u>38,800.62</u>
Commercial	<u>25,843.26</u>
Institutional	<u>-0-</u>
Other (DO NOT INCLUDE INDUSTRIAL WASTES)	<u>-0-</u>
TOTAL MSW DISPOSED	<u>64,643.88</u>
	(Enter Total on Page 2, Step 1 and Step 3)

****MSW DISPOSED** for the purpose of this report means delivered to a permitted sanitary landfill, transfer station, or waste incinerator for disposal.

Locality Recycling Rate Report

For Calendar Year 2012

Credits Worksheet

I. Reuse of any Solid Waste

✓	Material description	Tons	
___	PRM	_____	
___	PRM	_____	
___	PRM	_____	
___	Industrial	_____	
___	Construction	_____	
___	Demolition	_____	
___	Debris	_____	
___	Other	_____	
___	Other	_____	
___	Other	_____	
	TOTAL TONS	-0-	(enter data on Page 4, Solid Waste ReUsed)

II. Recycling of any Non-Municipal Solid Waste

✓	Material description	Tons	
___	Industrial	_____	
___	Construction	_____	
___	Demolition	_____	
___	Debris	_____	
___	Other	_____	
___	Other	_____	
___	Other	_____	
	TOTAL TONS	-0-	(enter data on Page 4, Non-MSW Recycled)

III. Inoperable Vehicles Removed and Demolished – include number of vehicles that the localities received reimbursement from DMV under §46.2-1207 of the Code of Virginia.

of vehicles removed/reimbursement received

Average tonnage per vehicle

X 1 Ton each

Total Tons

-0-

(enter data on Page 3,
PRMs, Inoperative
Motor Vehicle
Program)

NOTE: Check "Exclusions" on Page 4 to avoid listing of those materials on this worksheet and/or in the data fields of this report.



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

TDD (804) 698-4021

www.deq.virginia.gov

Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

May 18, 2012

Ms. Linda Zirkle
County of Rockingham
P.O. Box 1252
Harrisonburg, Virginia 22803

Dear Ms. Zirkle:

We have completed our review of Rockingham County's 2011 Recycling Rate Report submitted pursuant to The Virginia Regulations for Solid Waste Management Planning (9VAC-20-130-165). State law (10.1-1411) and section 120.B. of the regulations require each city, county, town or region to maintain a minimum recycling rate and to report the data for the previous calendar year to DEQ by April 30 of each year. The Rockingham County was to meet or exceed a 15% mandated recycling rate based upon the criteria established in 2006.

We accept your data as submitted, and your calculated recycling rate for CY 2011 will be reported as 33.3 %. This information has been forwarded to DEQ's Office of Waste Permitting and Compliance for consideration during their reviews of the Solid Waste Management Plans.

Attached for your review and filing is our worksheet that shows the DEQ review of your report. Please contact me with any questions.

Sincerely,

G. Stephen "Steve" Coe

G. Stephen Coe
Environmental Specialist - Recycling
Office of Land Protection & Revitalization

Enclosure
Cc: RRR file

2011 Recycling Rate Reporting

PRMs	As Submitted	Changes	SWPU Rockingham County		2/9/12
			Submitted RR:	33.0%	
Paper	8402.96		DEQ Adjusted RR:		
Metal	10127.94				
Plastic	751.33				
Glass	267.72		Calculations:	SWPU	DEQ
Commingled	0		PRMs/(PRMs + M) x 100	33.3%	#DIV/0!
Yard Waste	0				
Waste Wood	2520.5				
Textiles	0				
Tires	940.52		(PRMs+C)/(PRMs+C+M) x 100	33.3%	#DIV/0!
Used Oil	292.21				
Used Oil Filters	17.18				
Used Antifreeze	16.56				
Batteries	1235.98		M = MSW		
Electronics	5.5		C = Credits		
Inoperative Motor Vehicles	0				
Other Shoes	0.85				
Other Food	282.16				
Total:	24861.41	0			
MSW:					
Household	30464.47				
Commercial	19319.65				
Institutional	0				
Other	0		Base Recycling Rate	33.3%	#DIV/0!
Total:	49784.12	0			
Credits:					
Recycling Residue					
			Adjusted RR # 1	33.3%	#DIV/0!
Solid Waste Reused					
			Adjusted RR # 2	33.3%	#DIV/0!
Non MSW Recycled					
			(Max of 5%) Credits:	33.3%	#DIV/0!
Credits Total Tons	0	0			
			Final RR:	33.3%	#DIV/0!
Source Reduction	0.00%	0.00%			
Notes:					



Commonwealth of Virginia Locality Recycling Rate Report For Calendar Year 2011

Contact Information

Reporting Solid Waste Planning Unit: Rockingham County

Person Completing This Form: Linda B. Zirkle

Title: Recycling Coordinator

Address: P.O. Box 1252 Harrisonburg VA 22803
Street/P.O. Box City State Zip

Phone #: (540) 564-3008 Fax #: (540) 564-3048

Email Address: lzirkle@rockinghamcountyva.gov

Member Governments (The local governments identified in your regional solid waste management plan and whose data is included in this report):

Towns of Bridgewater, Broadway, Dayton, Elkton, Grottoes, Mt. Crawford
and Timberville.

Due to the complexity and difficulty in obtaining data, this report reflects the best efforts of the solid waste planning unit to represent its recycling efforts for CY 2011. I certify that I have personally examined and am familiar with the information submitted in this form and any attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. These records will be made available for auditing purposes, if requested.


Authorized Signature

County Administrator
Title

2/3/12
Date

Return completed form by April 30, 2012 to: Virginia DEQ, Attn: Recycling Rates, P.O. Box 1105, Richmond, VA 23218.

Locality Recycling Rate Report

For Calendar Year 2011

PART A: Recycling Rate Calculation - Using the formulae provided below and the information reported on Pages 3, 4 and 5 to calculate your recycling rates.

Step 1: $[(PRMs) / (PRMs + MSW Disposed)] \times 100 = \text{Base Recycling Rate } \%$

$$\boxed{24,861.41} / \boxed{24,861.41 + 49,784.12} \times 100 = \boxed{33} \%$$

Step 2: CREDITS calculation

- a. Total Recycling Residue _____ tons
- b. Total Solid Waste Reused _____ tons
- c. Total Non-MSW Recycled _____ tons

CREDITS _____ tons

Step 3: $[(PRMs + CREDITS) / (PRMs + CREDITS + MSW Disposed)] \times 100 = \text{Adjusted Recycling Rate \#1}^*$

$$\boxed{} + \boxed{} / \boxed{} + \boxed{} + \boxed{} \times 100 = \boxed{} \%$$

Step 4: ☐ Source Reduction Credit does not apply; or

☐ Adjusted Recycling Rate #1 + 2% SRP Credit = Adjusted Recycling Rate #2*

$$\boxed{} \% + 2\% = \boxed{} \%$$

Step 5: Final Recycling Rate* for Solid Waste Planning Unit = 33 %

* Total credits resulting from Steps 3 and 4 may not exceed 5 percentage points above the Base Recycling Rate achieved by the Solid Waste Planning Unit.

Locality Recycling Rate Report
PART B: DATA

For Calendar Year 20₁₁

Part I: Principal Recyclable Materials (PRMs): Report only PRM material generated within the reporting SWPU and recycled, NOT imported PRMs for recycling.

<u>PRM TYPE</u>	<u>RECYCLED AMOUNT (TONS)</u>
Paper	8,402.96
Metal	10,127.94
Plastic	751.33
Glass	267.72
Commingled (also known as Single Stream)	
Yard Waste (composted or mulched)	
Waste wood (chipped or mulched)	2,520.50
Textiles	
Tires	940.52
Used Oil	292.21
Used Oil Filters	17.18
Used Antifreeze	16.56
Batteries	1,235.98
Electronics	5.50
Inoperative Motor Vehicles (see guidance)	
Other (specify: <u>Shoes</u>)	.85
Other (specify: <u>Food</u>)	282.16
TOTAL PRMs	24,861.41 (PRMs)
	(Enter Total on Page 2, Step 1)

Part II: Credits by Category (see Credits Worksheet, Page 5)

A. Recycling Residue – “Recycling residue” means the (i) nonmetallic substances, including but not limited to plastic, rubber, and insulation, which remain after a shredder has separated for purposes of recycling the ferrous and nonferrous metal from a motor vehicle, appliance, or other discarded metallic item and (ii) organic waste remaining after removal of metals, glass, plastics and paper which are to be recycled as part of a resource recovery process for municipal solid waste resulting in the production of a refuse derived fuel. (§ 10.1-1400 of the *Code of Virginia*) (use only SWPU generation)

<u>MATERIAL DESCRIPTION</u>	<u>FACILITY/OPERATION</u>	<u>TONS OF MATERIAL</u>
_____ from _____	_____	_____
_____ from _____	_____	_____
_____ from _____	_____	_____

TOTAL RECYCLING RESIDUE

(Enter Total on Page 2, Step 2 a)

Locality Recycling Rate Report

For Calendar Year 2011

B. Solid Waste Re-Used

MATERIAL
DESCRIPTION

REUSE METHOD

TONS OF MATERIAL

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

TOTAL SOLID WASTE REUSED

0

(Enter Total on Page 2, Step 2 b)

C. Non-Municipal Solid Waste (MSW) Recycled

MATERIAL
DESCRIPTION

RECYCLING METHOD

TONS OF MATERIAL

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

TOTAL NON-MSW RECYCLED

0

(Enter Total on Page 2, Step 2 c)

D: A credit of two (2) percentage points may be added to the Adjusted Recycling Rate #1 if the Solid Waste Planning Unit has implemented a Source Reduction Program (SRP). Examples of SRPs include Grasscycling, Home Composting, Clothing Reuse, Office Paper Reduction (duplexing), Multi-Use Pallets, or Paper Towel Reduction. The SRP must be included in the Solid Waste Management Plan on file with the Department:

SRP description: _____

SRP description: _____

SRP description: _____

(Certify on Page 2, Step 4)

Exclusions: For the purposes of this report, the following materials are not considered solid wastes, and should not be included in any of the data categories utilized in calculating the recycling rate.

1. Biosolids – industrial sludge, animal manures; or, sewage sludge (unless composted)
2. Automobiles – unless part of the Inoperable Vehicle Program (DMV)
3. Leachate
4. Soils – contaminated soils, soil material from road maintenance
5. Household hazardous waste
6. Hazardous waste
7. Medical waste
8. Rocks or stone

Locality Recycling Rate Report

For Calendar Year 2011

<u>MSW TYPE</u>	<u>TOTAL AMOUNT DISPOSED (TONS)</u>
Household	<u>30,464.47</u>
Commercial	<u>19,319.65</u>
Institutional	<u>-0-</u>
Other (DO NOT INCLUDE INDUSTRIAL WASTES)	<u> </u>
TOTAL MSW DISPOSED	<u>49,784.12</u> (Enter Total on Page 2, Step 1 and Step 3)

****MSW DISPOSED** for the purpose of this report means delivered to a permitted sanitary landfill, transfer station, or waste incinerator for disposal.

Locality Recycling Rate Report

For Calendar Year 2011

Credits Worksheet

I. Reuse of any Solid Waste

✓	Material description	Tons	
___	PRM	___	
___	PRM	___	
___	PRM	___	
___	Industrial	___	
___	Construction	___	
___	Demolition	___	
___	Debris	___	
___	Other	___	
___	Other	___	
___	Other	___	
	TOTAL TONS	<u>0</u>	(enter data on Page 4, Solid Waste ReUsed)

II. Recycling of any Non-Municipal Solid Waste

✓	Material description	Tons	
___	Industrial	___	
___	Construction	___	
___	Demolition	___	
___	Debris	___	
___	Other	___	
___	Other	___	
___	Other	___	
	TOTAL TONS	<u>0</u>	(enter data on Page 4, Non-MSW Recycled)

III. Inoperable Vehicles Removed and Demolished – include number of vehicles that the localities received reimbursement from DMV under §46.2-1207 of the Code of Virginia.

# of vehicles removed/reimbursement received	<u>0</u>	
Average tonnage per vehicle	X 1 Ton each	
Total Tons	<u>0</u>	(enter data on Page 3, PRMs, Inoperative Motor Vehicle Program)

NOTE: Check "Exclusions" on Page 4 to avoid listing of those materials on this worksheet and/or in the data fields of this report.



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

TDD (804) 698-4021

www.deq.virginia.gov

Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

April 19, 2011

Ms. Linda Zirkle
County of Rockingham
P.O. Box 1252
Harrisonburg, Virginia 22803

Dear Ms. Zirkle:

We have completed our review of Rockingham County's 2010 Recycling Rate Report submitted pursuant to The Virginia Regulations for Solid Waste Management Planning (9VAC-20-130-165). State law (10.1-1411) and section 120.B. of the regulations require each city, county, town or region to maintain a minimum recycling rate and to report the data for the previous calendar year to DEQ by April 30 of each year. The Rockingham County was to meet or exceed a 15% mandated recycling rate based upon the criteria established in 2006.

We accept your data as submitted, and your calculated recycling rate for CY 2010 will be reported as 35.6 %. This information has been forwarded to DEQ's Office of Waste Permitting and Compliance for consideration during their reviews of the Solid Waste Management Plans.

Attached for your review and filing is our worksheet that shows the DEQ review of your report. Please contact me with any questions.

Sincerely,

G. Stephen "Steve" Coe

G. Stephen Coe
Environmental Specialist - Recycling
Office of Land Protection & Revitalization

Enclosure

Cc: Dan Gwinner, DEQ

2010 Recycling Rate Reporting

PRMs	As Submitted	Changes	SWPU Greater Rockingham		3/7/11
		NONE	Submitted RR:	36.0%	
Paper	7070.27		DEQ Adjusted RR:	35.6%	
Metal	16843.1				
Plastic	678.23				
Glass	521.05		Calculations:	SWPU	DEQ
Commingled	0		PRMs/(PRMs + M) x 100	35.6%	#DIV/0!
Yard Waste	0				
Waste Wood	770.5				
Textiles	0				
Tires	484.43		(PRMs+C)/(PRMs+C+M) x 100	35.6%	#DIV/0!
Used Oil	331.84				
Used Oil Filters	25.38				
Used Antifreeze	17.39				
Batteries	811.23		M = MSW		
Electronics	162		C = Credits		
Inoperative Motor Vehicles	0				
Other Food	1042.88				
Other shoes	2.47				
Total:	28760.77	0			
MSW:					
Household	41593.78				
Commercial	10427.44				
Institutional	0				
Other	0		Base Recycling Rate	35.6%	#DIV/0!
Total:	52021.22	0			
Credits:					
Recycling Residue	0				
			Adjusted RR # 1	35.6%	#DIV/0!
Solid Waste Reused	0				
			Adjusted RR # 2	35.6%	#DIV/0!
Non MSW Recycled	0				
			(Max of 5%) Credits:	35.6%	#DIV/0!
Credits Total Tons	0	0			
			Final RR:	35.6%	#DIV/0!
Source Reduction	0.00%	0.00%			
Notes:					



Commonwealth of Virginia Locality Recycling Rate Report For Calendar Year 2010

Contact Information

Reporting Solid Waste Planning Unit: Rockingham County

Person Completing This Form: Linda B. Zirkle

Title: Recycling Coordinator

Address: P.O. Box 1252 Harrisonburg VA 22803
Street/P.O. Box City State Zip

Phone #: (540) 564-3008 Fax #: (540) 564-3048

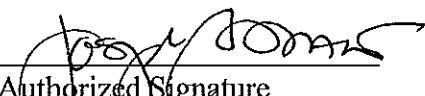
Email Address: lzirkle@rockinghamcountyva.gov

Member Governments (The local governments identified in your regional solid waste management plan and whose data is included in this report):

Towns of Bridgewater, Broadway, Dayton, Elkton, Grottoes,

Mt. Crawford & Timberville

Due to the complexity and difficulty in obtaining data, this report reflects the best efforts of the solid waste planning unit to represent its recycling efforts for CY 2010. I certify that I have personally examined and am familiar with the information submitted in this form and any attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. These records will be made available for auditing purposes, if requested.

 County Administrator 2/28/11
Authorized Signature Title Date

Return completed form by April 30, 2011 to: Virginia DEQ, Attn: Recycling Rates, P.O. Box 1105, Richmond, VA 23218.

Locality Recycling Rate Report

For Calendar Year 2010

PART A: Recycling Rate Calculation - Using the formulae provided below and the information reported on Pages 3, 4 and 5 to calculate your recycling rates.

Step 1: $[(PRMs) / (PRMs + MSW Disposed)] \times 100 = \text{Base Recycling Rate } \%$

$$\boxed{28,760.77} / \boxed{28,760.77} + \boxed{52,021.22} \times 100 = \boxed{36} \%$$

Step 2: CREDITS calculation

- a. Total Recycling Residue _____ tons
- b. Total Solid Waste Reused _____ tons
- c. Total Non-MSW Recycled _____ tons

CREDITS 0 tons

Step 3: $[(PRMs + CREDITS) / (PRMs + CREDITS + MSW Disposed)] \times 100 = \text{Adjusted Recycling Rate \#1}^*$

$$\boxed{} + \boxed{} / \boxed{} + \boxed{} + \boxed{} \times 100 = \boxed{} \%$$

Step 4: ☐ Source Reduction Credit does not apply; or

☐ Adjusted Recycling Rate #1 + 2% SRP Credit = Adjusted Recycling Rate #2*

$$\boxed{} \% + 2\% = \boxed{} \%$$

Step 5: Final Recycling Rate* for Solid Waste Planning Unit = 36 %

* Total credits resulting from Steps 3 and 4 may not exceed 5 percentage points above the Base Recycling Rate achieved by the Solid Waste Planning Unit.

Locality Recycling Rate Report
PART B: DATA

For Calendar Year 2010

Part I: Principal Recyclable Materials (PRMs): Report only PRM material generated within the reporting SWPU and recycled, NOT imported PRMs for recycling.

<u>PRM TYPE</u>	<u>RECYCLED AMOUNT (TONS)</u>
Paper	7,070.27
Metal	16,843.10
Plastic	678.23
Glass	521.05
Commingled (also known as Single Stream)	
Yard Waste (composted or mulched)	
Waste wood (chipped or mulched)	770.50
Textiles	
Tires	484.43
Used Oil	331.84
Used Oil Filters	25.38
Used Antifreeze	17.39
Batteries	811.23
Electronics	162.00
Inoperative Motor Vehicles (see guidance)	
Other (specify: <u>Food</u>)	1,042.88
Other (specify: <u>Shoes</u>)	2.47
TOTAL PRMs	28,760.77 (PRMs)
	(Enter Total on Page 2, Step 1)

Part II: Credits by Category (see Credits Worksheet, Page 5)

A. Recycling Residue – “Recycling residue” means the (i) nonmetallic substances, including but not limited to plastic, rubber, and insulation, which remain after a shredder has separated for purposes of recycling the ferrous and nonferrous metal from a motor vehicle, appliance, or other discarded metallic item and (ii) organic waste remaining after removal of metals, glass, plastics and paper which are to be recycled as part of a resource recovery process for municipal solid waste resulting in the production of a refuse derived fuel. (§ 10.1-1400 of the *Code of Virginia*) (use only SWPU generation)

<u>MATERIAL DESCRIPTION</u>	<u>FACILITY/OPERATION</u>	<u>TONS OF MATERIAL</u>
_____ from _____	_____	_____
_____ from _____	_____	_____
_____ from _____	_____	_____
TOTAL RECYCLING RESIDUE		0
		(Enter Total on Page 2, Step 2 a)

Locality Recycling Rate Report

For Calendar Year 2010

B: Solid Waste ReUsed

MATERIAL
DESCRIPTION

REUSE METHOD

TONS OF MATERIAL

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

TOTAL SOLID WASTE REUSED

0

(Enter Total on Page 2, Step 2 b)

C. Non-Municipal Solid Waste (MSW) Recycled

MATERIAL
DESCRIPTION

RECYCLING METHOD

TONS OF MATERIAL

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

TOTAL NON-MSW RECYCLED

0

(Enter Total on Page 2, Step 2 c)

D: A credit of two (2) percentage points may be added to the Adjusted Recycling Rate #1 if the Solid Waste Planning Unit has implemented a Source Reduction Program (SRP). Examples of SRPs include Grasscycling, Home Composting, Clothing Reuse, Office Paper Reduction (duplexing), Multi-Use Pallets, or Paper Towel Reduction. The SRP must be included in the Solid Waste Management Plan on file with the Department:

SRP description: _____

SRP description: _____

SRP description: _____

SRP description: _____

(Certify on Page 2, Step 4)

Exclusions: For the purposes of this report, the following materials are not considered solid wastes, and should not be included in any of the data categories utilized in calculating the recycling rate.

1. Biosolids – industrial sludge, animal manures; or, sewage sludge (unless composted)
2. Automobiles – unless part of the Inoperable Vehicle Program (DMV)
3. Leachate
4. Soils – contaminated soils, soil material from road maintenance
5. Household hazardous waste
6. Hazardous waste
7. Medical waste

Locality Recycling Rate Report

For Calendar Year 2010

Part III: Total Municipal Solid Waste (MSW) Disposed** - Report only MSW generated within the reporting jurisdiction(s), NOT imported wastes or industrial wastes.

<u>MSW TYPE</u>	<u>TOTAL AMOUNT DISPOSED (TONS)</u>
Household	<u>41,593.78</u>
Commercial	<u>10,427.44</u>
Institutional	<u> </u>
Other (DO NOT INCLUDE INDUSTRIAL WASTES)	<u> </u>
TOTAL MSW DISPOSED	<u>52,021.22</u> (Enter Total on Page 2, Step 1 and Step 3)

****MSW DISPOSED** for the purpose of this report means delivered to a permitted sanitary landfill, transfer station, or waste incinerator for disposal.

Appendix C
List of Landfill, Collection, and Recycling Equipment

Rockingham County Collection Equipment - 2015

	LANDFILL	BERGTON	ELKTON	GROTTOES	OTTOBINE	MAUZY
Equipment						
RJ 325 HD Compactors	0	1	3	2	2	3
40 Yd. Receiving Box	2	2	3	2	2	3
20 Yd. Open Top (ALUMINUM)	1	1	1	1	1	1
20 Yd. Open Top (GLASS)	1	1	1	1	1	1
30 Yd. Enclosed (PLASTIC)	1	1	1	1	2	2
20 Yd. Enclosed (STEEL & BI-METAL)	1	1	1	1	1	1
30 Yd. Open Top (METAL)	1	2	2	2	2	2
30 Yd. Open Top (WOOD)	1	3	0	0	0	0
RJ 325 Compactors	2					
55' Trailer Payne's Scrap	1					
40 Yd. Open Top Bulk Items	4	* One of the 4 is a spare box left onsite at Bergton site.				
40 Yd. Open Top Metal Overflow	1					
30 Yd. Open Top White Goods	1	*Trailer is owned by Recycle Management.				
30 Yd. Open Top Electronics	1	*Trailer is owned by Recycle Management.				
Oil Tank 500 gallons or less	0	2	2	2	2	2
Tank 1,500 gallon	2	*One is for oil, the other is for antifreeze.				

Trailers

Cardboard	1	1	1	0	1	2
Newspaper	1	0	1	0	1	1
Spare	1	0	0	0	0	1
Goodwill Box	1	0	1	1	1	1
Tires	1					
*1 trailer at Bergton is a combination cardboard/newspaper trailer.						
*Newspaper/cardboard trailers are owned by Valley Paper. Tire trailer provided by Desper Hauling.						
*Goodwill owns the boxes at the sites. Mauzy also has a shed that is County owned and used for Goodwill collections.						

	LANDFILL	BERGTON	ELKTON	GROTTOES	OTTOBINE	MAUZY
Equipment						

Spare Containers

20 Yd. Open Top	2	
40 yd. receiving boxes	2	
20 yd. enclosed (STEEL & BI-METAL)	1	
30 yd. enclosed (PLASTIC)	2	

Roll Off Trucks*

2002 International		
2003 Kenworth		
2005 Mack		
2016 International		

*There are 1 of each listed. Trucks change locations.

Rockingham County Landfill Equipment

Equipment	Purchased
D6 Dozer (CAT)	11/14/2015
D6 Dozer (CAT)	8/12/2015
826 Compactor (CAT)	3/12/2015
826 Compactor (CAT)	12/14/2015
621B Rubber Tire Loader (CASE)	bought used
John Deere Broom Tractor/Brush Hog	
1992 GMC pickup	
1991 Ford Explorer	
1977 Mack Fuel Truck	
1971 Dodge Water Truck	bought used
Ford Tandem Dump Truck	
Equipment for removing freon	
2015 Polaris 570 - green	5/14/2015
2015 Polaris 570 Ranger w/cab – red	6/30/2015
236B Skid Steer Loader	bought used 6/09
270C John Deere Excavator	bought used 1/12
624K John Deere Rubber Tire Loader	10/10/2015
1995 Jeep Cherokee	1995
Golf Cart	bought used 3/11
JCB Backhoe	2008
Volvo Articulated Truck	2007
1992 963 Track loader (CAT)	bought used 10/05
610 Mule	3/10/2015
2005 Ford Explorer	1/2015 - from Sheriff's Dept
2006 Chevrolet Pickup Truck	2/06
2000 Jeep Cherokee	2/2012 - from Sheriff's Dept

Appendix D
Memorandum of Agreement for Pesticide Containers Recycling

MEMORANDUM OF AGREEMENT
between
VIRGINIA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES
and
ROCKINGHAM COUNTY

VDACS Contract #: 301-15-112

PURPOSE:

This Agreement establishes the roles and responsibilities of the Virginia Department of Agriculture and Consumer Services (VDACS) and Rockingham County in conducting the annual Plastic Pesticide Container Recycling Program. The Virginia Plastic Pesticide Container Recycling Program assists agricultural producers, pesticide dealers and pest control firms to recycle properly rinsed plastic pesticide containers.

CONTRACT PERIOD: January 1, 2015 through December 31, 2015.

RENEWAL OF CONTRACT: This contract may be renewed by VDACS upon written agreement of both parties for four (4) successive one year periods, under the terms of the current contract.

VDACS RESPONSIBILITIES:

1. **Administer the statewide Program.** VDACS shall administer and provide oversight of the statewide Program by:
 1. establishing guidelines for statewide Program;
 2. approving local government programs;
 3. scheduling the granulation of containers; and,
 4. monitoring each local program to ensure their adherence to established guidelines.
2. **Reimburse Rockingham County up to the amount of \$ 1,875 to support the costs of the Program.** VDACS shall reimburse Rockingham County for actual local program expenses for the administration of the Plastic Pesticide Container Recycling Program incurred during the contract period (January 1 – December 31) up to \$1,875. All expenses must be directly related to the Plastic Pesticide Container Recycling Program and may include: construction, rental, and material costs related to the establishment of a collection site; salaries, wages, and fringe benefits for container inspection and administration of the Program; travel expenses (travel expenses not to exceed allowable State rates in effect at the time travel occurred), safety equipment purchases, incentives and training materials related to the Program. Reimbursement shall be made upon receipt of an activity report and expense reimbursement request, including receipts, for the contract period (January 1 – December 31).
3. **Provide educational materials for use by Rockingham County for distribution to participants.** VDACS shall provide, upon request, educational materials (slide series, videotapes,

pamphlets, etc.) which illustrate the proper procedures for rinsing pesticide containers, pesticide container inspection checklists, wellhead protection and the overall recycling program. VDACS shall also assist Rockingham County in educating participants in the recycling program, upon request.

4. **Provide training for pesticide container inspectors.** VDACS shall, upon request, train Rockingham County pesticide container inspectors to properly inspect pesticide containers for cleanliness and educate participants in proper rinsing procedures. All pesticide container inspectors must complete this training.
5. **Provide jet-rinse nozzles as requested.** VDACS shall provide, upon request, a limited supply of jet-rinse nozzles to Rockingham County to assist in promoting the recycling program, upon request. The jet-rinse nozzles shall be distributed to agricultural producers, pesticide dealers and pest control firms who agree to recycle their plastic pesticide containers, until supplies run out.
6. **Coordinate the scheduling for the granulation of pesticide containers.** VDACS shall coordinate the scheduling for the granulation of pesticide containers at Rockingham County collection site. It is anticipated that 1-2 visits will be made during the Program year to granulate the collected containers.

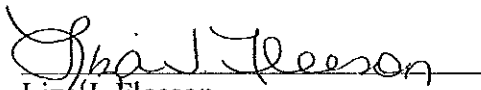
ROCKINGHAM COUNTY RESPONSIBILITIES:

1. **Develop plan to administer the Recycling Program.** Rockingham County shall develop a written plan for implementing and administering the Plastic Pesticide Container Recycling Program for their locality and submit the plan to VDACS for concurrence. The written plan must address the following topics:
 1. location of collection site(s);
 2. collection site(s) hours of operation;
 3. method for storing accepted containers;
 4. pesticide container inspection personnel; and,
 5. handling containers rejected by granulator.
2. **Administer the Plastic Pesticide Container Recycling Program in Rockingham County.** Rockingham County shall administer the local Program by:
 1. establishment of a secure, covered recycling site;
 2. employment and supervision of container inspector(s);
 3. removal of all plastic pesticide sleeves or labels prior to placement in the recycling storage facility;
 4. inspection of all plastic pesticide containers to assure cleanliness in accordance with established guidelines;
 5. assisting the recycling contractor during the processing and granulation of the containers; and,
 6. submission of an activity report and expense reimbursement request, including

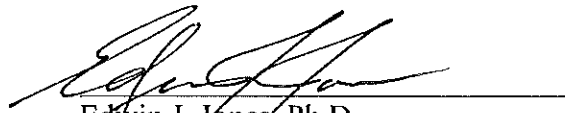
receipts, for the contract period (January 1 – December 31) to VDACS by January 31st of the following year.

3. **Execute documentation transferring container ownership to granulator.** Rockingham County shall execute and sign the documentation transferring ownership of the containers to the recycling contractor.
4. **Educate agricultural producers about proper pesticide container rinsing procedures and the Recycling Program.** Rockingham County, through Virginia Polytechnic Institute and State University through its Virginia Cooperative Extension (VCE), shall promote the value of recycling plastic pesticide containers to the agricultural community. VCE shall educate agricultural producers about proper pesticide container rinsing procedures and the Recycling Program through the distribution of educational materials and presentations at growers' meetings.
5. **Distribute jet-rinse nozzles to participating agricultural producers.** To promote the recycling program and encourage participation, Rockingham County, through VCE, shall distribute VDACS-supplied jet-rinse nozzles to agricultural producers, pesticide dealers and pest control firms agreeing to participate in the Program.

This Memorandum of Agreement has been reviewed and is recommended for approval:



Liza U. Fleeson
Program Manager
Virginia Department of Agriculture
and Consumer Services

February 20, 2015
DATE

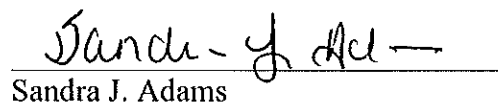

Edwin J. Jones, Ph.D.
Director
Virginia Cooperative Extension

May 8, 2015
DATE

Approved by:


Joseph S. Paxton
County Administrator
Rockingham County

3-9-15
DATE


Sandra J. Adams
Commissioner
Virginia Department of Agriculture
and Consumer Services

June 1, 2015
DATE

Appendix E
Resolutions of Adoption - 2015 & Original



JOSEPH S. PAXTON
County Administrator



ROCKINGHAM COUNTY

BOARD OF SUPERVISORS

PABLO CUEVAS

Election District No. 1

FREDERICK E. EBERLY

Election District No. 2

RICK L. CHANDLER

Election District No. 3

WILLIAM B. KYGER, JR.

Election District No. 4

MICHAEL A. BREEDEN

Election District No. 5

RESOLUTION ADOPTING THE GREATER ROCKINGHAM SOLID WASTE MANAGEMENT PLAN 2015 UPDATE

WHEREAS, the County of Rockingham and the Towns of Bridgewater, Broadway, Dayton, Elkton, Grottoes, Mount Crawford, and Timberville have been designated as a solid waste planning region known as The Greater Rockingham Solid Waste Management Region for the purpose of joint development of a solid waste management plan; and

WHEREAS, Solid Waste Planning Regulations, Amendment 3, 9VAC20-130-10 et seq., effective August 3, 2011, require each region in Virginia to develop comprehensive and integrated solid waste management plans by July 1, 2004 that, at a minimum:

- Identify the solid waste management needs and objectives of the Region for the next 20 years while seeking to protect the public health, public safety, environment, and natural resources of the Region with the most effective and efficient use of available resources.
- Produce an implementation and funding strategy to meet the needs and objectives identified in the plan.
- Continue to develop the Region's integrated waste management strategy, which includes source reduction, reuse, recycling, and landfill disposal.
- Ensure that the Region maintains or exceeds the state mandated 25% recycling rate.
- Provide a strategy to sustain or improve public education and information on source reduction, reuse, and recycling.
- Consider public and private sector partnerships in the improvement of solid waste management; and

WHEREAS, Solid Waste Management Regulation, 9VAC20-130-175, requires Solid Waste Management Plans to be updated before every five-year anniversary of the Virginia Department of Environmental Quality's original plan-approval date.

NOW, THEREFORE, BE IT RESOLVED, that the County of Rockingham and the Towns of Bridgewater, Broadway, Dayton, Elkton, Grottoes, Mount Crawford and Timberville, Virginia, do hereby adopt the Greater Rockingham Solid Waste Management Plan 2015 Update in accordance with 9VAC20-130-120; and

BE IT FURTHER RESOLVED, that the Rockingham County Board of Supervisors authorizes the Rockingham County Administrator to submit the Greater Rockingham Solid Waste Management Plan to the Virginia Department of Environmental Quality by September 30, 2015.

Given under our hand this ninth day of September
in the year two thousand fifteen, A.D.

Michael A. Breeden, Chairman
Supervisor, District 5

Pablo Cuevas
Supervisor, District 1

Frederick E. Eberly
Supervisor, District 2

Rick L. Chandler
Supervisor District 3

William B. Kyger, Jr.
Supervisor, District 4

Attest:

Joseph S. Paxton, County Administrator

**RESOLUTION
ADOPTING
THE GREATER ROCKINGHAM SOLID WASTE MANAGEMENT PLAN**

WHEREAS, the County of Rockingham and the Towns of Bridgewater, Broadway, Dayton, Elkton, Grottoes, Mount Crawford and Timberville, have been designated as a solid waste planning region known as The Greater Rockingham Solid Waste Management Region for the purpose of joint development of a solid waste management plan, and

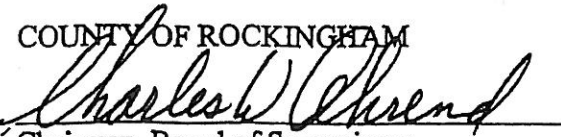
WHEREAS, Solid Waste Planning Regulations, Amendment 1, 9 VAC 20-130-10 et seq., effective August 1, 2001, require each region in Virginia to develop comprehensive and integrated solid waste management plans by July 1, 2004 that, at a minimum:

- Identify the solid waste management needs and objectives of the Region for the next 20 years while seeking to protect the public health, public safety, environment, and natural resources of the Region with the most effective and efficient use of available resources.
- Produce an implementation and funding strategy to meet the needs and objectives identified in the plan.
- Continue to develop the Region's integrated waste management strategy, which includes source reduction, reuse, recycling, waste-to-energy, and landfill disposal.
- Ensure that the Region maintains or exceeds the state mandated 25% recycling rate.
- Provide a strategy to sustain or improve public education and information on source reduction, reuse, and recycling.
- Consider public and private sector partnerships in the improvement of solid waste management; and

NOW, THEREFORE, BE IT RESOLVED, that the County of Rockingham and the Towns of Bridgewater, Broadway, Dayton, Elkton, Grottoes, Mount Crawford and Timberville, Virginia, do hereby adopt the Greater Rockingham Solid Waste Management Plan in accordance with 9 VAC 20-130-140.

BE IT FURTHER RESOLVED, that the Rockingham County Board of Supervisors authorizes the Rockingham County Administrator to submit the Greater Rockingham Solid Waste Management Plan to the Virginia Department of Environmental Quality by September 30, 2004.

COUNTY OF ROCKINGHAM


Chairman, Board of Supervisors

ATTESTE:


Title County Administrator

TOWN OF BRIDGEWATER

William R. Pinkel
Mayor

ATTESTE:

Calleen O. Loveless
Clerk, Admin. Asst.
Title

TOWN OF BROADWAY

John F. Long Jr.
Mayor

ATTESTE:

Maura W. Klein
Clerk - Treasurer
Title

TOWN OF DAYTON

Don J. Kuder
Mayor

ATTESTE:

Brenda P. Stearn
Secretary
Title

TOWN OF ELKTON

W. E. C. C. C.
Mayor

ATTESTE:

Charlotte Shufflett
Clerk
Title
Spunk of ELKTON

TOWN OF GROTTOS

Charles W. Shy
Mayor

ATTESTE:

Charles E. Stickney
Maintenance Supervisor
Title

TOWN OF MOUNT CRAWFORD

Wynne L. Cook
Mayor

ATTESTE:

Yvonne Miller
4-H Leader, Ext. & Bridge Club
Title

TOWN OF TIMBERVILLE

Don D. G. G.
Mayor

ATTESTE:

M. B. G.
SALES
Title