Draft Update
Floyd County Solid Waste Management Plan
Floyd County Including the Town of Floyd

June 2016
ACKNOWLEDGEMENTS

Floyd County
Board of Supervisors
Case C. Clinger, Chairman
Joe D. Turman, Vice-Chairman
J. Fred Gerald
Linda DeVito Kuchenbuch
Lauren D. Yoder

Floyd Town Council
William R. Griffin, Mayor
Bruce A. Turner, Vice-Mayor
Karen A. Bingham
Paul L. LeMay
Michael S. Patton

Floyd County Staff
Terri W. Morris, County Administrator
Sherrell Thompson, Solid Waste Mgr.
Jabe Graham, Recycling Coordinator

Floyd Town Staff
Kayla W. Cox, Town Manager

Technical Assistance provided by:
New River Valley Regional Commission
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INTRODUCTION

Purpose and Authority

The purpose of the *Floyd County Solid Waste Management Plan* is to comply with the provisions of Chapter 14, Code of Virginia, 1950 as Amended and particularly §10.1-1411 which requires the preparation of local or regional solid waste management plans and Virginia’s Waste Management Board regulations (including 9 VAC 20-130-10 et seq.).

Additionally, this solid waste management plan will help to protect the public health and safety as well as the environment and natural resources of Floyd County. It will also promote local planning that provides for environmentally sound solid waste management with the most effective and efficient use of available resources. Lastly, it will help insure that state recycling requirements continue to be met. Local government resolutions of adoption are included in Appendix E.

Planning Area

Floyd County lies just to the west of the Blue Ridge in Southwest Virginia. The planning area includes the jurisdictions of the County of Floyd and the Town of Floyd. The County has a land area of 381.5 square miles, which are traversed by a vast highway network of 621 miles. Yet, there are no four-lane roads, and only 2 primary roads in the County. These two primary roads intersect in the Town of Floyd, the County seat and only town in the County. The Town of Floyd is located near the center of the County and has a land area of 0.6 square mile or about 384 acres. Map 1 is a location map of the County. Map 2 illustrates the County, the location of the Town of Floyd, and the road network.

History of Solid Waste Planning

Floyd County has been a participant in a number of studies dealing with a full range of solid waste management processes. In addition to many site specific studies which were enumerated in the last edition of this plan, the County has been a participant in at least five regional planning efforts going back to 1974 up to the 1989 Update of the *New River Valley Solid Waste Management Plan*.

Beginning July 1, 1992, an approved local solid waste plan was required by the state before solid waste management facilities could be approved. In order to promote recycling at the local level the General Assembly also required that the plans address the statewide recycling goal of 25 percent reduction in the municipal waste stream by 1995. This prompted the first Floyd County Solid Waste Plan, adopted in July 1991. The plan was updated in July 1999, as required by law. Both plans focused on meeting state requirements, making fiscally sound decisions, and educating the public about recycling. Since that time, Floyd County has elected to close its landfill and transfer solid waste from the County.
Map 1
Location of Floyd County

Floyd County and the Town of Floyd developed a new solid waste plan in 2004, in compliance with state regulations. That plan has been updated multiple times. This document serves to fully update the 2004 plan.

**Planning Process for 2004 Plan**

The planning process included input opportunities for private citizens and county and town staffs. Ideas for more source reduction, reuse, resource recovery and recycling were gathered at a public meeting. Ideas ranged from increasing the number of recycling collection sites, to more business and household outreach, to investigating the feasibility of capturing methane for use from the old landfill. The tables in Appendix A provide a summary of proposed and current actions that came from citizens during that process. Many of these suggestions were incorporated into the Goals, Strategies and Actions Timetable.

A citizen advisory committee reviewed the draft plan and made suggestions. The broader goals of this plan are also guided by the Floyd-Floyd County Comprehensive Plan in place at that time. Final Plan decisions were made by the Board of Supervisors and Town Council.

**Current State Regulations**

A current set of regulations for the development of Solid Waste Management Plans (9 VAC 20, Chapter 130) is included in Appendix B. The required elements of solid waste plans are found in those regulations at 9 VAC 20-130-120. Also, per recycling requirements at 9 VAC 20-130-125, Floyd County is now subject to a minimum recycling rate of 15%, rather than 25%, due to the fact that the County’s population density is less than 100 persons per square mile.
SOLID WASTE HIERARCHY

People make hundreds of decisions daily regarding what materials or goods to use, and then in deciding the placement of those goods after the regular lifecycle has been expended. The Virginia Waste Management Board (VWMB) speaks of these choices in terms of a hierarchy. This hierarchy consists of the following: source reduction, reuse, recycling, resource recovery (waste-to-energy), incineration and landfilling. These are defined here, and local information is included as appropriate.

- **Source Reduction** means “any action that reduces or eliminates the generation of waste at the source, usually within a process.” It is, by definition, the most difficult of the waste reduction methods to track in the waste systems operation. It includes any process modifications or improvements. For example, the Floyd County administrative staff has dramatically and consciously reduced paper usage internally through electronic communication such as email. A county-wide fiber-optic network, owned and operated by Citizens, a local cooperative, is providing the same rapid, paper-less communications for homes and industries. Other, less obvious source reductions include the use of cloth or paper bags and containers by local commercial establishments, which reduce the demand for non-renewable products, and encourage reuse and recycling. See the second table (current actions) in Appendix A for additional source reduction techniques reported in Floyd County.

- **Reuse** means “the process of separating a given solid waste material from the waste stream and reusing it, without processing it or changing its form, other than size reduction, for the same or another end use.” For example, the Floyd County Solid Waste staff heats their building with used motor oil. Reuse is culturally engrained in this rural mountain community, to the point that much of it is invisible to tracking efforts: such as reusing commercial food containers such as plastic, glass or aluminum; reusing scraps of cloth and other materials for quilts and art projects; and reusing wood, such as the recovered beams used at Chateau Morrisette Winery. Other reuse processes have been institutionalized, such as local antique shops, flea markets, and yard sales. Also, a local thrift shop, Angels in the Attic, accepts used items, which it resells to raise funds for local service charities. See the second table (current actions) in Appendix A for additional reuse techniques reported in Floyd County.

- **Recycling** officially means “the process of separating a given waste material from the waste stream and processing it so that it may be used again as a raw material for a product, which may or may not be similar to the original product.” (In practice, this word is often used generically to represent any action reducing the flow of waste to landfills.) Collecting and processing secondary materials, manufacturing recycled-content products, and then purchasing recycled products creates a circle or loop that ensures the overall success and value of recycling. Information on recyclable materials is usually categorized as either "principal" or "supplemental" recyclable materials. The County has partnered with Hollingsworth & Vose, a local manufacturer, to facilitate recycling of a scrap material that is left over from the company’s manufacturing process.
• **Principal recyclable** materials include: paper (newspapers, corrugated cardboard, Kraft paper, high-grade office paper), metal (ferrous scrap metal, non-ferrous scrap metal, aluminum, tin cans), plastic, glass, yard waste (composted or mulched), wood, and textiles.

• **Supplemental recyclable** materials include: tires, used oil, auto bodies, construction waste, demolition waste, debris waste, batteries, ash, and sludge.

Local government-sponsored recycling was initiated more than 20 years ago through the placement of recycling drop-off bins. In Floyd County the citizens are already in the habit of bringing their trash to a conveniently located greenbox, so the recycling bins were a natural extension of this system.

Note that industrial and manufacturing waste is not officially part of “municipal solid waste,” but it has traditionally been included by localities, including Floyd County to be sure all significant recycling efforts are reported.

• **Resource Recovery** (waste-to-energy) means the “collection, separation, recycling and recovery of energy or solid wastes.” In some localities, waste is incinerated and steam is recaptured and/or power is generated. Due to the small nature of the Floyd County waste stream, incineration is not considered economically feasible. Ideas were shared by a couple of citizens at a public input meeting for this planning process regarding the capture of methane from old landfills. This idea will be further elaborated upon later in this document.

• **Incineration** of refuse as a waste stream reduction method without recovery of steam or the generation of electrical power was not considered as a viable approach, again due to the relatively small waste stream in Floyd County.

• **Land-filling** is the primary management method employed for the disposal of municipal solid waste. Floyd County stopped using its landfill in 1993, and now pays for the transport and disposal of all solid waste out of the County.

In summary, solid waste management in Floyd County, and this plan, focuses primarily on the ability to minimize waste that needs to be land-filled by focusing on source reduction, reuse and recycling programs.
DATA

1. Population

Floyd County’s population is estimated at 15,430 residents, according to Weldon Cooper Center data for 2015. This estimate indicates growth of 1% since the 2010 Census. Population grew by 10% between 2000 and 2010, but that growth has slowed somewhat in recent years. Projections indicate that growth in Floyd County will continue to moderate after the years of higher growth rates (i.e., 1990s and 2000s) when Floyd added many new residents, including many retirees and commuters who work in nearby urban areas. The sources of growth for Floyd County are primarily in-migration, which accounted for 270 of the 291 additional residents in Floyd between 2010 and 2014 (US Census Bureau, 2014 Population Estimates). Floyd County has an aging population, with a higher median age and a greater proportion of County residents who are age 65 or over, as compared to Virginia and the surrounding New River Valley region (consisting of the counties of Floyd, Giles, Montgomery, and Pulaski, and the City of Radford).

Table 1: Floyd County Population

<table>
<thead>
<tr>
<th>Area</th>
<th>2000 Census Population</th>
<th>2010 Census Population</th>
<th>Weldon Cooper Center Estimates</th>
<th>Percent Population age 65 and over (ACS estimates)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Town of Floyd</td>
<td>432</td>
<td>425</td>
<td>434</td>
<td>24.7%</td>
</tr>
<tr>
<td>Floyd County</td>
<td>13,874</td>
<td>15,279</td>
<td>15,430</td>
<td>19.0%</td>
</tr>
<tr>
<td>New River Valley</td>
<td>165,146</td>
<td>178,237</td>
<td>182,991</td>
<td>13.5%</td>
</tr>
<tr>
<td>Virginia</td>
<td>7,078,515</td>
<td>8,001,024</td>
<td>8,382,993</td>
<td>13.0%</td>
</tr>
</tbody>
</table>


Population Projections

The Weldon Cooper Center and the Virginia Employment Commission produce population projections for Virginia localities based on historic trends and current demographic information. The most recent estimates (created in 2012) predict continued modest growth for Floyd County in the upcoming decades, with Floyd County population projected to add 1,366 residents between 2010 and 2040, for a total of 16,645 residents. Over the same period, the New River Valley region is projected to grow by around 7% per decade, for a total of 219,420 residents by 2040. Much of this growth is projected to occur in the region’s urban areas in Montgomery County (Blacksburg and Christiansburg). It should be noted that these projections are old, in need of update, and are based on past trends.
Table 2: Floyd County Population Projections

<table>
<thead>
<tr>
<th></th>
<th>Number of residents</th>
<th>Growth rate over previous decade</th>
<th>Residents added over previous decade</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010 Census Population</td>
<td>15,279</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>2020 Projection</td>
<td>15,902</td>
<td>4.1%</td>
<td>627</td>
</tr>
<tr>
<td>2030 Projection</td>
<td>16,311</td>
<td>2.6%</td>
<td>409</td>
</tr>
<tr>
<td>2040 Projection</td>
<td>16,645</td>
<td>2.0%</td>
<td>334</td>
</tr>
<tr>
<td><strong>Growth rate/population increase 2010-2040</strong></td>
<td><strong>8.9%</strong></td>
<td><strong>1,366</strong></td>
<td></td>
</tr>
</tbody>
</table>


In order to develop a 20-year population projection, an annual growth rate of 0.3% was used starting from the Weldon Cooper Center 2015 population estimate of 15,430. This rate is slightly more than the 0.2% annual rate indicated by recent growth between 2010 and 2015 and puts growth in the vicinity of the long-term trends shown in Table 2. The projected growth in Table 3 amounts to 3.0% population growth in each decade of the projection period.

Table 3: 20-Year Population Projection

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>15,476</td>
<td>15,522</td>
<td>15,569</td>
<td>15,616</td>
<td>15,663</td>
<td>15,710</td>
<td>15,757</td>
<td>15,804</td>
<td>15,851</td>
<td>15,899</td>
</tr>
<tr>
<td>Year</td>
<td>2026</td>
<td>2027</td>
<td>2028</td>
<td>2029</td>
<td>2030</td>
<td>2031</td>
<td>2032</td>
<td>2033</td>
<td>2034</td>
<td>2035</td>
</tr>
</tbody>
</table>

Development Patterns

Floyd County has one incorporated area, the Town of Floyd, which exhibits a development pattern that is more urban than the rest of the County. Residential development density is also noticeable in the Check-Copper Hill area and a portion of the Willis-Indian Valley area. Due to the County’s diffuse road network, low density development is dispersed throughout the County.
2. Urban Concentrations and Geographic Conditions

The greatest concentration of population is in the level terrain of the Town of Floyd and the communities of Willis and Check (see Map 3).

Floyd County covers an area of 382 square miles. Approximately 143,000 acres is forest land and 100,000 acres is non-forested. The Town of Floyd is 0.6 square mile in area or about 384 acres. The Town is rectangular in shape and is located in the central section of the County.

Floyd County is situated in the Blue Ridge Uplands, a part of the Blue Ridge Physiographic Province which extends from New York to northwestern Georgia. The County is bordered on the southeast by the Blue Ridge Escarpment, the boundary between the Blue Ridge and Piedmont Physiographic Provinces. The change in elevation between the provinces may be as much as 1,300 feet.

Elevations in the County generally range from 2,000 to 3,000 feet. The Buffalo Mountain monadnock, however, rises nearly 1,000 feet above the surrounding upland, its summit at 3,977 feet. Wills Ridge, a lesser monadnock, reaches 3,380 feet at its highest point.

The physiography of the County is characterized by gently rolling land. Most of the land is more suited to grazing and forestry than to extensive cultivation and urban types of development. Nearly half of the County's total acreage is forested, however, there are no National Forest holdings. With the exception of a small number of acres in Federal ownership along the Blue Ridge Parkway, all forest land is in private ownership.

The traditional agricultural economy of Floyd County is well adapted to the local topography. The valleys have been cultivated for crops or cleared for grazing, while the steeper slopes have been maintained in forest. Higher densities of residential development have generally also been well placed. There is land containing both adequate soils and tolerant slopes to accommodate moderate growth.
Economic Growth and Development

The Floyd County economy shares many of the economic challenges of rural Appalachia, with dramatic declines in traditional industries over the previous four decades, especially in textiles and agriculture, as well as forestry. Modest job growth has returned in recent years, with gains in the health care sector, and tourism-related sectors such as accommodation, food service, and retail trade. Agriculture remains an important source of income for families in Floyd County as well, although most farmers hold a job in addition to farming ‘on the side.’

Floyd County businesses employed an estimated 3,063 workers in 2015, an increase of 4.6% over the previous decade. Top employment sectors include local government (including public schools, law enforcement, and administration), health care and social assistance, retail trade, and manufacturing, which account for over half of all jobs in Floyd County (1,842 jobs -- see Table 4 below). Aside from the Floyd County government, the County’s top employers represent a diverse array of industries:

- Hollingsworth and Vose (160+ jobs), a manufacturer of non-woven media with uses in automotive filters and an array of other applications
- Strengthening Our System, Inc. (100+ employees), a private, for-profit human services agency providing services to support children and adults with intellectual and development disabilities
- Riverbend Nursery (100+ jobs), a greenhouse complex growing flowers, herbs and other plants at the wholesale scale
- Citizens Telephone Cooperative (100 employees), regional telecommunications and internet service provider
- Chateau Morrisette (80 employees), a vineyard, winery, restaurant, and special events venue
- Bank of Floyd (75 employees), a regional bank providing personal and business banking services.

Table 4: Floyd County Employment and Earnings by Industry Sector

<table>
<thead>
<tr>
<th>Industry sector</th>
<th>2015 Jobs</th>
<th>2006-15 Change</th>
<th>2015 Average Earnings</th>
<th>2014 Average employees per firm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government</td>
<td>732</td>
<td>-33</td>
<td>$44,939</td>
<td>36.2</td>
</tr>
<tr>
<td>Health Care and Social Assistance</td>
<td>429</td>
<td>131</td>
<td>$26,244</td>
<td>4.7</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>374</td>
<td>99</td>
<td>$18,620</td>
<td>7.8</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>307</td>
<td>-41</td>
<td>$39,538</td>
<td>13.8</td>
</tr>
<tr>
<td>Accommodation and Food Services</td>
<td>265</td>
<td>60</td>
<td>$12,061</td>
<td>11.6</td>
</tr>
<tr>
<td>Construction</td>
<td>224</td>
<td>-38</td>
<td>$26,820</td>
<td>3.7</td>
</tr>
<tr>
<td>Finance and Insurance</td>
<td>126</td>
<td>-9</td>
<td>$50,190</td>
<td>10.3</td>
</tr>
<tr>
<td>Crop and Animal Production</td>
<td>122</td>
<td>-73</td>
<td>$24,499</td>
<td>9.8</td>
</tr>
<tr>
<td>Other Services (e.g., mechanics, hairdressers, etc.)</td>
<td>103</td>
<td>23</td>
<td>$23,912</td>
<td>3.4</td>
</tr>
<tr>
<td>All other sectors</td>
<td>376</td>
<td>20</td>
<td>$32,080</td>
<td>4.0</td>
</tr>
<tr>
<td><strong>Total, all sectors</strong></td>
<td><strong>3,063</strong></td>
<td><strong>132</strong></td>
<td><strong>$31,473</strong></td>
<td><strong>7.5</strong></td>
</tr>
</tbody>
</table>

Source: EMSI Class of Worker Dataset, 2015.2-QCEW Employees

Businesses in Floyd County tend to be small, and in many cases are sole proprietor businesses. Floyd County businesses have an average of 7.5 employees, compared to an average of 15.7 employees for Virginia, and 17.5 employees for the New River Valley. While Floyd County has
only 3,063 jobs at ‘traditional’ employers (businesses, government, etc.), an additional 586 workers are self-employed, and 2,608 workers hold a secondary job as an additional source of income (source: EMSI Class of Worker Dataset, 2015.2). Most of these jobs are in the agriculture and construction/contracting sectors.

Floyd County unemployment rates are similar to rates in Virginia statewide, and are slightly lower than rates in the surrounding New River Valley region. By August 2015, the unemployment rate in Floyd County had decreased steadily to 3.7% (Figure 1).

**Figure 1: Unemployment Rates**

![Unemployment Rates Graph](image)

Although Floyd County has a low unemployment rate, the County has many more workers than jobs, with over 70% of Floyd County’s employed residents traveling out of the county for their job. According to the US Census Bureau’s ‘On the Map’ data source, Floyd County has 6,793 employed residents, but only 2,814 jobs at businesses located in the county (NOTE: The most recent year for which ‘On the Map’ data is available is 2011). Moreover, only 1,701 Floyd County residents both live and work in the County, so over 5,000 residents commute to jobs outside Floyd County.

**Table 5: Floyd County Jobs and Commuters**

<table>
<thead>
<tr>
<th>Jobs at Floyd County businesses</th>
<th>2,815</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floyd County-based jobs held by Floyd County residents</td>
<td>1,701</td>
</tr>
<tr>
<td>Floyd County-based jobs held by commuters to Floyd County</td>
<td>1,114</td>
</tr>
<tr>
<td>Floyd County residents with jobs</td>
<td>6,793</td>
</tr>
<tr>
<td>Floyd County residents working in Floyd County</td>
<td>1,701</td>
</tr>
<tr>
<td>Floyd County residents commuting to jobs outside Floyd County</td>
<td>5,092</td>
</tr>
</tbody>
</table>

Source: US Census Bureau, On the Map
Table 6: Top Jurisdictions Where Floyd County Residents Work

<table>
<thead>
<tr>
<th>County/city</th>
<th># of jobs</th>
<th>% of jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floyd County</td>
<td>1,701</td>
<td>25.0%</td>
</tr>
<tr>
<td>Montgomery County</td>
<td>1,232</td>
<td>18.1%</td>
</tr>
<tr>
<td>Roanoke city</td>
<td>658</td>
<td>9.7%</td>
</tr>
<tr>
<td>Radford city</td>
<td>303</td>
<td>4.5%</td>
</tr>
<tr>
<td>Salem city</td>
<td>290</td>
<td>4.3%</td>
</tr>
<tr>
<td>Roanoke County</td>
<td>286</td>
<td>4.2%</td>
</tr>
<tr>
<td>Pulaski County</td>
<td>233</td>
<td>3.4%</td>
</tr>
</tbody>
</table>

Source: US Census Bureau, On the Map

Although 25% of Floyd County residents both live and work in Floyd County, most of Floyd County’s employed workers are heading to jobs in nearby urban areas. Nearly 45% of Floyd County residents with jobs travel to the Blacksburg and Roanoke metropolitan areas for their jobs, with most workers heading to the cities and towns. Roanoke (658 jobs), Christiansburg (499), Blacksburg (480), and Radford (303) are top destinations. Figure 2 below shows the job commuting destinations of Floyd County residents.

Figure 2: Job Locations of Floyd County Residents
The types of workers who travel outside Floyd County to their jobs are representative of employment trends of the broader region, with out-commuters traveling to jobs in the region’s manufacturing, health care, and higher education and professional services sectors. Agriculture is the only sector that has a net in-commute to Floyd County, although Floyd County has higher proportions of jobs in educational services (especially K-12) compared to workers in these sectors, providing more opportunities for Floyd County residents.

**Agriculture**

Although agriculture is not a major source of jobs in Floyd County, farms are a critical part of the County’s character and economy. Nearly 60% of Floyd County’s land area is in agricultural use, an increase of 10,000 acres over the past decade. Top products in Floyd County include cattle and calves, nursery and greenhouse products, hay and silage, cut Christmas trees, tree fruit, and grain crops. The number, size, and average earnings per farm are roughly the same as they were a decade ago, although this masks fluctuations over the years, including increases in acreage in pastures and woodlands, decreases in cattle farms and crop acreage, and large fluctuations in both livestock and crop sales (especially nursery/greenhouse sales) between 2002 and 2012.
Table 7: Selected Characteristics of Floyd County Farms

<table>
<thead>
<tr>
<th></th>
<th>2002 Census</th>
<th>2007 Census</th>
<th>2012 Census</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of farms</td>
<td>864</td>
<td>829</td>
<td>863</td>
</tr>
<tr>
<td>Acres in farmland</td>
<td>135,311</td>
<td>128,872</td>
<td>144,657</td>
</tr>
<tr>
<td>Average size of farm (acres)</td>
<td>163</td>
<td>149</td>
<td>168</td>
</tr>
<tr>
<td>Market value of products sold</td>
<td>$32,801,000</td>
<td>$43,361,000</td>
<td>$34,701,000</td>
</tr>
<tr>
<td>Average sales per farm</td>
<td>$39,567</td>
<td>$50,186</td>
<td>$40,210</td>
</tr>
</tbody>
</table>

Source: USDA Census of Agriculture

Farms in Floyd County hired an estimated 771 workers in 2012, with a total payroll of $4,970,000. Most workers were seasonal workers, with only 204 workers hired for 150 days per year or more. As noted above, many farms are a secondary source of income for their owners, who have other jobs that provide their primary source of income.

Tourism and Hospitality

Spending by visitors to Floyd County is an important and growing part of the Floyd County economy, supporting a wide array of hospitality businesses, restaurants, retail stores and local artisans. Floyd County is home to major tourist attractions such as the Blue Ridge Parkway, Mabry Mill, Chateau Morrisette, the Floyd Country Store, the Floyd Fest annual music festival, the Jacksonville Center for the Arts, Floyd Yoga Jam, Chantilly Farm and an array of traditional music and crafts venues that are part of the broader Southwest Virginia tourism initiatives of the ‘Crooked Road.’

The Virginia Tourism Corporation (VTC) estimated that tourism generated $22,820,209 in expenditures in Floyd County in 2014, as visitors made purchases at stores, hotels, restaurants and associated businesses. Tourism revenues have increased by 13% since 2010, with corresponding increases in tax receipts and worker earnings. The VTC estimates that 215 jobs are directly attributable to tourism in Floyd County, generating an estimated $4.1 million in earnings for workers.

Table 8: Economic Impacts of Tourism in Floyd County

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditures</td>
<td>$20,046,700</td>
<td>$21,833,423</td>
<td>$22,417,925</td>
<td>$22,288,284</td>
<td>$22,820,209</td>
</tr>
<tr>
<td>Jobs</td>
<td>210</td>
<td>215</td>
<td>216</td>
<td>214</td>
<td>215</td>
</tr>
<tr>
<td>Payroll</td>
<td>$3,777,828</td>
<td>$2,925,044</td>
<td>$4,006,319</td>
<td>$4,078,466</td>
<td>$4,158,282</td>
</tr>
</tbody>
</table>

Source: Virginia Tourism Corporation
Markets for Reuse and Recycling of Materials

Markets for reuse and recycling vary dramatically by types of items and tend to fluctuate over time. The relatively low volume of some items in a rural community like Floyd County can make finding efficient markets for some items even more difficult. Floyd County recycling staff have worked diligently to identify markets and recycling opportunities by networking with recycling contacts in other localities and jurisdictions and working with business and industrial contacts in Floyd County. While many localities do not collect/recycle glass, Floyd County recycling staff have identified and work with a buyer for glass, which makes a significant contribution to the County’s recycling tonnage. Existing markets/buyers are listed in Table 11.

Transportation Conditions

The transportation system of Floyd County consists entirely of highways (see Map 2), as there are no railroads or airports. Trucks and private automobiles are the conveyers of almost all cargo and people. There are no interstates or four-lane highways in Floyd County. The existing road network in Floyd County consists mainly of collector and local routes. Two roads considered minor arterial by State standards serve as major access routes: U.S. Route 221 and Virginia Route 8. The intersection of U.S. 221 and Virginia Route 8 occurs in the Town of Floyd and is the only intersection in the County with a traffic light. Interstate 81, the closest limited-access highway designed for high volume traffic, lies about 20 miles North-Northwest of the Town of Floyd via Route 8. Interstate 77 lies about 28 miles west of Floyd via U.S Route 221.

The distance to and from markets has substantial impact on the local economy. The increased costs of transportation, both collection within and transport beyond, faced by rural jurisdictions such as Floyd County is a limiting factor for some solid waste management and recycling efforts.
3. Estimates of Solid Waste Generation

Table 9 includes data for principal recyclable materials, municipal solid waste landfilled, and total municipal solid waste over the last 10 years. After 2006, MSW landfilled/disposed has generally been in the vicinity of 11,000 tons per year. With the exception of 2006 and 2009, total MSW has largely been in a range of 12,000 to 13,000 tons per year.

Table 9: Floyd County PRMs, MSW Landfilled, and Total MSW (in tons) 2006-2015

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRMs</td>
<td>1,678</td>
<td>1,184</td>
<td>1,665</td>
<td>2,759</td>
<td>1,891</td>
</tr>
<tr>
<td>MSW LF</td>
<td>13,581</td>
<td>11,333</td>
<td>11,309</td>
<td>11,269</td>
<td>11,016</td>
</tr>
<tr>
<td>Total MSW</td>
<td>15,259</td>
<td>12,517</td>
<td>12,974</td>
<td>14,028</td>
<td>12,907</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRMs</td>
<td>1,841</td>
<td>1,186</td>
<td>2,291</td>
<td>1,122</td>
<td>2,079</td>
</tr>
<tr>
<td>MSW LF</td>
<td>10,237</td>
<td>10,756</td>
<td>11,002</td>
<td>11,001</td>
<td>10,920</td>
</tr>
<tr>
<td>Total MSW</td>
<td>12,078</td>
<td>11,942</td>
<td>13,293</td>
<td>12,123</td>
<td>12,999</td>
</tr>
</tbody>
</table>

With this data in mind, the projection scenarios for solid waste generation in Table 10 were developed. The table includes two scenarios: one is a high growth scenario and assumes a 5% annual growth rate in total MSW; and the other is a low growth scenario and assumes a 2% annual growth rate in total MSW. The high growth scenario seems to be too extreme to be a useful guide/projection, but may serve as a reference point in the event that growth and population move upward at higher rate than in the recent past. The low growth scenario appears to include reasonable growth given recent population and MSW trends and is likely more valuable as a guide/projection.
### Table 10: Projection Scenarios for Solid Waste Generation (PRMs, MSW Landfilled, and Total MSW)

#### 5% Annual Growth Rate in Total MSW (high)

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</thead>
<tbody>
<tr>
<td>PRMs</td>
<td>2,079</td>
<td>2,047</td>
<td>2,150</td>
<td>2,257</td>
<td>2,370</td>
<td>2,489</td>
<td>2,613</td>
<td>2,744</td>
<td>2,881</td>
<td>3,025</td>
<td>3,176</td>
<td>3,335</td>
<td>3,502</td>
<td>3,677</td>
<td>3,861</td>
<td>4,054</td>
<td>4,256</td>
<td>4,469</td>
<td>4,693</td>
<td>4,927</td>
<td>5,174</td>
<td></td>
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<tr>
<td>MSW Landfilled</td>
<td>10,920</td>
<td>11,602</td>
<td>12,181</td>
<td>12,791</td>
<td>13,430</td>
<td>14,101</td>
<td>14,807</td>
<td>15,547</td>
<td>16,325</td>
<td>17,141</td>
<td>17,998</td>
<td>18,898</td>
<td>19,843</td>
<td>20,835</td>
<td>21,877</td>
<td>22,971</td>
<td>24,120</td>
<td>25,326</td>
<td>26,592</td>
<td>27,922</td>
<td>29,317</td>
<td></td>
</tr>
<tr>
<td>Total MSW</td>
<td>12,999</td>
<td>13,649</td>
<td>14,331</td>
<td>15,048</td>
<td>15,800</td>
<td>16,590</td>
<td>17,420</td>
<td>18,291</td>
<td>19,206</td>
<td>20,166</td>
<td>21,174</td>
<td>22,338</td>
<td>23,452</td>
<td>24,512</td>
<td>25,738</td>
<td>27,025</td>
<td>28,376</td>
<td>29,795</td>
<td>31,285</td>
<td>32,849</td>
<td>34,491</td>
<td></td>
</tr>
<tr>
<td>Recycling Rate (base)</td>
<td>16%</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
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#### 2% Annual Growth Rate in Total MSW (low)

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</tr>
</thead>
<tbody>
<tr>
<td>PRMs</td>
<td>2,079</td>
<td>1,989</td>
<td>2,029</td>
<td>2,069</td>
<td>2,111</td>
<td>2,153</td>
<td>2,196</td>
<td>2,240</td>
<td>2,285</td>
<td>2,330</td>
<td>2,380</td>
<td>2,432</td>
<td>2,487</td>
<td>2,542</td>
<td>2,607</td>
<td>2,672</td>
<td>2,737</td>
<td>2,803</td>
<td>2,870</td>
<td>2,941</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSW Landfilled</td>
<td>10,920</td>
<td>11,270</td>
<td>11,495</td>
<td>11,725</td>
<td>11,959</td>
<td>12,198</td>
<td>12,442</td>
<td>12,691</td>
<td>12,945</td>
<td>13,205</td>
<td>13,523</td>
<td>13,739</td>
<td>14,013</td>
<td>14,294</td>
<td>14,579</td>
<td>14,871</td>
<td>15,168</td>
<td>15,472</td>
<td>15,781</td>
<td>16,096</td>
<td>16,419</td>
<td></td>
</tr>
<tr>
<td>Total MSW</td>
<td>12,999</td>
<td>13,259</td>
<td>13,524</td>
<td>13,794</td>
<td>14,070</td>
<td>14,351</td>
<td>14,638</td>
<td>14,931</td>
<td>15,230</td>
<td>15,535</td>
<td>15,846</td>
<td>16,163</td>
<td>16,486</td>
<td>16,816</td>
<td>17,152</td>
<td>17,495</td>
<td>17,845</td>
<td>18,202</td>
<td>18,566</td>
<td>18,937</td>
<td>19,316</td>
<td></td>
</tr>
<tr>
<td>Recycling Rate (base)</td>
<td>16%</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
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</tr>
</tbody>
</table>
4. Existing Solid Waste Management Facilities

Collection of Municipal Waste

Floyd County collects solid waste from approximately 40 sites (Map 4) around the County utilizing a greenbox collection unit system. There are approximately 200 public green boxes (each with 8-cubic yard capacity) for solid waste collection placed at these sites. Trucks collect from these boxes 6 days per week. There are also 20 boxes that are rented to larger businesses and other significant users. Boxes are emptied two or more times per week by County collection vehicles. Currently these boxes cost about $850 to $1,100 each and have a life span of approximately 5 years. The Town of Floyd provides curbside trash pick-up twice per week in the corporate limits. Approximately 520 tons of municipal solid waste, collected through the Town’s curbside collection effort, are delivered to the transfer station by the Town each year.

Transfer Station and Recycling Center Operations

Floyd County has operated the transfer station since the County’s 55-acre landfill closed in October 1993. The County carries out a monitoring plan for the landfill and will continue to do so through at least 2024. Refuse is being transported to the Cloyd Mountain Landfill (in Pulaski County), operated by the New River Resource Authority. Thompson Trucking is currently contracted by the County to haul waste to the landfill.

The Floyd County transfer station receives household, business, commercial, industrial and institutional waste meeting the acceptance criteria of the receiving landfill. According to the current Operating Plan, the transfer station (54’ X 52’) has a capacity of at least 17,000 tons per year (which can be expanded with the addition of transport trailers and personnel). The recycling station (32’ X 80’) is located adjacent to the transfer facility; there is also a maintenance building (60’ X 100’) onsite (reference to site layout). The transfer and recycling stations operate six days per week utilizing nine full-time (including two licensed operators) and one part-time employee. Although waste material is delivered to the transfer station primarily by the County collection vehicles and the Town, citizens and businesses are allowed direct access to the site. Operating hours (Monday through Friday 8:00 a.m. to 4:00 p.m.; Saturday 8:00 to 11:30 a.m.) and acceptance criteria are posted on the entrance sign. Anyone delivering unauthorized waste to the County is responsible for its removal and proper disposal. The facility does not accept the following materials:

- Free liquids
- Regulated hazardous waste
- Solid Waste Residues or soils containing 1.0 ppb oxidants, residues
- Soil containing 5.0 ppb or more of PCB’s
- Sludges
- Pesticide containers that have not been tripled rinsed, or crushed
- Drums that are not empty, cleaned, and opened
- Brush, stumps and yard waste
- Regulated medical waste or the residue of the processing or treatment of medical waste
Asbestos containing materials
Animal carcasses are not accepted unless brought in by the County or VDOT

A 100-ton Thurmond scale (70’ length) is located along the entrance road into the transfer station. As collection vehicles enter the facility they are weighed. The scale house attendant maintains a list of empty weights for collection trucks and regular customers. After weight is recorded, the attendant authorizes the vehicle to move to tipping floor to unload. Once the waste is on the floor, the station operator views the waste for unauthorized materials and recyclable materials that can be removed such as tires and batteries. A loader pushes waste into the transfer trailer then it is tamped by backhoe to compact. Vehicles of new customers are weighed before and after unloading to obtain a record of dropped weight.

The transfer from floor to trailer is an on-going process minimizing the time that waste is on floor. No waste is left on the floor overnight. Full trailers are covered and switched out with an empty trailer by the County staff. This process occurs 2-4 times each day.

The tipping floor is cleaned daily, disinfected weekly, and is thoroughly cleaned monthly, or more often if needed. Liquid waste from the tipping floor drains to two, 1000-gallon tanks. When full the tanks are unloaded by a septic hauler and then delivered to a treatment facility located in Martinsville, Virginia. The tipping floor is resurfaced every 10 years (last done in 2015).

To facilitate the waste management collection and recycling processes, the County currently maintains the following fleet and equipment inventory:

- 4 trash collection trucks (2006, 2011, 2011, and 2017) all 30-yd capacity with life of 7-10 years; 2 trucks run full week with 3 running on Mondays
- 2 recycling trucks (1990 and 1997) 1 two ton, 1 one ton - one with lift gate
- 1 roll off truck (1994)
- 2 Backhoes (2002 and 2006)
- 1 track loader (1979)
- 100 ton Thurmond scales (1999)
- Crusher
- 3 Bailers (2 plastic; 1 cardboard)
- 200 green box collection units - current cost approx. $850 each to $1,100, life – approx. 5 years
- 9 recycling bins – current cost approx. $5,500
- 22 containers - mix of 20 & 30 yd capacity and one 40 yd capacity for special material handling situations

Assuming that MSW growth stays within the low growth scenario in Table 10, the MSW to be landfilled, which goes through the transfer station, should stay below 17,000 tons/year through the end of the planning period. County staff will monitor data and trends throughout the planning period.
**Disposal of Municipal Solid Waste**

As noted previously, municipal solid waste is transported from the County transfer station to the New River Resource Authority (NRRA) landfill in Pulaski County for disposal. The NRRA landfill is a 300+ acre regional facility that handles approximately 180,000 tons of waste each year. The NRRA landfill is estimated to have a service life of over 90 years, well beyond the planning period of this document. It is concluded that the NRRA landfill will be able to provide MSW disposal capacity for Floyd County throughout the planning period.

**Collection of Recyclable Materials**

The County has 9 recycling bins placed at convenient, high traffic locations to encourage recycling by residents. The material bins are valued at $5,500 each and have a life expectancy of about 7 to 10 years. Two trucks are operated 6 days per week collecting the materials deposited for recycling (recycling bin locations are shown in Map 5). The recycling bins are designed to receive separated products. Recyclables are placed in 55-gallon drums or other large containers, which are exchanged for empties.

The Town performs residential curbside collection of recyclables one day per week. The Town also collects cardboard and recycling from businesses two days per week. In total, the Town is collecting recyclables three days per week.

Collection trucks deliver recyclables to the recycling station where they are unloaded and sorted. Recyclables are crushed and baled as applicable then loaded into containers and trailers for delivery to material “buyers”.
Recyclables Markets

Recyclables accepted at the County collection boxes include: cardboard, newspaper, clear and colored glass, plastics #1 and #2, and aluminum and tin. Additional recyclables accepted at the Recycling Center include: tires, and white goods (i.e. large appliances). It is notable that most waste oil received is used on site to heat the transfer building. Waste oil received during the summer is stored for use during cold weather/heating season. Current recyclables buyers are listed in Table 11 below.

<table>
<thead>
<tr>
<th>Product</th>
<th>“Buyer”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear/brown glass</td>
<td>Reflective Glass Wilson, NC</td>
</tr>
<tr>
<td>Metals, appliances</td>
<td>OmniSource Rocky Mount, VA</td>
</tr>
<tr>
<td>Aluminum, copper</td>
<td>OmniSource Rocky Mount, VA</td>
</tr>
<tr>
<td>Newspaper &amp; magazines</td>
<td>EMI Corp. Stuart, VA</td>
</tr>
<tr>
<td>White office paper</td>
<td>EMI Corp. Stuart, VA</td>
</tr>
<tr>
<td>Cardboard</td>
<td>EMI Corp. Stuart, VA</td>
</tr>
<tr>
<td>Plastics, #1 &amp; #2</td>
<td>EMI Corp. Stuart, VA</td>
</tr>
<tr>
<td>Tires</td>
<td>New River Tire Pilot Mountain, NC</td>
</tr>
<tr>
<td>Waste oil, antifreeze</td>
<td>Holston Roanoke, VA</td>
</tr>
<tr>
<td>Electronics</td>
<td>E-waste Johnson City, TN</td>
</tr>
</tbody>
</table>
5. Implementation

Goals and Objectives
(including Mandatory Objectives*)

This solid waste management plan encompasses the following goals:

- Protect the public health and safety of Floyd County citizens; and
- Protect the environment and natural resources of Floyd County.
- Promote local decision-making regarding the most effective and efficient use of available resources.
- Reduce the flow of solid waste to be landfilled by encouraging desirable alternatives (source reduction, reuse, recycling) and insure at least a minimum recycling rate of 15% (in compliance with State Code.)*
- Insure compliance with state plan requirement*.

Supporting objectives and strategies are detailed next.

I. Protect the public health and safety of citizens, and protect the natural resources of Floyd County.

Objective A: Insure the security of the old landfill.

1. Continue monitoring and reporting.

Objective B: Reduce littering and continue clean up of illegal dumpsites.

1. Encourage participation in voluntary roadside clean up, such as the Adopt-a-Highway program.
2. Encourage continuation of bi-ennial volunteer clean-up days, targeting illegal dumpsites.
3. Investigate availability of grant funding for voluntary junk car site clean up.

II. Enable and promote local decision-making regarding the most effective and efficient use of available resources.

Objective A: Minimize landfilling costs.

1. Encourage reduction, reuse and recycling.
2. Locate lowest-cost options for landfilling.

Objective B: Recover Resources to the maximum extent possible.

1. Locate best markets for recyclables.
Objective C: Make best possible allocation of limited resources.
   1. Understand unique aspects of local solid waste generation, collection, and processing as well as reuse and recycling opportunities.
   2. Consider future needs as population growth continues.
   3. Consider opportunities for regional collaboration.
   4. Consider system modifications to increase efficiency.

III. Reduce the flow of solid waste to the landfill, and insure at least a minimum of 15% recycling.

Objective A: Promote increases in residential, commercial and industrial reuse and recycling by demonstrating the practical benefits for all and making it easier.
   1. Provide education and outreach programs about how to recycle (such as crafts in schools, through “tips of the week” or guest columns in the newspaper, etc.) using local resources such as Cooperative Extension.
   2. Make recycling as easy as practically possible through the provision of recycling bins and programs.
   3. Particular effort is apparently needed on paper and paperboard.
   4. Encourage new local recycling industries.
   5. Look for opportunities to build partnerships with public and private entities to capture/document recycling efforts and improve recycling rates.

IV. Insure compliance with state plan requirement*. 
Assessment of Current and Predicted Needs and 20-Year Timeline with Milestones

Key needs include:

- Monitoring of MSW and recycling data to ensure that staffing, collection activities, and transfer station operation measures/capacity are adequate for incoming volumes. Monitor trends and make adjustments as needed.
- Replacement of equipment, greenboxes, facility maintenance, monitoring of closed landfill.
- Maintaining tax revenue to support the above items.
- Periodically review/assess opportunities to improve efforts and efficiency.
- Continue to look for ways to expand recycling efforts and document private sector efforts.
- Continue to seek markets for recyclables.

A 20-year action timeline with milestones is included in Table 12.
### Municipal Solid Waste

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<tbody>
<tr>
<td>Monitor solid waste volumes and trends; Review household and business</td>
<td>County Administrator; Board of Supervisors</td>
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<td>Town reviews solid waste management</td>
<td>Town Council</td>
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<td>County replaces collection vehicles</td>
<td>Board of Supervisors</td>
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<tr>
<td>County identifies/evaluates collection options; reviews solid waste</td>
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<td>Town replaces collection vehicle</td>
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<tr>
<td>Replacement of greenboxes (approx. 8 per year)</td>
<td>Board of Supervisors</td>
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<td>Address transfer station capacity</td>
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<td>Resurface tipping floor at transfer station</td>
<td>Board of Supervisors</td>
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<tr>
<td>Review landfill disposal agreement w/NRRA; consider extension</td>
<td>Board of Supervisors</td>
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<tr>
<td>Monitoring of closed landfill</td>
<td>County Solid Waste Mgmt. Dept./Board of Supervisors</td>
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<tr>
<td>Maintain general tax levies to support solid waste management</td>
<td>Board of Supervisors; Town Council</td>
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### Recycling

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<tbody>
<tr>
<td>Monitor recycling volumes and trends; report to DEQ</td>
<td>County Solid Waste Mgmt. Dept./County Administrator</td>
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<tr>
<td>Continue education and outreach; expand as needed</td>
<td>County Solid Waste Mgmt. Dept./Board of Supervisors</td>
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<tr>
<td>Identify opportunities to expand recycling efforts; review bin options;</td>
<td>County Solid Waste Mgmt. Dept./Board of Supervisors</td>
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<tr>
<td>add collection bins at additional sites</td>
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<tr>
<td>Continue to seek markets for recyclables</td>
<td>County Solid Waste Mgmt. Dept./Board of Supervisors</td>
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<tr>
<td>Replace collection vehicles</td>
<td>Board of Supervisors</td>
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6. Description of Programs

Floyd County operates a litter control program, funded in part by state non-competitive grant funds. The County sponsors an annual clean-up day where volunteers clean up roadsides and illegal dumpsites. The County litter program provides safety vests, gloves and bags. (The Virginia Department of Transportation picks up the filled bags of trash, then, from roadsides.)

Many Floyd County roadways have been “adopted” by concerned citizens and/or organizations. These areas are posted with blue highway markers designating the organization responsible for clean up.

The potential exists for expanded community education regarding reuse and recycling opportunities.

7. Outreach Programs

County staff does offer educational guidance on recycling and tours to local school students. Also, paper-recycling boxes are provided for each classroom. Also, see description of programs above. Virginia Tech Cooperative Extension and some local citizens groups may wish to help expand outreach.

8. Procedures for Evaluation

**County**

Solid waste personnel will continue to closely monitor the greenbox and transfer station system to ascertain when minor adjustments are needed or major changes should be considered. Also, County leadership will review solid waste collection activities and transfer station use levels at least every two years. Of critical importance is discerning the likely/actual annual growth rate for municipal solid waste so that adequate planning and provisions can be made to manage municipal solid waste and facilities.

**Town**

The Town Manager will continue to monitor collection of waste and recyclables. Town leadership will review solid waste and recyclables collection activities at least every two years.
PLAN AMENDMENTS

Amendments to the Solid Waste Plan may be made at any time as described below. Amendments are classified as major or minor as described in Virginia Code (see Appendix B, Section 175).

Major amendments include any addition, deletion, or cessation of operation of any solid waste facility; any increase in landfill capacity; any change that moves toward implementation of a waste management strategy that is lower in the waste management hierarchy; and any change to membership in the approved area.

Minor amendments include any change that moves toward implementation of a waste management strategy that is higher in the waste management hierarchy and any nonsubstantive administrative change such as a change in name.

Prior to implementation the department must approve any plan amendments. Minor amendments may be submitted directly to the department for approval; however, major amendments require public participation before being submitted to the department for approval.

The department will review amendments and approve or return with comments on deficiencies no later than 90 days from the date the plans are received. If the review cannot be completed within 90 days, the applicant will be notified and given a date as to when the review will be completed. Submitters who receive plan comments have 90 days to submit a corrected amendment to the department following notification. Amendments approved without alteration become effective upon notification.
Appendices
Appendix A

## SUMMARY OF COMMUNITY INPUT MEETING
### PROPOSED ACTIONS

<table>
<thead>
<tr>
<th>DOCUMENT CURRENT EFFORTS</th>
<th>EDUCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create and provide easy form for reporting</td>
<td>Outreach to business and households</td>
</tr>
<tr>
<td>Track junk vehicles to crusher yard</td>
<td>Educate children - multi-generational problem</td>
</tr>
</tbody>
</table>

### INDIVIDUAL REUSE

<table>
<thead>
<tr>
<th>Individually Reuse Items</th>
<th>Long-Term Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create arts/crafts from materials</td>
<td>Methane generation/use from landfill</td>
</tr>
<tr>
<td>Tires for trench silos</td>
<td>Hollingsworth &amp; Vose - uses for smaller ends</td>
</tr>
<tr>
<td>Salvaging business</td>
<td>Some Hollingsworth &amp; Vose materials flammable -</td>
</tr>
<tr>
<td>Return diabetic syringe to medical office</td>
<td>need to market or educate</td>
</tr>
<tr>
<td></td>
<td>Bottle bill for Virginia - state should help</td>
</tr>
</tbody>
</table>

### RECYCLING COLLECTION

<table>
<thead>
<tr>
<th>Convenience Items</th>
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</thead>
<tbody>
<tr>
<td>More recycling centers in county</td>
</tr>
<tr>
<td>Trailer body near transfer site for &quot;re-usables&quot;</td>
</tr>
<tr>
<td>Scrap piles for wood/metal or resource yard</td>
</tr>
<tr>
<td>Recycling bins for offices closer to back doors</td>
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</table>

### RECYCLING PROCESS

<table>
<thead>
<tr>
<th>Refinements</th>
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<tbody>
<tr>
<td>Allow colored paper recycling</td>
</tr>
<tr>
<td>Organize recycling for smaller batteries</td>
</tr>
<tr>
<td>Better market for many recyclables</td>
</tr>
<tr>
<td>Check into Montgomery Co. process</td>
</tr>
<tr>
<td>No market for green glass</td>
</tr>
<tr>
<td>Increase confidentiality in office paper recycling</td>
</tr>
</tbody>
</table>

### NO LOCAL CONTROL

<table>
<thead>
<tr>
<th>Items</th>
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<tbody>
<tr>
<td>Society/Marketing encourages not to fix or reuse</td>
</tr>
<tr>
<td>Sources make efforts difficult - more color, composite</td>
</tr>
<tr>
<td>Slick colored papers</td>
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</tbody>
</table>
# SUMMARY OF COMMUNITY INPUT MEETING
## CURRENT ACTIONS

<table>
<thead>
<tr>
<th>REDUCTION</th>
<th>REUSE</th>
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<tbody>
<tr>
<td>Grow own food</td>
<td>Compost garbage</td>
</tr>
<tr>
<td>Ask baggers for less bags</td>
<td>Reuse paper towels</td>
</tr>
<tr>
<td>Save trips to town - combine errands</td>
<td>Grass clippings for mulch</td>
</tr>
<tr>
<td>Buy in bulk</td>
<td>Newspaper/cardboard for garden mulch</td>
</tr>
<tr>
<td>Turn off lights</td>
<td>Reuse medical equipment (ex. braces,crutches)</td>
</tr>
<tr>
<td>Think recycling when ordering supplies</td>
<td>Timber frame waste wood</td>
</tr>
<tr>
<td>Avoid disposable surgical instruments</td>
<td>Wash plastic food bags</td>
</tr>
<tr>
<td>Decrease use of drug samples - increase</td>
<td>Reuse plastic bags for garden produce</td>
</tr>
<tr>
<td>use of patient assistance programs</td>
<td></td>
</tr>
<tr>
<td>Use strip not cartridge lab tests</td>
<td></td>
</tr>
<tr>
<td>Cloth napkins</td>
<td>Fertilize with manure</td>
</tr>
<tr>
<td>Cloth towels instead of paper towels</td>
<td>Hollingsworth-Vose material</td>
</tr>
<tr>
<td>Exchange books</td>
<td>Egg cartons to local folks with poultry</td>
</tr>
<tr>
<td>Used clothing swaps</td>
<td>Bring own bags to grocery</td>
</tr>
<tr>
<td>Use durable, washable dishes</td>
<td>Wear it until it falls apart</td>
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<tr>
<td>Cloth diapers</td>
<td>Rags from old clothes</td>
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<tr>
<td></td>
<td>Use paper to start fires in stove</td>
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<td></td>
<td>Plastic/paper bags as trash can liners</td>
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<td>Material scraps for quilts</td>
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<td>Glass jars as drinking glass or vase</td>
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<tr>
<td></td>
<td>Give away useful items</td>
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<td>Styrofoam peanuts to Chics</td>
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<tr>
<td></td>
<td>Artist makes lanterns from tin cans</td>
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<tr>
<td></td>
<td>Use the back of paper</td>
</tr>
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<td>Silver scrap as jewelry</td>
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Appendix B

State Solid Waste Planning Regulations
Virginia Administrative Code

Database updated through June 5, 2016

9VAC20-130-10. Definitions.

The following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise:

"Agricultural waste" means all solid waste produced from farming operations.

"Board" means the Virginia Waste Management Board.

"Commercial waste" means all solid waste generated by establishments engaged in business operations other than manufacturing or construction. This category includes, but is not limited to, solid waste resulting from the operation of stores, markets, office buildings, restaurants and shopping centers.

"Compost" means a stabilized organic product produced by composting in such a manner that the product can be handled, stored, and/or applied to the land.

"Composting" means the manipulation of the natural process of decomposition of organic materials to increase the rate of decomposition.

"Construction waste" means solid waste that is produced or generated during construction, remodeling, or repair of pavements, houses, commercial buildings, and other structures. Construction wastes include, but are not limited to, lumber, wire, sheetrock, broken brick, shingles, glass, pipes, concrete, paving materials, and metal and plastics if the metal or plastics are a part of the materials of construction or empty containers for such materials. Paints, coatings, solvents, asbestos-containing material, any liquid, compressed gases, or semi-liquids and garbage are not construction wastes.

"Debris waste" means solid waste resulting from land clearing operations. Debris wastes include, but are not limited to, stumps, wood, brush, leaves, soil, and road spoils.

"Demolition waste" means solid waste produced by the destruction of structures and their foundations and includes the same materials as construction wastes.

"Department" means the Department of Environmental Quality.

"Director" means the Director of the Department of Environmental Quality or his designee. For purposes of submissions to the director as specified in the Waste Management Act, submissions may be made to the department.

"Disposal" means the discharge, deposit, injection, dumping, spilling, leaking or placing of any solid waste into or on any land or water so that such solid waste or any constituent of it may enter the environment or be emitted into the air or discharged into any waters.

"Facility" means solid waste management facility unless the context clearly indicates otherwise.

"Hazardous waste" means a "hazardous waste" as defined by the Virginia Hazardous Waste Management Regulation, 9VAC20-60.

"Incineration" means the controlled combustion of solid waste for disposal.

"Industrial waste" means any solid waste generated by manufacturing or industrial process that is not a regulated hazardous waste. Such waste may include, but is not limited to, waste resulting from the following manufacturing processes:
electric power generation; fertilizer/agricultural chemicals; food and related products/byproducts; inorganic chemicals; iron
and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals;
plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay,
and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include
mining waste or oil and gas waste.

"Institutional waste" means all solid waste emanating from institutions such as, but not limited to, hospitals, nursing
homes, orphanages, and public or private schools. It can include regulated medical waste from health care facilities and
research facilities that must be managed as a regulated medical waste.

"Integrated waste management plan" means a governmental plan that considers all elements of waste management
during generation, collection, transportation, treatment, storage, disposal, and litter control and selects the appropriate
methods of providing necessary control and services for effective and efficient management of all wastes. An "integrated
waste management plan" must provide for source reduction, reuse and recycling within the jurisdiction and the proper
funding and management of waste management programs.

"Jurisdiction" means a local governing body; city, county or town; or any independent entity, such as a federal or state
agency, which join with local governing bodies to develop a waste management plan.

"Landfill" means a sanitary landfill, an industrial waste landfill, or a construction/demolition/debris landfill (as these terms
are defined in the Solid Waste Management Regulations (9VAC20-81).

"Litter" means all waste material disposable packages or containers, but not including the wastes of the primary
processes of mining, logging, farming, or manufacturing.

"Market" or "markets" means interim or end destinations for the recyclable materials, including a materials recovery
facility (MRF).

"Market conditions" means business and system related issues used to determine if materials can be targeted, collected,
and delivered to an interim or end market in an efficient manner. Issues may include, but are not limited to: the cost of
collection, storage and preparation or both; the cost of transportation; accessible volumes of materials targeted for recycling;
market value of materials targeted for collection/recycling; and distance to viable markets.

"Materials recovery facility (MRF)" means, for the purpose of this regulation, a facility for the collection, processing and
marketing of recyclable materials including, but not limited to: metal, paper, plastics, and glass.

"Mulch" means woody waste consisting of stumps, trees, limbs, branches, bark, leaves and other clean wood waste that
has undergone size reduction by grinding, shredding, or chipping, and is distributed to the general public for landscaping
purposes or other horticultural uses, except composting as defined and regulated under the Solid Waste Management
Regulations (9VAC20-81).

"Municipal solid waste" means waste that is normally composed of residential, commercial, and institutional solid waste
and residues derived from the combustion of these wastes.

"Permit" means the written permission of the director to own, operate or construct a solid waste management facility.

"Person" means an individual, corporation, partnership, association, a governmental body, a municipal corporation or
any other legal entity.
"Principal recyclable materials (PRMs)" means paper, metal, plastic, glass, commingled yard waste, wood, textiles, tires, used oil, used oil filters, used antifreeze, batteries, electronics, or material as may be approved by the director. Commingled materials refers to single stream collections of recyclables where sorting is done at a materials recovery facility.

"Recycling" means the process of separating a given waste material from the waste stream and processing it so that it may be used again as a raw material for a product, which may or may not be similar to the original product. For the purpose of this chapter, recycling shall not include processes that only involve size reduction.

"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 that are to be recycled as part of a resource recovery process for municipal solid waste resulting in the production of a refuse derived fuel.

"Regional boundary" means the boundary defining an area of land that will be a unit for the purpose of developing a waste management plan, and is established in accordance with 9VAC20-130-180 through 9VAC20-130-220.

"Regulated medical waste" means solid wastes so defined by the Regulated Medical Waste Management Regulations (9VAC20-120) as promulgated by the Virginia Waste Management Board.

"Residential waste" means any waste material, including garbage, trash and refuse, derived from households. Households include single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds and day-use recreation areas. Residential wastes do not include sanitary waste in septic tanks (septage), that is regulated by other state agencies.

"Resource recovery system" means a solid waste management system that provides for collection, separation, recycling and recovery of energy or solid wastes, including disposal of nonrecoverable waste residues.

"Reuse" means the process of separating a given solid waste material from the waste stream and using it, without processing or changing its form, other than size reduction, for the same or another end use.

"Sanitary landfill" means an engineered land burial facility for the disposal of household waste, which is so located, designed, constructed and operated to contain and isolate the waste so that it does not pose a substantial present or potential hazard to human health or the environment. A sanitary landfill also may receive other types of solid wastes, such as commercial solid waste, nonhazardous sludge, hazardous waste from conditionally exempt small quantity generators, construction demolition debris, and nonhazardous industrial solid waste.

"Site" means all land and structures, other appurtenances, and improvements on them used for treating, storing, and disposing of solid waste. This term includes adjacent land within the facility boundary used for the utility systems such as repair, storage, shipping or processing areas, or other areas incident to the management of solid waste. (Note: This term includes all sites whether they are planned and managed facilities or open dumps.)

"Sludge" means any solid, semisolid or liquid waste generated from a public, municipal, commercial or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility.

"Solid waste" means any of those materials defined as "solid waste" in the Solid Waste Management Regulations (9VAC20-81).
"Solid waste planning unit" means each region or locality that submits a solid waste management plan.

"Solid waste management facility ("SWMF")" means a site used for planned treating, storing, or disposing of solid waste. A facility may consist of several treatment, storage, or disposal units.

"Source reduction" means any action that reduces or eliminates the generation of waste at the source, usually within a process. Source reduction measures include process modifications, feedstock substitutions, improvements in feedstock purity, improvements in housekeeping and management practices, increases in the efficiency of machinery, and recycling within a process. Source reduction minimizes the material that must be managed by waste disposal or nondisposal options by creating less waste. "Source reduction" is also called "waste prevention," "waste minimization," or "waste reduction."

"Source separation" means separation of recyclable materials by the waste generator of materials that are collected for use, reuse, reclamation, or recycling.

"Tons" means 2,000 pounds.

"Transfer station" means any solid waste storage or collection facility at which solid waste is transferred from collection vehicles to haulage vehicles for transportation to a central solid waste management facility for disposal, incineration or resource recovery.

"Vegetative waste" means decomposable materials generated by yard and lawn care or land-clearing activities and includes, but is not limited to, leaves, grass trimmings, and woody wastes such as shrub and tree prunings, bark, limbs, roots, and stumps. For more detail see the Solid Waste Management Regulations (9VAC20-81).

"Waste exchange" means any system to identify sources of wastes with potential for use reuse, recycling or reclamation and to facilitate its acquisition by persons who reuse, recycle or reclaim it, with a provision for maintaining confidentiality of trade secrets.

"White goods" means any stoves, washers, hot water heaters or other large appliances. For the purposes of this chapter, this definition also includes, but is not limited to, such Freon-containing appliances as refrigerators, freezers, air conditioners, and dehumidifiers.

"Yard waste" means decomposable waste materials generated by yard and lawn care and includes leaves, grass trimmings, brush, wood chips, and shrub and tree trimmings. Yard waste shall not include roots or stumps that exceed six inches in diameter.

Statutory Authority
§ 10.1-1411 of the Code of Virginia; 42 USC § 6942(b), 40 CFR Parts 255 and 256.

Historical Notes

9VAC20-130-20. Authority for regulations.

These regulations are promulgated pursuant to Chapter 14 (§ 10.1-1400 et seq. and specifically §§ 10.1-1402, 10.1-1411 and 10.1-1413.1) of Title 10.1 of the Code of Virginia, which authorizes the Virginia Waste Management Board to promulgate and enforce such regulations as may be necessary to carry out its duties and powers and the intent of the Virginia Waste Management Act and the federal acts.
9VAC20-130-30. Policy.

It is the policy of the Virginia Waste Management Board to require each region designated pursuant to 9VAC20-130-180 through 9VAC20-130-220, 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 (waste-to-energy);
5. Incineration; and

9VAC20-130-40. Purpose of regulations.

The purpose of these regulations is to:

1. Establish minimum requirements for solid waste management planning and recycling for protection of the public health, public safety, the environment, and natural resources throughout the Commonwealth; promote local and regional planning that provides for environmentally sound and compatible solid waste management with the most effective and efficient use of available resources;
2. Establish procedures and rules for designation of regional boundaries for solid waste management plans;
3. Establish state, local government, regional or area served by the plan responsible for meeting and maintaining the minimum recycling rates;
4. Establish the requirement in compliance with the Virginia Waste Management Act, §§ 10.1-1411 and 10.1-1408.1 D 1 (vi) of the Code of Virginia, for withholding issuance of permits for solid waste management facility; and
5. Provide for reasonable variance and exemptions.
9VAC20-130-50. Administration of regulations.

The director is authorized and directed to administer and enforce these regulations in accordance with the Virginia Waste Management Act, §§ 10.1-1400 through 10.1-1457 of the Code of Virginia.

Statutory Authority

§ 10.1-1411 of the Code of Virginia.

Historical Notes


9VAC20-130-60. Applicability of regulations.

A. This chapter applies to all cities, counties, towns, designated solid waste planning units (under 9VAC20-130-180) and permitted solid waste facilities within the solid waste planning unit, including those facilities covered under permit by rule procedures found in 9VAC20-81. Any city, county, and town may mutually agree to unite for the purpose of solid waste management planning, and upon joint written notification to the director, shall be deemed to be a solid waste planning unit for development of a solid waste management plan.

B. Any cities, counties, and towns may be represented by a planning district, public service authority, or designated region that has been adopted under 9VAC20-130-90 B.

C. The plan may (subject to statutory authority) specify that all solid waste must be recycled at the rate established by the plan regardless of the point of origin of the solid waste. Solid wastes from both public and private sources shall be subject to such requirement.

Statutory Authority

§ 10.1-1411 of the Code of Virginia; 42 USC § 6942(b), 40 CFR Parts 255 and 256.

Historical Notes


9VAC20-130-70. Enforcement and appeal.

A. All administrative enforcement and appeals taken from actions of the director relative to the provisions of this chapter shall be governed by Chapter 40 (§ 2.2-4000 et seq.) of Title 2.2 of the Code of Virginia. Enforcement of this chapter will be in accord with §§ 10.1-1186, 10.1-1411 and 10.1-1455 of the Code of Virginia.

B. After July 1, 2007, no permit for a new sanitary landfill, incinerator, or waste-to-energy facility, or for an expansion, increase in capacity, or increase in the intake rate of an existing sanitary landfill, incinerator, or waste-to-energy facility shall be issued until the solid waste planning unit within which the facility is located has a solid waste management plan approved by the board in accordance with the regulations, except as otherwise provided in § 10.1-1411 of the Code of Virginia and the permit complies with the statutory requirements of the Virginia Waste Management Act, §§ 10.1-1408.1 D 1 (iv) and 10.1-1411 of the Code of Virginia. These provisions shall not be applicable to permits or permit amendments required for
the operation or regulatory compliance of any existing facility, regardless of type, nor shall it be cause for the delay of any technical or administrative review of pending amendments thereto.

C. Failure to attain a mandated municipal solid waste recycling rate shall not be the sole cause for the denial of any permit or permit amendment, except as provided herein for sanitary landfills, incinerators, or waste-to-energy facilities, provided that all components of the solid waste management plan for the planning unit are in compliance with the regulations.

D. No application for a new solid waste management facility permit or for a modification of a permit to allow an existing solid waste management facility to expand or increase its capacity shall be complete unless the application contains certification, from the governing body for the locality in which the facility is or will be located, that (i) the proposed new facility or the expansion or increase in capacity of the existing facility is consistent with the applicable local or regional solid waste management plan developed and approved pursuant to § 10.1-1411 of the Code of Virginia; or (ii) the local government or solid waste management planning unit has initiated the process to revise the solid waste management plan to include the new or expanded facility. Inclusion of such certification shall be sufficient to allow processing of the permit application, up to but not including publication of the draft permit or permit amendment for public comment, but shall not bind the director in making the determination required by § 10.1-1408.1 D 1 of the Code of Virginia.

E. No application for coverage under a permit-by-rule or for modification of coverage under a permit-by-rule shall be complete unless it contains certification from the governing body of the locality in which the facility is to be located that the facility is consistent with the solid waste management plan developed and approved in accordance with § 10.1-1411 of the Code of Virginia.

Statutory Authority
§ 10.1-1411 of the Code of Virginia; 42 USC § 6942(b), 40 CFR Parts 255 and 256.

Historical Notes

9VAC20-130-90. Relationship to other bodies of regulation.

A. This chapter is a solid waste planning and recycling regulation that specifies minimum standards and planning requirements for solid waste management in the Commonwealth, including solid waste management planning by regional or local governmental entities of the Commonwealth and assessment of solid waste management in the Commonwealth. If there is a mutually exclusive conflict between this chapter and other adopted nonhazardous solid waste management regulations of this agency, the provisions of this chapter are superior. In any detail where there exists no mutually exclusive conflict between this chapter and other regulations of the board, compliance with all regulations is required.

B. Multi-jurisdictional plans developed in fulfillment of the requirements of this chapter must be adopted under authority of the Regional Cooperation Act (Chapter 42 (§ 15.2-4200 et seq.) of Title 15.2 of the Code of Virginia), the Virginia Water...
and Waste Authorities Act (Chapter 51 (§ 15.2-5100 et seq.) of Title 15.2 of The Code of Virginia), the provisions of the Code of Virginia governing joint exercise of powers by political subdivisions (§ 15.2-1300), or other authority as applicable.

C. If there is a mutually exclusive conflict between this chapter and the Virginia Hazardous Waste Management Regulations, the provisions of the hazardous waste regulations are superior. In any detail where no such mutually exclusive conflict exists, compliance with all regulations is required.

Statutory Authority
§ 10.1-1411 of the Code of Virginia.

Historical Notes

9VAC20-130-100. [Reserved]

9VAC20-130-110. Schedule for plan development.

A. Each solid waste planning unit in the Commonwealth shall develop and maintain a solid waste management plan or amend an existing solid waste management plan and submit it for approval in accordance with this chapter. Existing plans may be amended by addendum of items such as consideration of the waste management hierarchy, the recycling program implementation activities and other requirements of this chapter that are not a part of the existing plan.

B. The department shall review and approve or return comments on the deficiencies in each plan submitted in accordance with 9VAC20-130-110 A no later than 90 days from the date the plans are received. In the event the department is unable to complete its review within 90 days, the applicant will be notified and given a date as to when the review will be completed.

C. Each submitter who receives comments on its solid waste management plan under subsection B of this section shall submit a revised solid waste management plan to the department no later than 90 days following receipt of notification of deficiencies.

D. Plans approved without alteration shall become effective upon notification of such approval by the department. If after review of the corrected plan submitted pursuant to subsection C of this section, the department cannot approve the corrected solid waste management plan because the department finds the plan not to be in accordance with this chapter, it will issue a notice of intent to disapprove to the submitter. The notice of intent to disapprove shall set forth (i) the reason for the disapproval, (ii) what is required for approval, (iii) the right of the submitter to an informal fact-finding proceeding under Chapter 40 (§ 2.2-4000 et seq.) of Title 2.2 of the Code of Virginia, and (iv) allow the development of an action plan for the solid waste planning unit as set forth in this chapter at 9VAC20-130-120 I. The department will give priority consideration for review of corrected plans where the solid waste planning unit has a pending permit application for a solid waste management facility.

E. The director may revoke the approval of any plan or require its revision and resubmittal if there is evidence that there has been significant deviation from the plan. Significant deviations are departures or omissions from activities planned in accordance with 9VAC20-130-120. The department will issue a notice of intent to revoke or require revision and resubmittal of a plan. The notice of intent shall set forth (i) whether the department intends to revoke or require revision and resubmittal...
of the plan, (ii) the reason the department intends to take the action, and (iii) the right of the submitter of the plan to an informal fact-finding proceeding under Chapter 40 (§ 2.2-4000 et seq.) of Title 2.2 of the Code of Virginia.

Statutory Authority

§ 10.1-1411 of the Code of Virginia; 42 USC § 6942(b), 40 CFR Parts 255 and 256.

Historical Notes


9VAC20-130-120. Planning requirements.

A. Basic planning elements:

1. Objectives for solid waste management within the planning unit;
2. A discussion as to how the plan will be implemented and tracked, consisting of an integrated waste management strategy to support and promote the hierarchy set forth at 9VAC20-130-30; giving preference to alternatives in the following order of priority: source reduction, reuse, recycling, resource recovery, incineration, and landfilling;
3. Definition of incremental stages of progress toward the objectives and schedule for their implementation, including, for compliance with 9VAC20-81-450, specific solid waste management facility names, facility capacities, and life based on 20-year need;
4. Strategy for the provision of necessary funds and resources;
5. Descriptions of the funding and resources necessary, including consideration of fees dedicated to future facility development;
6. Strategy for public education and information on source reduction, reuse, and recycling; and
7. Consideration of public and private sector partnerships and private sector participation in execution of the plan. Existing private sector recycling operations should be incorporated in the plan and the expansion of such operations should be encouraged.

B. A minimum recycling rate as specified in § 10.1-1411 of the Code of Virginia for total municipal solid waste generated annually in each solid waste planning unit shall be met and maintained.

1. The plan shall describe how the minimum recycling rate shall be met or exceeded. The department may approve the solid waste management plans of units that do not currently meet the minimum recycling rate only if all other requirements of these regulations have been met and the solid waste planning unit demonstrates its commitment to implementing a strong and detailed action plan for recycling to meet the required rate.

2. When a solid waste planning unit's annual recycling rate falls below the minimum rate, it shall constitute evidence of a significant deviation from the plan. The plan may be subject to revocation by the department under 9VAC20-130-110 E unless the solid waste planning unit submits a recycling action plan acceptable to the department per subsection I of this section.

C. The solid waste management plan shall include data and analyses of the following type(s) for each jurisdiction. Each item below shall be in a separate section and labeled as to content:
1. Population information and projections for 20 years of population growth and development patterns;

2. Urban concentrations, geographic conditions, economic growth and development, markets for the reuse and recycling of materials, transportation conditions, and related factors;

3. Estimates of solid waste generation from residential, commercial institutional, industrial, construction, demolition, debris and other types of sources, including the amounts reused, recycled, recovered as a resource, incinerated and landfilled. Entities engaged in the collection, processing, and marketing of recyclable materials should provide data for incorporation into the recycling rate calculation, when requested by the planning unit.

4. A listing of existing and planned solid waste collection, storage, treatment, transportation, disposal and other management facilities, their projected capacities, expected life and systems for their use;

5. All milestones in the implementation of the solid waste management plan over the 20-year projection and the parties responsible for each milestone;

6. A description of programs for solid waste reduction, reuse, recycling, resource recovery, incineration, storage, treatment, disposal and litter control;

7. A description of outreach programs for waste exchange, public education and public participation;

8. The procedures for and results of evaluating solid waste collection, including transfer stations; and

9. The assessment of all current and predicted needs for solid waste management for a period of 20 years and a description of the action to be taken to meet those needs.

D. All known solid waste disposal sites, closed, inactive and active, within the area of the solid waste management plan shall be documented and recorded at a centralized archive authorized to receive and record information and a copy shall be sent to the department. All new sites shall be recorded at the same central data source.

E. A methodology shall be utilized to monitor the amount of solid waste of each type produced within the area of the solid waste management plan and to record the annual production by solid waste types at a centralized archive and a copy shall be sent to the department.

F. The solid waste management plan shall include, when developed locally, a copy of the local governing body's resolution adopting the solid waste management plan.

G. The solid waste management plan shall include, when developed regionally, a copy of the resolution approving the plan adopted in accordance with the Virginia Area Development Act, the Virginia Water and Waste Authorities Act, the provisions of the Code of Virginia governing joint exercise of powers by political subdivisions (§ 15.2-1300 of the Code of Virginia), or other authority as applicable.

H. The solid waste management plan shall clearly and explicitly demonstrate the manner in which the goals of the planning requirements in these regulations shall be accomplished and actions to take if these requirements are not met.

I. A planning unit that does not meet the requirements of these regulations shall submit an action plan, by mail or electronic mail, for approval by the department. Such action plans shall include:

1. A description of the deficiency that requires the development of the action plan.

2. A time schedule to resolve the deficiency(ies) associated with the planning unit's failure to meet the requirements of the approved solid waste management plan.
3. A reporting requirement to the department, of a minimum of once every six months, including activities or updates documenting how the action plan requirements are being met.

4. Plans and all subsequent reports and submittals shall be reviewed by the department within 30 days of receipt by the department.

5. All the department's requests for further information or response(s) shall be provided within 30 days of receipt at the planning unit. The department may grant reasonable extensions to these deadlines on a case-by-case basis.

Statutory Authority
§ 10.1-1411 of the Code of Virginia; 42 USC § 6942(b), 40 CFR Parts 255 and 256.

Historical Notes

9VAC20-130-125. Recycling requirements.

A. Each solid waste planning unit shall maintain a minimum recycling rate for municipal solid waste generated within the solid waste planning unit pursuant to the following schedule:

   1. Except as provided in subdivision 2 of this subsection, each solid waste planning unit shall maintain a minimum 25% recycling rate; or

   2. Each solid waste planning unit shall maintain a minimum 15% recycling rate if it has (i) a population density rate of less than 100 persons per square mile according to the most recent United States Census, or (ii) a not seasonally adjusted civilian unemployment rate for the immediately preceding calendar year that is at least 50% greater than the state average as reported by the Virginia Employment Commission for such year.

B. The minimum recycling rate shall be determined by the following formula:

   \[
   \text{Recycling Rate} = \frac{\text{PRMs recycled}}{\text{MSW generated}} + \text{all Credits in C}
   \]

   Where:

   PRMs recycled equals the amount of principal recyclable materials received for recycling each calendar year; and
   MSW generated equals the sum of PRMs recycled and MSW disposed. (MSW disposed equals the amount of MSW delivered to landfills, transfer stations, incineration and waste-to-energy facilities)

   The amounts shall be expressed in tons using one of the methods below:

   1. The actual weight of each component in tons; or

   2. The volume of each component, converted to weight in tons (conversion chart in Form DEQ 50-30).

C. Credits may be added to the recycling formula in subsection B of this section provided that the aggregate of all such credits shall not exceed five percentage points of the annual municipal solid waste recycling rate achieved for each solid waste planning unit:

   1. A credit of one ton for each ton of any nonmunicipal solid waste material that is recycled;

   2. A credit of one ton for each ton of any solid waste material that is reused;
3. A credit of one ton for each ton of recycling residue generated in Virginia and deposited in a landfill permitted under § 10.1-1408.1 of the Code of Virginia;

4. A credit of two percentage points of the minimum recycling rate mandated for the solid waste planning unit for a source reduction program that is implemented within the solid waste planning unit. The existence and operation of such a program shall be certified by the solid waste planning unit; and

5. A credit of one ton for each inoperable vehicle for which a locality receives reimbursement from the Virginia Department of Motor Vehicles under § 46.2-1407 of the Code of Virginia.

D. Yard wastes and vegetative wastes are deemed to be recycled if they are composted or mulched and the finished mulch or compost is marketed or otherwise used productively. Tires are deemed to be recycled if they are beneficially used in a method consistent with the waste tire program operated by the department. Used oil, oil filters and antifreeze are deemed to be recycled if they are marketed or otherwise used productively.

Statutory Authority
§ 10.1-1411 of the Code of Virginia; 42 USC § 6942(b), 40 CFR Parts 255 and 256.

Historical Notes

9VAC20-130-130. Public participation.

A. Each solid waste planning unit shall provide for public participation during plan development through such means as public meetings or citizen advisory committees.

B. Prior to submission of a plan or major amendment the solid waste planning unit shall publish a notice and hold a public hearing on the plan. When the solid waste planning unit represents multiple government units, the unit submitting a major plan amendment(s) needs to conduct the above public participation requirements only in the county or locality involved in the major amendment. A record of the public hearing, a copy of all written comments and the submitter's response to all comments received shall be submitted with the plan or plan amendment.

Statutory Authority
§ 10.1-1411 of the Code of Virginia; 42 USC § 6942(b), 40 CFR Parts 255 and 256.

Historical Notes

9VAC20-130-140. (Repealed.)

Historical Notes

9VAC20-130-150. (Repealed.)

Historical Notes
9VAC20-130-165. Recycling data reporting.

A. Each solid waste planning unit or locality with a population of greater than 100,000 persons according to the most recent United States census shall prepare and submit a recycling survey report to the department by April 30 of each year.

B. Each solid waste planning unit or locality with a population of 100,000 or less according to the most recent United States census shall prepare and submit a recycling survey report to the department once every four years. These recycling survey reports shall include only information for the most recent single year. The first reports submitted pursuant to this subsection shall be submitted by April 30, 2013, for the reporting year ending December 31, 2012. Thereafter, recycling survey reports shall be submitted by April 30 of every fourth year (i.e., 2017, 2021, 2025, and so on).

C. The recycling survey report required by subsections A and B of this section shall include the data and calculations required in 9VAC20-130-125 A, B, and C.

Statutory Authority
§ 10.1-1411 of the Code of Virginia.

9VAC20-130-170. [Repealed]
a. Any addition, deletion, or cessation of operation of any facility that is not a solid waste disposal facility;

b. Any change that moves toward implementation of a waste management strategy that is higher in the waste management hierarchy; or

c. Any nonsubstantive administrative change such as a change in name.

3. Minor amendments shall be submitted, by mail or electronic mail, directly to the department for notation. The planning units are the repository for the minor amendments to the plans.

B. Major amendments shall require the same public participation as detailed in 9VAC20-130-130 before being submitted, by mail or electronic mail, to the department for approval prior to implementation.

C. The department shall review major amendments and approve or return comments on any deficiencies no later than 90 days from the date the amendments are received. In the event the department is unable to complete its review within 90 days, the applicant will be notified and given a date as to when the review will be completed. No department approval shall be necessary for minor amendments.

D. Each submitter who receives comments on his major plan amendment under subsection C of this section shall submit a corrected amendment to the department no later than 90 days following notification of deficiencies.

E. Major amendments approved without alteration shall become effective upon notification. If after review of the corrected amendment submitted pursuant to subsection D of this section, the department cannot approve the corrected amendment because it finds the amendment not to be in accordance with this chapter, it will issue a notice of intent to disapprove to the submitter. The notice of intent to disapprove shall set forth (i) the reason for the disapproval, (ii) what is required for approval, and (iii) the right of the submitter to an informal fact-finding proceeding under Chapter 40 (§ 2.2-4000 et seq.) of Title 2.2 of the Code of Virginia. The department will give priority consideration for review of corrected amendments when the planning unit has a pending permit application for a solid waste management facility.

F. Solid waste management planning units are required to maintain current plans. On or before each five-year anniversary of the department's plan-approval date, the planning unit shall submit a letter to the department, by mail or electronic mail, certifying that the following plan elements, listed in 9VAC20-130-120 C, have been maintained and updated: waste generation estimates are current, the schedule increments have been met, and a projected 20-year waste management capacity remains available or projects otherwise are on schedule to meet the unit's solid waste needs. The letter of certification will be used in the department's assessment of whether any plan amendments are necessary and to ensure compliance with 9VAC20-130-110 E.

Statutory Authority

§ 10.1-1411 of the Code of Virginia; 42 USC § 6942(b), 40 CFR Parts 255 and 256.

Historical Notes


9VAC20-130-180. Designation of solid waste planning units.

The director has been authorized by the Governor to designate regional boundaries defining areas and jurisdictions to be considered for joint development of solid waste management plans. Only those solid waste planning units meeting the
standards established in this chapter will be considered. Any group of jurisdictions may petition the director for designation as a solid waste planning unit, and, if the proposed region meets the standards established for designation, the director shall approve the request.

Statutory Authority

§ 10.1-1411 of the Code of Virginia; 42 USC § 6942(b), 40 CFR Parts 255 and 256.

Historical Notes


9VAC20-130-190. Development of designated solid waste planning units.

A. At least 14 days prior to designating a regional boundary for solid waste management planning, the director shall place a notice of the proposed regional boundary and an opportunity to comment in the Virginia Register of Regulations and in a newspaper of general circulation within the proposed solid waste planning unit.

B. If, as a result of the notices required by subsection A of this section, the director feels a significant need exists to hold a public hearing on the issues, a public hearing shall be held in the proposed region prior to the designation. At least 14 days prior to the public hearing, a notice of the proposed public hearing shall appear in the same publications as the notice under subsection A of this section.

Statutory Authority

§ 10.1-1411 of the Code of Virginia; 42 USC § 6942(b), 40 CFR Parts 255 and 256.

Historical Notes


9VAC20-130-200. Considerations in designating solid waste planning unit boundaries.

A. The following shall be considered in designating solid waste planning unit boundaries:

1. Geographic areas or jurisdictions which have a history of cooperating to solve problems in environmental or other related matters;
2. Existing regional management systems, authorities or similar institutions;
3. The size, configuration and location of the regional areas should have sufficient solid waste contribution and market availability to support the solid waste management system;
4. Solid waste types within areas and mutuality of solid waste management interests;
5. Geologic, hydrologic, soil and groundwater conditions; availability of land and soils; and natural barriers and ecosystems; and
6. Existing planning areas established for purposes other than solid waste management including the existence of informational databases containing data related to that needed for solid waste management planning and recycling.

B. Areas included within a solid waste planning unit’s boundaries may be local or regional.
1. A local area may include a city, town or county and any towns within the county that through mutual agreement join with the county for the purpose of developing a plan.

2. A regional area may include:
   a. The jurisdictions with existing regional planning district boundaries;
   b. Any combination of local governments formally joined to form a region or service authority; or
   c. Existing waste management or public service authorities.

Statutory Authority

§ 10.1-1411 of the Code of Virginia; 42 USC § 6942(b), 40 CFR Parts 255 and 256.

Historical Notes


A. The director may authorize an official committee or public body as authorized to develop, adopt and promulgate the solid waste management plan.

B. Prospective solid waste planning units shall have:
   1. Demonstrated ability to plan, manage or operate solid waste management and recycling services; or
   2. Completed planning that resulted in successful implementation of solid waste management and recycling facilities or services.

C. An entity designated as responsible for developing a solid waste management plan shall:
   1. Be an organization that represents the executive boards of jurisdictions within the solid waste planning unit;
   2. Have planning authority for the regional area;
   3. Be capable of readily starting the plan development work tasks;
   4. Have an established methodology for resolving conflicts, making planning decisions and providing public participation in the development of the plan;
   5. Have experience in environmental planning and have a staff experienced in the work tasks involved in such planning;
   6. Have established a methodology and authority sufficient to implement the plan once it is complete and approved; and
   7. Have access to informational resources within the region.

Statutory Authority

§ 10.1-1411 of the Code of Virginia; 42 USC § 6942(b), 40 CFR Parts 255 and 256.

Historical Notes

9VAC20-130-220. Amendment of solid waste planning unit boundaries.

The director may amend a solid waste planning unit's boundary based on an application from the governing body or bodies of the solid waste planning unit. Along with the application, each locality (within the original region and any locality being added) must submit a letter acknowledging the change in the boundary.

Statutory Authority

§ 10.1-1411 of the Code of Virginia; 42 USC § 6942(b), 40 CFR Parts 255 and 256.

Historical Notes


9VAC20-130-230. Petitioning for variance or exemption.

A. Any person regulated by this chapter may petition the director to grant a variance or an exemption from any requirement of this chapter subject to the provisions of this section. Any petition submitted to the department is also subject to Chapter 40 (§ 2.2-4000 et seq.) of Title 2.2 of the Code of Virginia.

B. The director may grant the variance or an exemption provided the applicant demonstrates to the satisfaction of the director that:

1. The solid waste planning unit has demonstrated that it has made a good faith effort to comply with the minimum recycling rates and with the requirements of this chapter before that unit petitioned for a variance; and

2. (i) If the minimum recycling rate is addressed in the petition, and strict application of the minimum recycling rates will result in undue hardship as a result of the solid waste planning unit's particular market conditions that are beyond the planning unit's control; or (ii) if the recycling rate is not addressed in the petition and granting the variance will not have an adverse impact on the integrity of the overall solid waste management plan.

C. The petition shall be submitted to the department by certified mail and shall include:

1. The petitioner's name and address;

2. A statement of petitioner's interest in the proposed action;

3. A description of desired action and a citation of the regulation from which a variance is requested;

4. A description of need and justification for the proposed action, including impacts from existing operations and market conditions (if the planning unit chooses to petition for subdivision B 2 (i) of this section);

5. The duration of the variance, if applicable;

6. Other information believed by the applicant to be pertinent; and

7. The following statement signed by the petitioner or authorized representative:

   "I certify that I have personally examined and am familiar with the information submitted in this petition and all 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. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

D. Petition processing and resolution.
1. In the case of a denial, the petitioner's procedural rights are outlined in Chapter 40 (§ 2.2-4000 et seq.) of Title 2.2 of the Code of Virginia.

2. If the director grants a variance request, the notice to the petitioner shall provide that the variance may be terminated upon a finding by the director that the petitioner has failed to comply with any variance requirements.

Statutory Authority

§ 10.1-1411 of the Code of Virginia; 42 USC § 6942(b), 40 CFR Parts 255 and 256.

Historical Notes


9VAC20-130-240. [Repealed]

Historical Notes

Appendix C

Floyd County Solid Waste/Recycling Information
139 Transfer Station Rd SE
P. O. Box 218
Floyd, Virginia 24091

**Hours of Operation:**
8:00 AM to 4:00 PM Monday through Friday
8:00 to 11:30 AM Saturday
Closed on Holidays

**Contact Information:**

**Sherrell Thompson** (mailto:stthompson@floydcova.org)
Solid Waste Management
(540) 745-9367

**Jabe Graham**
Assistant Solid Waste Management and Recycling Coordinator
(540) 745-9371

**Directions:**
Route 8 South (Parkway Ln S), left on State Route #710 (Storkers Knob Rd), go to end, right on Transfer Station Rd

Public Greenbox Locations: Click Here
(http://www.floydcova.org/County_Roadmap_Greenboxes.pdf)

**Fees Amending beginning of July 1, 2004**

**Municipal/Commercial/Industrial Solid Waste Tipping Fees:**
$55.00 Per Ton
$20.00 Pickup Truck
$200.00 Single Axle Truck
$300.00 Dual Axle Truck
$400.00 Tractor Trailer Truck

**Tire Fees:**
$1.00 Passenger car/small truck tire equal to fit less than 16 inches, per tire
$2.00 Bias ply tire greater than 16 inches and equal to or less than 20 inches, per tire
$8.00 Radial ply tire greater than 16 inches and equal to or less than 20 inches, per tire
$10.00 Tractor-trailer, off-road and agricultural implement tires greater than 20 inches, per tire

**Roll Off Container:**
$50.00 to drop off
$50.00 to pick-up
$55.00 per ton to unload

**Application fee for solid waste management facility certificate, minimum $12,000.00**

To view the Code of Ordinances for the Solid Waste, click here
(http://www.municode.com/Resources/gateway.asp?pid=13477&sid=46) and then scroll down to Chapter 42.
Appendix D

Waste Collection Methods Used by Selected

Southwest Virginia Localities
<table>
<thead>
<tr>
<th>County</th>
<th>Population*</th>
<th>Solid Waste Collection Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floyd</td>
<td>15,430</td>
<td>Greenboxes located at 40 sites along roadways in the County. Sites are accessible 24 hours/day.</td>
</tr>
<tr>
<td>Grayson</td>
<td>16,087</td>
<td>Curbside/roadside collection on a weekly basis by County. Residents are billed twice a year (with real estate taxes) for monthly collection fees.</td>
</tr>
<tr>
<td>Carroll</td>
<td>29,283</td>
<td>County established and awarded a residential curbside collection franchise to a private waste collection company.</td>
</tr>
<tr>
<td>Patrick</td>
<td>18,450</td>
<td>County established and awarded a residential curbside collection franchise to a private waste collection company.</td>
</tr>
<tr>
<td>Franklin</td>
<td>56,373</td>
<td>County had a greenbox collection system with 68 sites. The County announced an effort in 2015 to reduce the number of sites, provide staff at the sites, and have a set schedule.</td>
</tr>
<tr>
<td>Wythe</td>
<td>28,743</td>
<td>County has 12 convenience centers which are staffed, have controlled access (fenced/gated), and set hours of operation. County residents can drop off waste and recyclables at the centers.</td>
</tr>
<tr>
<td>Bland</td>
<td>6,684</td>
<td>Curbside/roadside collection on a weekly basis. County bids out collection to private waste collection company. County bills residents on a quarterly basis for collection.</td>
</tr>
<tr>
<td>Pulaski</td>
<td>34,841</td>
<td>Curbside collection on a weekly basis by Pulaski County Public Service Authority. A monthly collection fee is billed by the PSA.</td>
</tr>
<tr>
<td>Giles</td>
<td>17,179</td>
<td>Curbside collection on a weekly basis by Giles County Public Service Authority. A monthly collection fee is billed by the PSA.</td>
</tr>
<tr>
<td>Montgomery</td>
<td>98,121</td>
<td>County has 10 convenience centers which are staffed, have controlled access (fenced/gated), and set hours of operation. County residents can drop off waste and recyclables at the centers.</td>
</tr>
</tbody>
</table>

*Weldon Cooper Center County Population Estimates for 2015.*
Appendix E

Local Government Resolutions of Adoption