

Solid Waste Management Plan

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Produced by:

Thomas Jefferson Planning District Commission

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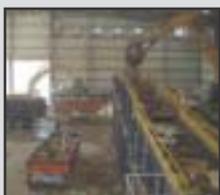


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Executive Summary

This document is an update to the Thomas Jefferson Solid Waste Management Plan. It includes a description of existing and projected solid waste needs and facilities, as well as a plan for management of the solid waste generated by residential, industrial and commercial activities of the Thomas Jefferson Solid Waste Planning Unit (TJSWPU). This document serves as the regional plan for the TJSWPU, which is made up of the Counties of Albemarle, Greene, and Fluvanna, the City of Charlottesville, and the towns of Columbia, Scottsville, and Stanardsville. The plan meets the solid waste planning requirements of 9VAC20-130-120 for each locality participating in the planning unit by describing existing and proposed solid waste management systems that support the hierarchy of source reduction, reuse, recycling, resource recovery, incineration, and landfilling, as set forth in 9VAC20-130-30.

The committee of citizens and public and private sector representatives met regularly over the course of a year to amend this plan both to satisfy the Virginia Department of Environmental Quality requirements, and to serve as a basis for strategic planning for solid waste in the longer term. The group reviewed data and trends on waste generation, recycling, reuse, and disposal, comparing it with data available about solid waste management systems capacity to determine future needs. While some elements of the plan will require additional study, the group recommends the following basic strategies:

- 1. Regional approach:** *Regional efforts will yield better results than localized solutions, especially with high costs and capital needs for operations. Cooperative contracting, collection, disposal and recycling operations can provide budget and resource savings, and allow the region to join markets at a competitive level with larger cities.*
- 2. Increased recovery:** *Recovery of a larger percent of valuable material, such as recyclables and organic matter, leads to a better balance sheet and longer disposal facility lifetimes.*
- 3. Reduce total waste:** *Source reduction, reuse, and recycling decrease the need for landfilling, which is generally not considered a desirable option. In order to limit the negative impacts our communities have on others, the total volume of waste disposed of should be kept to a minimum.*
- 4. Increased outreach:** *Increased recovery and reduced total waste can only be achieved by an aware citizenry, institutions, and business community.*

Adoption & Amendment History

The Solid Waste Management Plan was adopted by the Thomas Jefferson Planning District Commission (TJPDC) on June 29, 2004. Further planning work was required beyond 2004 because the planning unit did not achieve the required 25% recycling rate. The plan was considered final by the DEQ in 2006 when the planning unit reached the required recycling rate. A progress log on the 2006 plan can be found in the Appendices. The required five-year update of the plan was adopted by the TJPDC on October 6, 2011.

1 Introduction and Background

In 1990, the Virginia Department of Waste Management published regulations for the development of Solid Waste Management Plans. The regulations established minimum solid waste management standards and planning requirements applicable to all cities, counties, towns, or designated regions in the Commonwealth of Virginia.

The first regional solid waste plan undertaken by the Thomas Jefferson Planning District Commission (TJPDC) was adopted in 1983 in response to the Virginia Solid and Hazardous Waste Management Act of 1979. Another plan was developed and adopted by all member governments in 1989. The TJPDC adopted its first plan required under the new regulations in 1991. Amendments to Virginia's solid waste regulations required that the region submit a new plan in 2004 (the TJSWPU's was considered finalized by the DEQ in 2006), and update the plan every five years. At the time of the original plan, the Thomas Jefferson Planning District, Virginia Planning District 10, was designated as the "region" for purposes of solid waste management planning.

The Thomas Jefferson Solid Waste Planning Unit (TJSWPU) now includes the Counties of Albemarle, Fluvanna, and Greene, the City of Charlottesville, and the Towns of Columbia, Stanardsville, and Scottsville. The region has the same boundaries as the Thomas Jefferson Planning District (Planning District 10) with the exclusion of Louisa and Nelson Counties, and the Towns of Louisa and Mineral. The City of Charlottesville and Albemarle County created the Rivanna Solid Waste Authority (RSWA) for waste management, operation and reporting. The University of Virginia (UVa) is also located within the SWPU. RSWA and UVa maintain representation on the TJSWPU's committee to contribute to planning activities for the unit. Both contributed to the content of this plan. Louisa County and its towns have their own solid waste management plan. Nelson County is taking part in the Region 2000 solid waste management plan.

This plan is designed to meet state planning requirements and to assist member governments with planning and decision making for solid waste management issues over the next 20 years. It includes a summary of the findings and recommendations of a steering committee composed of local staff and members of the public appointed by localities, and private sector individuals. In 2006, members of the committee recommended strategies to implement the goal and objectives related to solid waste management found in the 1998 Sustainability Accords, a document endorsed by all TJPDC localities that has served as a guide for long-term viability of economic, environmental, and social resources and institutions in the region. Many of the strategies in the 2011 update carry over from the 2006 plan as ongoing activities. The dispositions of strategies from the 2006 plan are included in a progress report found in the Appendices. New strategies developed by the committee respond to other recent planning initiatives involving solid waste management, and accomplishments and changes since 2006 that provide new opportunities to accomplish plan goals.

Feedback was incorporated into the updated plan through a review process that included the committee, locality planning staff and administrators, TJPDC Commissioners, other local elected officials, and the public. Economic, environmental, social, transportation and feasibility concerns were taken into account in developing the recommendations in the plan. Short and long term goals are included, as well as specific projects and timelines for implementation.

2 Profile of the Solid Waste Planning Unit

2.1 Population and Growth Projections

The Thomas Jefferson Planning District is located roughly in the geographic center of the Commonwealth. The counties of Albemarle, Fluvanna, and Greene, the City of Charlottesville and the incorporated towns of Columbia, Scottsville and Stanardsville make up the Solid Waste Planning Unit. The City of Charlottesville and the urban portions of Albemarle County, including the University of Virginia, constitute the economic, educational and cultural hub of the region.

As the following population figures show, the region has grown by approximately 15% from 2000 to 2010. While each locality has grown steadily over the past decade, most showed a decreased rate of growth from the previous decade, excluding the City of Charlottesville, whose growth rate increased from 2000 - 2010.

TABLE 1. POPULATION HISTORY AND PROJECTIONS

Locality	1990	2000	2010	2020	2030
Charlottesville	40,341	40,099	43,475	44,125	45,036
Albemarle	68,040	84,186	98,970	110,725	123,779
Fluvanna	12,429	20,047	25,691	32,654	41,008
Greene	10,297	15,244	18,403	22,002	25,950
Solid Waste Unit	131,107	159,576	186,539	209,505	235,773

Source: US Census (1990 - 2010); Virginia Employment Commission (2020, 2030 - adjusted projections based on the % error between 2010 VEC projections and 2010 decennial census)

TABLE 2. NUMBER OF HOUSEHOLDS

Locality	1990	2000	2005 - 2009	% Change from 2000
Charlottesville	16,099	16,851	17,037	1%
Albemarle	24,387	31,876	36,894	16%
Fluvanna	4,495	7,387	9,276	26%
Greene	3,737	5,574	6,741	21%
Solid Waste Unit	50,708	63,688	69,948	10%

Source: US Census American Community Survey (2010 Census data not yet released)

2.2 Development Patterns and Geographic Conditions

Census data and local comprehensive planning information show the major population centers and growth areas. The City of Charlottesville and the surrounding urban ring in Albemarle County are home to roughly half the population of the SWPU. Fluvanna and Greene grew at a faster than average rate from 2000 – 2010 compared to other Virginia counties. The Route 29 corridor and the I-64/250 corridor are the major residential, commercial, and industrial areas outside of the city and small towns. Most localities have policies in effect to persuade growth around existing centers and reduce the potential for sprawling development over time.

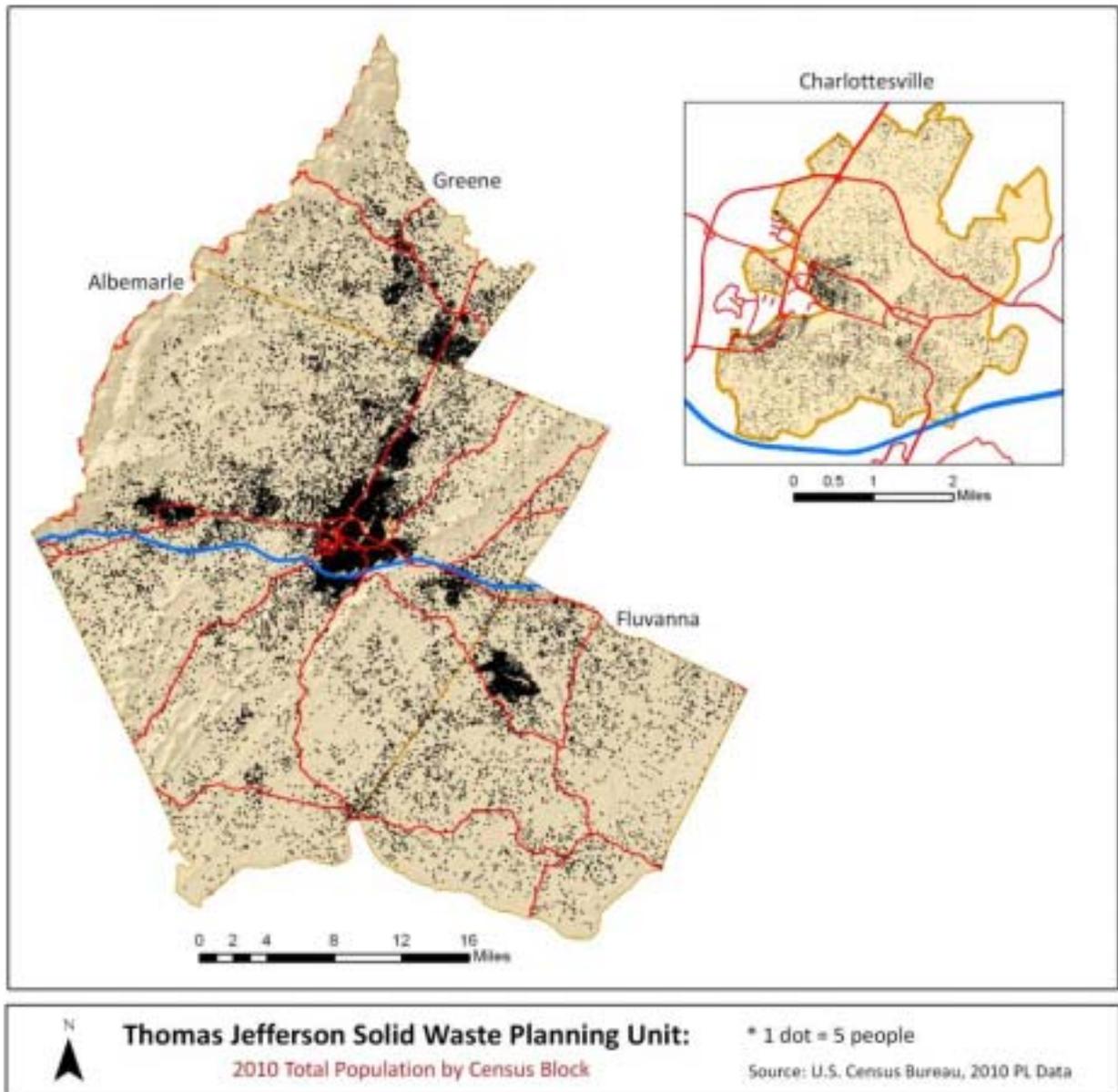


FIGURE 1. POPULATION DENSITY IN THE SWPU

ALBEMARLE

Albemarle County has defined development areas around the City of Charlottesville and north of the City along the Route 29 corridor, in the area of Crozet to the west of Charlottesville, and along Route 250 to the east of Charlottesville. The western side of the County is bounded by the Blue Ridge Mountains and Shenandoah National Park. Outside the development areas, the remainder of the County is rolling Piedmont landscape dotted with a mix of residential, agricultural and minor commercial uses. Residential growth has occurred both inside and outside of the development areas, but in recent years the balance has tipped to the development areas. The major commercial corridors are Route 29, particularly north of Charlottesville, and Route 250 east. The Town of Scottsville is located in the southeastern corner of Albemarle on the James River. A small portion of the town is in Fluvanna County.

CHARLOTTESVILLE

The City of Charlottesville is essentially “built-out” at this point. Infill and redevelopment have started to occur. The City is entirely surrounded by the County of Albemarle and can expand no further. Much of the City is residential, with major commercial areas located in the Main Street area (Business Route 250 and the downtown pedestrian mall) and along Route 29. The University of Virginia is the major employer in the City and straddles the City/County’s western border. The City features a rolling landscape and is bounded by the Rivanna River and Moore’s Creek on its east and south sides, respectively.

FLUVANNA

Fluvanna County experienced a high rate of population growth through the 1990s and maintained higher than average growth rates through the following decade. Most of this growth has been centered on the Lake Monticello development in the western portion of the County, to the northwest of the county seat of Palmyra. This has brought minor amounts of commercial development to serve the residents; however, Fluvanna residents still largely commute to Charlottesville and Albemarle County for employment, goods and services. Fluvanna County terrain is relatively flat compared to the counties to the west, and becomes increasingly gentle as one moves east. The Rivanna River bisects the County running northwest to southeast, and the James River forms its southern boundary. The small town of Columbia is found at the confluence of the two rivers in the southeast.

GREENE

Greene County has also experienced rapid growth, primarily in the southeast along the Route 29 corridor. The rapid residential growth in this area is primarily made up of commuters to Albemarle County and Charlottesville. Increasing employment opportunities coupled with rising housing costs in Albemarle have made Greene County an increasingly attractive option for potential homeowners. Some commercial development has occurred along the Route 29 corridor as well, but county residents still travel to Albemarle for many goods and services. Greene County is bounded on the west by the Blue Ridge Mountains and Shenandoah National Park. Similar to Albemarle, the terrain of Greene County falls away into foothills eastward from the Blue Ridge Mountains. The Town of Stanardsville serves as the County Seat and is a hub for residential development.

2.3 Economic Growth and Development

The overall economic growth for the region in the 1990s and early 2000s was very healthy, with various indicators showing positive trends. Despite the 2008 nationwide recession, each locality, and the region maintain lower unemployment rates than those of the state and nation. Median income also grew steadily in each jurisdiction.

TABLE 3. UNEMPLOYMENT RATE

Locality	1994	2000	2010
Charlottesville	3.3%	2.6%	6.0%
Albemarle	2.4%	1.7%	5.0%
Fluvanna	3.8%	1.9%	5.3%
Greene	3.9%	1.9%	5.3%
Solid Waste Unit	3.4%	2.0%	5.4%
Virginia	4.9%	2.2%	6.9%
National	6.1%	3.7%	9.3%

Source: Virginia Employment Commission

TABLE 4. MEDIAN HOUSEHOLD INCOME, IN DOLLARS

Locality	1990	2000	2009	% Change from 2000
Charlottesville	\$24,190	\$32,903	\$38,369	17%
Albemarle	\$36,886	\$53,263	\$64,306	21%
Fluvanna	\$31,378	\$46,630	\$62,163	33%
Greene	\$29,799	\$46,882	\$54,153	16%
Solid Waste Unit	\$30,563	\$44,920	\$54,748	22%

Source: US Census American Community Survey

Reflecting national trends, the greatest increases in jobs in the SWPU have been in the service, retail, wholesale, and government sectors, while farm and manufacturing jobs have been on the decline. Major employers in the area include the University of Virginia, Martha Jefferson Hospital, State Farm, GE Fanuc, Dominion Virginia Power, Lexis Publishing, Crutchfield Corporation, FIC Staff Services, Piedmont Virginia Community College, Klockner-Pentaplast, and the Virginia Department of Corrections.

2.4 Transportation Conditions

Transportation within the SWPU revolves around Interstate 64 on the east-west axis and Route 29 on the primary north-south axis. Other major transportation corridors include Route 15 through Fluvanna County, which travels roughly north-south, and Route 6, which passes through southern Fluvanna County and into northern Nelson County to the west. Route 33 cuts through Greene County on an east-west axis. Corridors other than Route 29 and Interstate 64 do not have the capacity for heavier volumes of traffic. Narrow roads and hilly conditions characterize rural areas that are traversed by county owned, state maintained secondary routes. The secondary system is more challenging for larger trucks to travel and occasional snow in winter can cause transportation delays of several days at times. Rail service runs both north-south and east-west through the region, including through Charlottesville and many small towns.

2.5 Markets for the Reuse and Recycling of Materials

Reuse of household materials is common in the area, and markets include used clothing, sporting goods, and pawn shops, yard sales, rummage sales, the Habitat Shop, and other building supply recovery operations. Reuse of inert fill is generally accomplished locally. Non-profits accept donations of old cars, appliances, equipment, eyeglasses, and other useful items. Online options include Freecycle and Craigslist, which are online message board where items to be given away can be posted and claimed.

Most materials destined to be recycled are shipped out of the region, since there are few local processors or markets. For example, cardboard collected by the Rivanna Solid Waste Authority goes to Georgia. Construction and demolition debris (CDD) and paper products are exceptions, however. The van der Linde Recycling facility recycles local CDD at a rate exceeding 90%, and Weyerhaeuser recycles a portion of the regions waste paper. National markets affect pricing at the local level, and some materials, like green glass, have been steadily losing national markets, and therefore value. Processing fees for separation of aluminum from steel affect the profitability of recycling metals. Cycle Systems, Inc. and other scrap dealers accept metals to be recycled. Waste oil and antifreeze are collected for recycling by contractors that service the region.

Organic wastes are readily consumed by a number of public and private mulching operations. Public operations include Charlottesville's leaf collection and Christmas tree programs offered by Charlottesville and Albemarle. Panorama Farms in Albemarle County accepts organic material to be composted, and a new composting facility is expected to open late in 2011. The new facility will be the first to offer post-consumer food waste composting to the region.

3 Current & Historical Solid Waste Management Systems

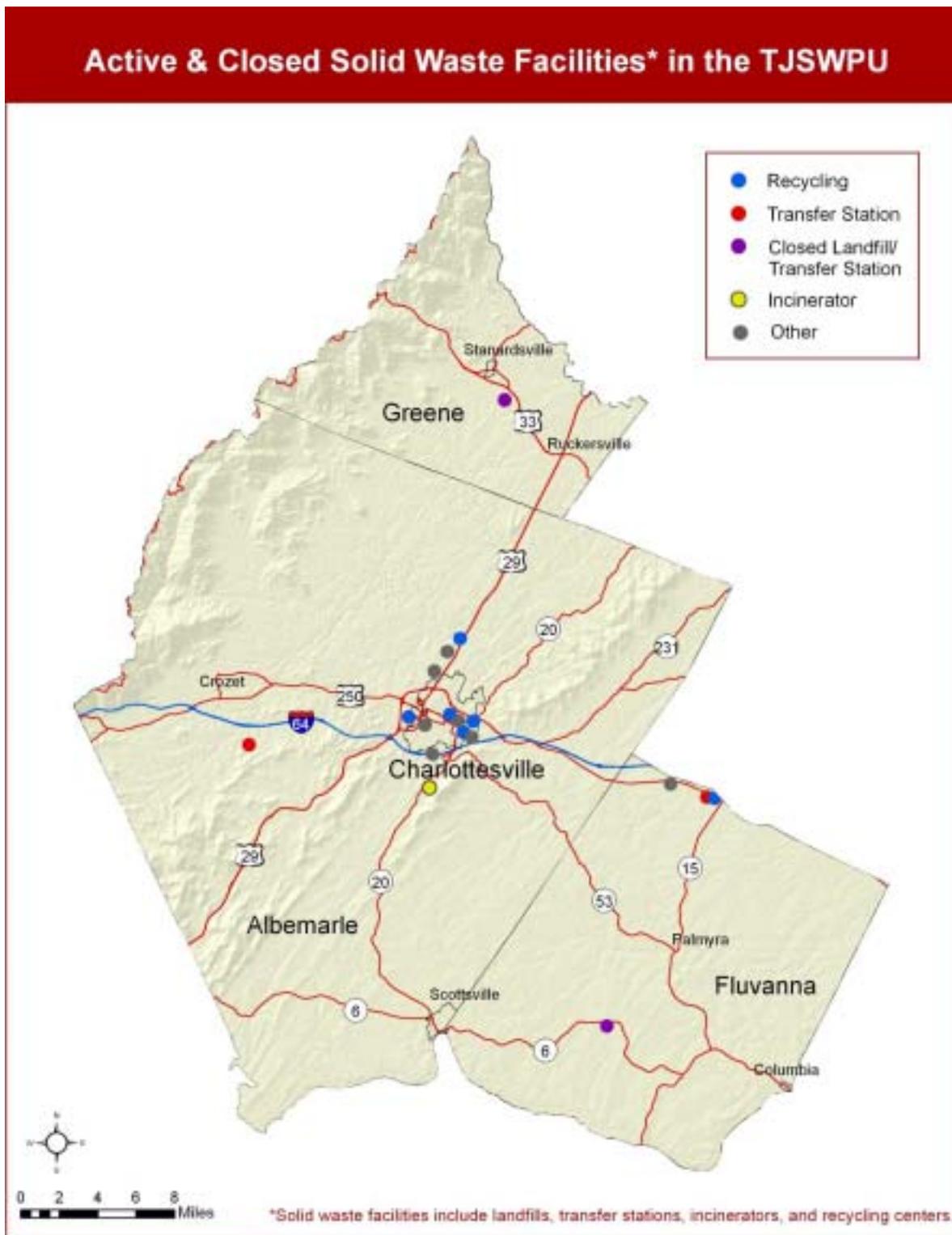


FIGURE 2. SOLID WASTE MANAGEMENT FACILITIES: ACTIVE AND CLOSED

The following table details the existing and closed waste management facilities in each locality. The table identifies those that have been permitted through the Virginia Department of Environmental Quality and does not provide a complete inventory of closed landfill sites that were either used informally or were not permitted. The closed facilities identified on this table are those for which the locality or authority is responsible for any necessary remediation.

TABLE 5. EXISTING SOLID WASTE MANAGEMENT FACILITIES IN THE TJSWPU: ACTIVE & CLOSED BY LOCALITY

Locality	Facility name	Type	Status	Permit Year
RSWA	Ivy Material Utilization Ctr.	Transfer Station	Active	1997
	Ivy Sanitary Landfill	Sanitary Landfill	Closed	1997
	RSWA Compost Facility	MSW Composting Facility	Closed (2001)	1998
Albemarle	Keene Sanitary Landfill	Sanitary Landfill	Closed	1974
Charlottesville	Eldercare Gardens	Regulated Medical Waste (RMW) Incineration	Permitted by Right (PBR) prior to 1994	
	HCMF Heritage Hall	RMW Storage Only	PBR prior to 1994	
	Martha Jefferson Hospital	RMW Incineration	PBR prior to 1994	
	University of Virginia	RMW Incineration	PBR prior to 1994	
	Virginia Ambulatory Surgery Center	RMW Storage only	Active	1998
	Old 5 th Street Landfill	Unlined landfill	Closed	1960's
Fluvanna	BFI Fluvanna County Transyclery	Materials Recovery Facility	Active	1995
	Fluvanna Correctional Unit#5	RMW Steam Sterilization	PBR prior to 1994	
	Fluvanna County Sanitary Landfill	Sanitary Landfill	Closed	1974
	Fluvanna County Sanitary Landfill	Sanitary Landfill	Closed	1983
	Zion Crossroads Recycling Center (MSW MRF) & Van der Linde Recycling (CDD MRF)	MSW and CDD Materials Recovery Facility	Active	CDD: 2007 MSW: 2009
Greene	Greene County MRF & Co - Compost	Materials Recovery Facility	Closed	1994
	Greene County Transfer Station	Transfer Station	Active	1994
	Greene County Sanitary Landfill	Sanitary Landfill	Closed	1974
	Greene County Sanitary Landfill	Sanitary Landfill	Closed	1978

Source: Virginia Department of Environmental Quality and local governments

3.1 Current Waste Generation Rates

The following table provides a breakdown of waste generated by type, as reported to the DEQ in 2011.

TABLE 6. TJPDC 2010 ESTIMATED CURRENT WASTE GENERATION RATES (IN TONS)

	RSWA*	Fluvanna	Greene	Region
Municipal Solid Waste Disposed	6,9199.58	3,372.04	24,431	97,002.62
Household	69,198	3,372	16,346	88,916
Commercial	2	0	8,085	8,087
Institutional	0	0	0	0
Other (non-industrial)	0	0	0	0
Primary Recyclable Materials	23,345	1,214	6,463	31,022
Paper	5,415	62	3,160	8,637
Metal	601	39	2,382	3,021
Plastic	354	0	65	419
Glass	635	0	45	680
Commingled	6,874	1,100	0	7,974
Yard Waste (composted or mulched)	3,513	0	340	3,853
Waste wood (chipped or mulched)	671	0	110	781
Textiles	455	0	163	618
Tires	351	1	105	457
Used Oil	1,350	10	63	1,423
Used Oil Filters	39	0	0	39
Used Antifreeze	71	0	1	72
Batteries	36	2	2	40
Electronics	170	0	27	197
Inoperative Motor Vehicles		0	0	0
Other - fat, bone, grease	397	0	0	397
Other - composted sludge	2,413	0	0	2,413
Other - Auction Waste	17	0	0	17
Solid Waste Reused	1,427	0	0	1,427
Reclaimed MSW (Encore Shop)	10	0	0	10
Building material (Habitat Store)	1,400	0	0	1,400
UVA Move-Out	17	0	0	17
Non-MSW Recycled	10,535	0	0	10,535
MERCI	29	0	0	29
Ash	10,506	0	0	10,506
Base Recycling Rate	25.2%	26.5%	20.9%	24.2%
Adjusted Recycling Rate				29.2%
Total Waste Generated	104,507	4,586	30,894	139,987
Population	137,676	25,732	18,421	181,829
Per capita waste production	0.76	0.18	1.68	0.77
Expected waste	EPA ave. tons per capita not available at time of plan adoption.			

Source: 2010 TJSWPU Recycling Rate Report

*The Rivanna Solid Waste Authority reports the recycling numbers for Albemarle County, the City of Charlottesville, and Town of Scottsville as a combined number.

**Adjusted recycling rates incorporate credits for reuse and source reduction.

***TJPDC estimates the 2010 tonnages to be approximately 25% underreported, and the actual 2010 regional recycling rate to be approximately 31.1%. Refer to Appendix for explanation.

3.2 Existing & Planned Solid Waste Management Programs

Thomas Jefferson Solid Waste Planning Unit

The Thomas Jefferson Planning District Commission (TJPDC) acts as the central clearinghouse for solid waste planning and reporting on behalf of the local governments that make up the TJSWPU. TJPDC is the designated central archive for receiving and recording information on solid waste generation, recycling, facilities, and to calculate and submit the annual regional recycling rate report to the DEQ. The TJPDC is also responsible for implementation of plan strategies. The TJPDC maintains a recycling website for the TJSWPU to serve as a centralized resource for citizens of the planning unit and participates in public education/outreach events to engage citizens. The TJPDC has also developed environmentally preferable procurement guidelines for use by member localities.

Localities in the planning region use similar strategies to promote proper waste disposal, waste reduction, reuse, and recycling, with more densely populated localities offering additional services. In general, localities in the planning unit encourage citizens to reduce, reuse, and recycle by charging for MSW disposal, while providing recycling options free of charge. On-going litter control is provided by a combined effort of law enforcement, trash cans in public spaces, the Virginia Department of Transportation's Adopt-a-Highway program, and by annual river clean-up events organized by the Rivanna Conservation Society.

Additionally, a number of recycling services are available to the region's residents from local retailers. Businesses such as Best Buy, Crutchfield, Home Depot, Carpet Plus, Target, and Goodwill Industries provide recycling for a number of special wastes on an on-going basis. As mentioned previously, the region is also home to the Zion Crossroads Recycling Center, a Materials Recovery Facility that separates recyclables from the MSW stream it receives. A number of private haulers from around the region use this facility.

A recent planning initiative of partners in the region called the Local Climate Action Planning Process (LCAPP) also makes recommendations for responsible solid waste management. The City of Charlottesville, Albemarle County, and UVa undertook an 18-month planning and public engagement process between 2009 and 2011 to address the role of energy and climate resiliency issues for their communities. Out of this process, governing bodies of the City, County and UVa will consider several recommendations on how to reduce the impact of materials utilization on climate change. The recommendations directly related to solid waste reduction are included as strategies in this Plan.

The following sections provide a comprehensive description of systems and programs administered in the TJSWPU that support and promote the solid waste hierarchy set forth in 9VAC20-130-30.

City of Charlottesville

COLLECTION AND TRANSPORTATION

Weekly residential curbside collection includes source separated recycling, contracted through Republic Services, and household trash, contracted through Waste Management, Inc. Commercial corridors receive daily trash and recycling (newsprint, mixed paper, glass, metals, plastics, cardboard) pick-up. The program is a "pay as you throw" program, where trash stickers and decals are purchased by customers, and recycling is free. Curbside customers may choose to use private haulers who also collect from commercial and multifamily dumpsters. Individuals can also drive to the Ivy MUC or McIntire recycling center. Each resident may request two bulky item pick-ups per year for appliances, large branches, and other over-sized items for \$25 per appointment. Construction and demolition debris must be transported privately. Private companies also service cardboard recycling bins at private businesses. Recycling bins

located at many larger apartment complexes, particularly near the University, are serviced by the same contractor that runs curbside pick-up.

STORAGE, TREATMENT AND DISPOSAL

All of the City's MSW goes to the Zion Crossroads Recycling Center where recyclables are pulled from the waste stream and shipped to recycling markets. MSW that is not separated for recycling is taken to a permitted landfill in Amelia County for final disposal. All source separated recyclables are taken to the BFI Fluvanna County Transcylery in Zion Crossroads where it is trucked to a Chester, Virginia MRF where it is processed and shipped to recycling markets. Christmas trees are ground into mulch, which is available free to citizens. Leaves and yard waste are ground into mulch by a private composter.

WASTE REDUCTION AND REUSE

The City encourages citizens to reduce waste by charging for trash removal by the bag, while recycling pick up is free. Leaves are picked up in the fall in a special free program, and Christmas trees are also picked up free curbside citywide. Trash cans help reduce litter in the City, and recycling cans are collocated with trashcans on the pedestrian mall downtown. Additionally, the City promotes proper disposal of household hazardous waste and electronics recycling on its website.

Albemarle County

COLLECTION AND TRANSPORTATION

Businesses, industries, and individuals are responsible for making their own waste collection and recycling arrangements, with curbside collection contracts available in the more developed areas of the county. Curbside collection activity can be inefficient and disruptive when multiple individual contracts exist along one road. Self-delivery to the Ivy MUC, the McIntire Recycling Center, or the three county newspaper/glossy paper bins (located in the parking lots near Sam's Club on route 29, Roses at Pantops, and the Community Center in Scottsville) is the only option for those in the rural areas and available to all others. The McIntire Recycling (described below) accepts a variety of recyclable materials. The Ivy MUC accepts MSW and limited recycling at the convenience center portion of the facility.

STORAGE, TREATMENT AND DISPOSAL

Private haulers deliver waste to one of several transfer stations in the region. The majority of waste is handled through the RSWA's Ivy Materials Utilization Center (MUC), the Zion Crossroads Recycling Center, and the BFI Fluvanna County Transcylery. Sludge from the RWSA treatment plant at Moore's Creek is composted and sold.

WASTE REDUCTION AND REUSE

The County partially funds waste reduction and reuse initiatives administered by the Rivanna Solid Waste Authority (described below). Additionally, two departments of the local government administer Environmental Management Systems programs that include source reduction and recycling components. The County also maintains a Green Resource Map on the County web site as a resource for residents.

Rivanna Solid Waste Authority (RSWA)

RSWA was established jointly by the City of Charlottesville and Albemarle County to administer solid waste services to the citizens of each.

COLLECTION AND TRANSPORTATION

RSWA offers no collection services. RSWA contracts with private haulers to transport wastes accumulated at the Ivy MUC and the McIntire Recycling Center to a variety of final destinations.

STORAGE, TREATMENT AND DISPOSAL

The Ivy MUC operates a waste transfer station, vegetative (stumps, brush, etc.) waste mulching operation, collection centers for white goods, pallets, tires, and the Encore Shop for collection of reusable items. The citizens' convenience center, just outside the scales for the transfer station, includes easy drop-offs for trash in bags or receptacles, and recyclable materials, including cardboard, newspaper, and waste motor oils. The Ivy MUC is open weekdays from 7:30 a.m. to 4:00 p.m. Waste collected at the MUC that is not separated at the convenience center for recycling is sent to Amelia County for disposal in a permitted landfill.

The RSWA transfer station accepts municipal solid waste from private citizens and private haulers servicing the City of Charlottesville and Albemarle County at \$66/ton, with a \$5 minimum, plus a service fee for each visit to the scales of \$1 for county users and \$10 for City users on all transactions. Small pick-up trucks, 8-foot bed or equivalent, with CDD are also accepted for the same tipping fee. Larger loads of CDD will be directed to the other facilities in the area. Clean fill, stumps, and brush are accepted at the MUC as well. RSWA also provides confidential document destruction. Vegetative debris and wooden pallets are ground into chips/mulch for resale.

RSWA also operates the McIntire Recycling Center located on McIntire road in Charlottesville. It is open for use by City and Albemarle County residents. The Center is open five days per week, closing at 5:20 p.m. each day with varying opening times. The center accepts boxboard, file stock, corrugated cardboard, newspapers, glossy paper, phone books, glass, #1 and #2 plastics in separate bins as well as #3 - #7 in comingled bins, and metal and aluminum cans. RSWA contracts with Weyerhaeuser for the paper goods collected. Glass, metals and plastics are sold to the various buyers based on market conditions.

WASTE REDUCTION AND REUSE

The Encore Shop, part of the Ivy MUC, provides a protected area where people can leave reusable items and pick up items for re-use. Mulch from the grinding of stumps and brush is sold there as well. Household hazardous waste and amnesty days (furniture, mattresses, appliances, and tires) are held at the Ivy MUC during advertised special events. A book exchange is offered at the McIntire Recycling Center.

Fluvanna County

COLLECTION AND TRANSPORTATION

Individuals, businesses and industries are generally responsible for waste hauling and recycling activities via either contract with a private firm or self-delivery to the convenience center located in Fork Union. The convenience center is open to the public Tuesday from 9:00am to 4:00pm, Thursday from 11:00am to 7:00pm, and Saturday - 8:00am to 5:00pm. It accepts newspaper, cardboard, telephone books, aluminum cans, plastic bottles, glass and used motor oil free of charge, and MSW at \$57/ton, with an \$8 minimum. Tires and appliances are also accepted at a charge. The convenience center is closed to any commercial waste. The Zion Crossroads Recycling Center accepts construction and demolition debris and MSW. At Lake Monticello, a private hauler collects MSW; curbside recycling is included for plastics, glass, metal and newspaper.

STORAGE, TREATMENT AND DISPOSAL

The BFI Fluvanna County Transcylery private transfer station is located on 250 at Zion Crossroads. Fluvanna County contracts with BFI to transfer convenience center waste to this facility where recyclables are sent to a variety of markets, and MSW is hauled to the Amelia County landfill for disposal. This facility is not open to cash customers. The Zion Crossroads Recycling Center operates as a materials recovery facility, hauling processed materials to secondary market recyclers and unacceptable materials to the Amelia County landfill. RSWA has a contract with Fluvanna to bring its wood grinding operation to Fluvanna on an as-needed basis.

WASTE REDUCTION AND REUSE

Fluvanna encourages citizens to recycle by offering recycling collection at the convenience center for free, while charging for MSW collection. The County also oversees a low maintenance reuse facility consisting of a covered lot where citizens can leave reusable items that others are free to pick up, free of charge. Additionally, the County has considered establishing an EMS, but the initiative was put on hiatus because of budget concerns.

Greene County

COLLECTION AND TRANSPORTATION

Individuals, businesses, and industries are generally responsible for waste hauling and recycling activities via either contract with a private firm or self-delivery. County residents may use the transfer station and recycling center located off Route 33 at 358 Mays Road, southeast of Stanardsville. The facility is open Monday through Saturday from 8 am to 4 pm. Recyclables collected include plastic, glass, paper (newsprint, magazines, and phone books), metals and corrugated cardboard. White goods, appliances, tires, furniture, and construction and demolition debris are also accepted. The transfer station accepts MSW from county residents, private haulers, and commercial sources.

In addition to MSW and recyclables generated within the county, the transfer station accepts residential and commercial MSW that originates in neighboring localities. The relatively lower tipping fee charged at this transfer station makes it an attractive option for haulers and individuals in the vicinity. This additional business is welcomed by the County because the additional revenue from tipping fees covers the entire cost of operating the transfer station. Because MSW originating from outside the County is not accounted for as such, the entire tonnage received at the transfer station is used in calculating Greene County's annual recycling rate. This results in an artificially low rate for recycling taking place in the County.

STORAGE, TREATMENT AND DISPOSAL

Recyclables accumulated at the transfer center are shipped to a variety of markets. The transfer station operator contracts with private haulers to transport accumulated MSW to the Amelia County landfill.

WASTE REDUCTION AND REUSE

A volunteer run waste exchange program makes clothing and other re-usable items available to the public at no charge. A retailer periodically takes a truck to the County containing off-merchandise for people to take items free of charge. Trash cans help reduce litter in the Town of Stanardsville, and a major volunteer county-wide road cleanup is held every spring.

University of Virginia (UVa)

COLLECTION AND TRANSPORTATION

Facilities Management is responsible for all solid waste activities. A private company is under contract for collection and shipping of MSW. Recyclables are collected in bins and other systems in dorms and office areas, brought to a central collection point by the Division of Recoverable and Disposable Resources employees, and picked up by a private firm.

STORAGE, TREATMENT AND DISPOSAL

MSW is to be transported to the Zion Crossroads Recycling Center for additional sorting and possible reclamation under a new contract beginning August 1, 2011. The Zion Crossroads Recycling Center sends any waste that is not recoverable for recycling to a permitted landfill in Amelia County. Hazardous and medical wastes are handled through the Office of Environmental Health and Safety, and are either sent to a hazardous waste facility or sterilized (deemed "Special Waste") and hauled directly to a special waste cell at a regulated landfill. UVa participated in an electronics recycling pilot program with RSWA in 2003 and 2006 and again with Crutchfield and a local nonprofit in 2009. Additionally, inkjet/laser cartridges

are collected by in house staff, and then collected by a local small business for recycling/refurbishment. Cell phones batteries and small electronics are sent to recyclers.

WASTE REDUCTION AND REUSE

UVA administers several waste reduction and reuse initiatives that serve the campus community. They include:

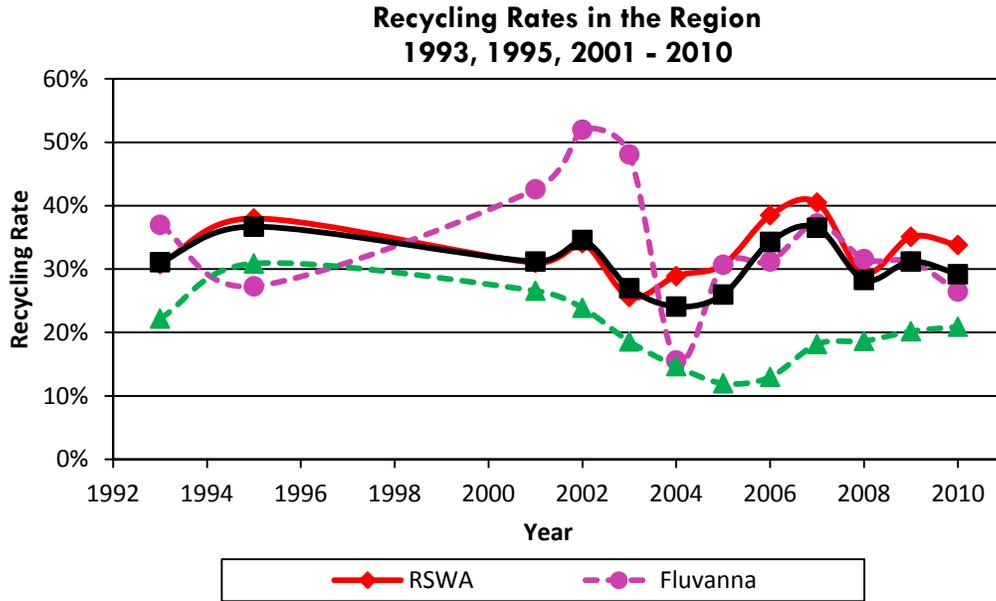
- ☞ *Chuck It For Charity: The collection of gently used items students donate to local nonprofits to help those less advantaged.*
- ☞ *MERCI: A program started and run by operating room nurses and volunteers to redeploy equipment back into the hospital and / or send to clinics, animal shelters, and 3rd world countries for use.*
- ☞ *Food waste reductions are centered around composting and limiting tray use at dining facilities. Composting efforts divert 3.5 to 5 tons of food waste from landfills each year. Facilities Management involves students in tracking, testing and reporting to VaDEQ from two of the large dining facilities on grounds. Dining Services' initiative to limit tray usage also reduced the overall food preparation and eventual waste associated with dining operations by limiting the amount of food that customers can carry at one time.*
- ☞ *Coal ash is collected and used as beneficial fill or sent to make cement / cinder blocks.*
- ☞ *UVA participated in the EPA sponsored "Game Day Challenge 2010" in an effort to show spectators of large sporting events (e.g. home football games, etc) what is produced in the way of disposables by patrons. This is a national competition between colleges and universities.*
- ☞ *All new construction and major renovation projects are committed to achieving LEED certification. CD&D is collected from even the smallest of projects and sent to a CD&D MRF and have received reports exceeding 90% reclamation/recycling rates.*
- ☞ *UVA holds regular auctions open to the public for the re-use of discarded items.*



FIGURE 3. REUSE FACILITY IN FLUVANNA COUNTY (LEFT) & ZION CROSSROADS RECYCLING CENTER (RIGHT)

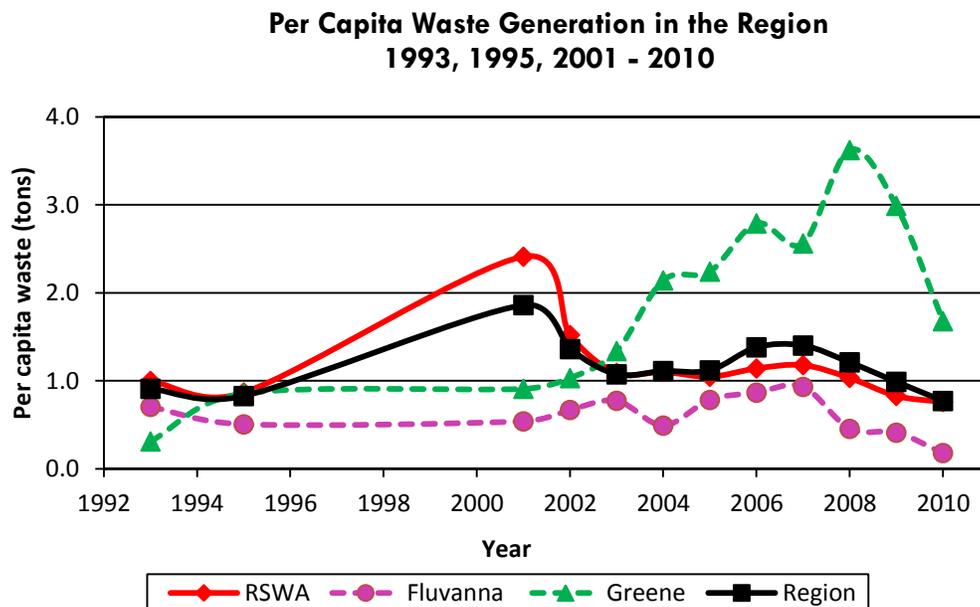
3.3 Historical Waste Generation

Historical waste generation rates are useful for tracking progress and can be used to predict future needs. The following figures and tables illustrate waste management data available from 1993, 1995, and 2001-2010. Despite RSWA and Greene County spikes in 2001 and 2008, respectively, the per capita waste generation has not changed significantly since the inception of data collection. Likewise, there has not been significant change in the regional recycling rate since 1993. Figures 4 and 5 show trends in the recycling rate and per capita waste generation in the region over time.



*FULL 2010 DATA IS LOCATED IN SECTION 3.1 CURRENT WASTE GENERATION RATES.

FIGURE 4. RECYCLING RATE TRENDS



*FULL 2010 DATA IS LOCATED IN SECTION 3.1 CURRENT WASTE GENERATION RATES.

FIGURE 5. PER CAPITA WASTE GENERATION TRENDS

1993 Waste Generation by Type

The following figures are based on the report made to the Department of Environmental Quality by the TJPDC in 1994.

TABLE 7. TJPDC 1993 WASTE GENERATION RATES (IN TONS)

	RSWA	Fluvanna	Greene	Region
Municipal Solid Waste (MSW)	78,822	6,331	2,943	88,096
Household		1,172		
Commercial		5,159		
Institutional				
Primary Recyclable Materials (PRM)	29,971	3,608	816	34,395
Paper	13,524	233	84	
Metal	10,493	2,890	594	
Plastic	662	7	20	
Glass	4,301	125	118	
Waste Wood (chipped or mulched)	514	0	0	
Textiles	0	0	0	
Yard Waste (composted or mulched)	383	353	0	
Commingled/Other	0	0	0	
Secondary Recyclable Materials (SRM)	5,172	113	22	5,307
Used Oil & Antifreeze	75	51	12	
Batteries	0	18	0	
Waste Tires	0	40	10	
Electronics	0	0	0	
White Goods	0	0	0	
Abandoned automobiles removed	0	0	0	
Sludge (composted)	4,288	0	0	
Tree Stumps >6"	0	0	0	
Recycling Rate	30.8%	37.0%	22.2%	31.1%
SRM Reuse	0	0	0	0
Construction Waste	0	0	0	
Demolition Waste	0	0	0	
Debris Waste	0	0	0	
Ash	0	0	0	
Other wastes	0	0	0	0
Hazardous	0	0	0	
Agricultural	0	0	0	
Mining	0	0	0	
Regulated. Medical	0	0	0	
Spill residue	0	0	0	
Other	0	0	0	
Total Waste	113,965	10,052	3,781	127,798
1993 Population	114,200	14,300	12,200	140,700
Per capita	0.998	0.703	0.310	0.908

Source: Local facility operators; Weldon Cooper Center

1995 Waste Generation by Type

The following figures are based on reports submitted by member localities to the Thomas Jefferson Planning District Commission in 1997.

TABLE 8. TJPDC 1995 WASTE GENERATION RATES (IN TONS)

	RSWA*	Fluvanna	Greene	Region
Municipal Solid Waste (MSW)	62,939	5,818	7,632	76,389
Household		5,818		
Commercial				
Institutional				
Primary Recyclable Materials (PRM)	*	2,187	3,353	--
Paper		45	606	
Metal		1,258	2,364	
Plastic		5	41	
Glass		21	215	
Waste Wood (chipped or mulched)		0	0	
Textiles		0	15	
Yard Waste (composted or mulched)		858	112	
Commingled/Other		0	0	
Secondary Recyclable Materials (SRM)	*	2.0	57	--
Used Oil & Antifreeze		2.0	36	
Batteries		0	0	
Waste Tires		0	21	
Electronics		0	0	
White Goods		0	0	
Abandoned automobiles removed		0	0	
Sludge (composted)		0	0	
Tree Stumps >6"		0	0	
Recycling Rate	38%	27.3%	30.9%	36.7%
SRM Reuse	*	0	0	--
Construction Waste		0	0	
Demolition Waste		0	0	
Debris Waste		0	0	
Ash		0	0	
Other wastes	*	0	0	--
Hazardous		0	0	
Agricultural		0	0	
Mining		0	0	
Regulated. Medical		0	0	
Spill residue		0	0	
Other		0	0	
Total Waste	101,704	8,007	11,042	120,753
1995 Population	117,400	15,900	12,900	146,200
Per capita	0.866	0.504	0.856	0.826

Source: Local facility operators; Weldon Cooper Center

*The report from RSWA only included totals for recyclables and waste. The total tonnage of recyclables reported was 38,765.

2001 Waste Generation by Type

The following figures are based on reports submitted by localities to DEQ in 2002.

TABLE 9. TJPDC 2001 WASTE GENERATION RATES (IN TONS)

	RSWA	Fluvanna	Greene	Region
Municipal Solid Waste	114,370	6,612	11,353	132,335
Household			6,244	
Commercial			5,109	
Institutional				
Primary Recyclable Materials (PRM)	31,125	4,890	3,437	39,452
Paper		414	1,540	
Metal		358	475	
Plastic		207	1,250	
Glass		0	60	
Waste Wood (chipped / mulched)		3,910	75	
Textiles		0	17	
Yard Waste (composted / mulched)		0	20	
Commingled/Other		0	0	
Secondary Recyclable Materials (SRM)	*	18	691	--
Used Oil & Antifreeze		17	57	
Batteries		1	3	
Waste Tires		0	21	
Electronics		0	0	
Abandoned automobiles removed		0	600	
Sludge (composted)		0	0	
Tree Stumps >6"		0	0	
Other		0	0	
Recycling Rate	31.0%	42.6%	26.6%	31.2%
SRM Reuse	*	0	0	--
Construction Waste		0	0	
Demolition Waste		0	0	
Debris Waste		0	0	
Ash		0	0	
Other		0	0	
Other wastes		0	0	--
Hazardous		0	0	
Agricultural		0	0	
Mining		0	0	
Regulated. Medical		0	0	
Spill residue		0	0	
Other	94,270(CDD)	0	0	94,270
Total Waste	302,565	11,520	15,481	329,566
2001 Population	125,600	21,400	15,800	177,200
Per capita	2.41	0.538	0.980	1.86

Source: local facility operators, DEQ; Weldon Cooper Center

*RSWA did not separate SRM recycling from SRM reuse in their report. The combined tonnage was 62,800.

2002 Waste Generation by Type

The following figures are based on reports submitted by localities to DEQ in 2003.

TABLE 10. TJPDC 2002 WASTE GENERATION RATES (IN TONS)

	RSWA	Fluvanna	Greene	Region
Municipal Solid Waste	126,915	7,213	12,738	146,866
Household		3,606	7,643	
Commercial		2,885	5,095	
Institutional		721		
Primary Recyclable Materials (PRM)	48,484	7,805	3,357	59,646
Paper	4,914	515	1,583	
Metal	41,799	203	60	
Plastic	131	224	1,166	
Glass	1,062	181	108	
Waste Wood (chipped or mulched)	50	6678	410	
Textiles	60	5.2	20	
Yard Waste (composted or mulched)	0	0	10	
Commingled/Other	468	0	0	
Secondary Recyclable Materials (SRM)	4,754	17	633	5,404
Used Oil & Antifreeze	500	12	51	
Batteries	100	4.7	7	
Waste Tires	177	0	75	
Electronics	0	0.62	0	
Abandoned automobiles removed	700	0	500	
Sludge (composted)	3,043	0	0	
Tree Stumps >6"	0	0	0	
Other	234	0	0	
SRM Reuse	12,566	0	0	12,566
Construction Waste	0	0	0	
Demolition Waste	7,918	0	0	
Debris Waste	4,648	0	0	
Ash	0	0	0	
Other	0	0	0	
Recycling Rate	34.1%	52.0%	23.9%	34.6%
Other wastes	0	0	0	0
Hazardous	0	0	0	
Agricultural	0	0	0	
Mining	0	0	0	
Regulated. Medical	0	0	0	
Spill residue	0	0	0	
Other	0	0	0	
Total Waste	192,719	15,035	16,728	224,482
2002 Population	126,400	22,500	16,200	165,100
Per capita	1.52	0.668	1.03	1.36

Source: Local facility operators, DEQ; Weldon Cooper Center

2003 Waste Generation by Type

The following figures are based on reports submitted by localities to DEQ in 2004.

TABLE 11. TJPDC 2003 WASTE GENERATION RATES (IN TONS)

	RSWA*	Fluvanna	Greene	Region
Municipal Solid Waste (MSW)	104,160	9,525	18,085	131,770
Household	104,160	4762	9,585	
Commercial		3810	8,500	
Institutional		952		
Primary Recyclable Materials (PRM)	28,334	1,774	3,602	33,710
Paper	8,210	565	1,710	
Metal	9,139	314	75	
Plastic	130	244	1,050	
Glass	1,168	134	90	
Waste Wood (chipped or mulched)	770	0	620	
Textiles	25	5.7	35	
Yard Waste (composted or mulched)	8,576	512	22	
Commingled/Other	316	0	0	
Secondary Recyclable Materials (SRM)	6,762	7,069	522	14,353
Used Oil & Antifreeze	1,168	20	56	
Batteries	13	4.9	6	
Waste Tires	209	31	60	
Electronics	28	2.2	0	
Abandoned automobiles removed	1,100	0	400	
Sludge (composted)	3,048	0	0	
Tree Stumps >6"	10	0	0	
Other	1,186	7,011	0	
SRM Reuse	718	0	0	718
Construction Waste	0	0	0	
Demolition Waste	0	0	0	
Debris Waste	0	0	0	
Ash	0	0	0	
Other	718	0	0	
Recycling Rate	25.6%	48.1%	18.6%	27.0%
Other wastes	0	0	0	0
Hazardous	0	0	0	
Agricultural	0	0	0	
Mining	0	0	0	
Regulated. Medical	0	0	0	
Spill residue	0	0	0	
Other	0	0	0	
Total Waste	139,974	18,368	22,209	180,551
Population	127,900	23,800	16,600	168,300
Per capita	1.09	.772	1.337	1.073
Expected waste (Based on EPA .566 avg. per capita)	72,391	13,471	9,396	95,258

Source: Local facility operators; DEQ; Weldon Cooper Center

*The Rivanna Solid Waste Authority reports the recycling numbers for Albemarle County, the City of Charlottesville, and Town of Scottsville as a combined number.

2004 Waste Generation by Type

The following figures are based on reports submitted by localities to DEQ in 2005.

TABLE 12. TJPDC 2004 WASTE GENERATION RATES (IN TONS)

	RSWA*	Fluvanna	Greene	Region
Municipal Solid Waste (MSW)	101,502	9,972	30,495	141,969
Household	101,502	5,534	18,297	
Commercial		4,427	12,198	
Institutional		11		
Primary Recyclable Materials (PRM)	33,793	1,794	4,145	
Paper	11,289	408	2,200	
Metal	10,025	235	425	
Plastic	168	329	75	
Glass	1,324	585	110	
Waste Wood (chipped or mulched)	1,840	2	1,220	
Textiles	13	8	65	
Yard Waste (composted or mulched)	9,058	228	50	
Commingled/Other	76	0	0	
Secondary Recyclable Materials (SRM)	7,525	45	1,117	8,687
Used Oil, Oil Filters & Antifreeze	1,349	30	78	
Batteries	210	7	9	
Waste Tires	208	5	105	
Electronics	4	3	0	
Abandoned automobiles removed	800	0	925	
Sludge (composted)	3,820	0	0	
Tree Stumps >6"	0	0	0	
Other	1,134	0	0	
SRM Reuse	23	3	0	26
Construction Waste	0	0	0	
Demolition Waste	0	3	0	
Debris Waste	0	0	0	
Ash	0	0	0	
Other	23	0	0	
Recycling Rate	28.9%	15.6%	14.7%	25.5%
Other wastes	0	0	0	0
Hazardous	0	0	0	
Agricultural	0	0	0	
Mining	0	0	0	
Regulated. Medical	0	0	0	
Spill residue	0	0	0	
Other	0	0	0	
Total Waste	142,843	11,814	35,757	190,414
Population	129,600	24,300	16,700	170,600
Per capita	1.10	0.49	2.14	1.12
Expected waste	73,354	13,754	9,452	96,560

Source: Local facility operators; DEQ; Weldon Cooper Center

*The Rivanna Solid Waste Authority reports the recycling numbers for Albemarle County, the City of Charlottesville, and Town of Scottsville as a combined number.

2005 Waste Generation by Type

The following figures are based on reports submitted by localities to DEQ in 2006.

TABLE 13. TJPDC 2005 WASTE GENERATION RATES (IN TONS)

	RSWA*	Fluvanna	Greene	Region
Municipal Solid Waste (MSW)	93,891	13,162	32,923	139,976
Household	93,891	3,052	19,753	116,696
Commercial	0	10,063	13,170	23,233
Institutional	0	47	0	47
Primary Recyclable Materials	34,487	5,798	3,418	43,703
Paper	14,558	467.5	1,516	16,542
Metal	12,032	32.1	415	12,479
Plastic	236	13.8	75	325
Glass	871	282.6	96	1,250
Commingled	865	751.9	0	1,617
Yard Waste (composted or mulched)	5,906	0.0	66	5,972
Waste wood (chipped or mulched)	0	4,250.0	1,200	5,450
Textiles	19	0.0	50	69
Secondary Recyclable Materials	7,169	34	1,066	8,269
Waste Tires	219	7.1	85	311
Used Oil	690	17.5	72	779
Used Oil Filters	18	0.0	0	18
Used Antifreeze	73	0.6	2	76
Abandoned automobiles removed	1,450		900	2,350
Batteries	210	8.5	7	226
Sludge (composted)	3,893		0	3,893
Electronics	0		0	0
Tree Stumps (>6" diameter)	10		0	10
Other	606		0	606
SUBTOTAL	7,169	34	1,066	8,269
Secondary Recyclable Materials Reused	0	0	0	0
Construction Waste	0	0	0	0
Demolition Waste	0	0	0	0
Debris Waste	0	0	0	0
Ash	0	0	0	0
Other	0	0	0	0
Recycling Rate	30.7%	30.7%	12.0%	26.0%
Total Waste	93,891	13,162	32,923	139,976
Population	129,600	24,300	16,700	170,600
Per Capita (tons/year)	0.72	0.54	1.97	0.82
Expected waste	110,455	20,710	14,233	145,398

Source: Locality facility operators; DEQ; Weldon Cooper Center

*The Rivanna Solid Waste Authority reports the recycling numbers for Albemarle County, the City of Charlottesville, and Town of Scottsville as a combined number.

**Nelson County data was included in the 2006 regional recycling rate. This is the rate that was reported to the DEQ and is thus recorded here.

2006 Waste Generation by Type

The following figures are based on reports submitted by localities to DEQ in 2007.

TABLE 14. TJPDC 2006 WASTE GENERATION RATES (IN TONS)

	RSWA*	Fluvanna	Greene	Region
Municipal Solid Waste Disposed	94,339	14,735	40,096	149,170
Household	94,339	3,684	24,026	122,049
Commercial	0	10,896	16,070	26,966
Institutional	0	155	0	155
Primary Recyclable Materials	43,868	6,662	5,833	56,363
Paper	21,091	316.5	3,584	24,991
Metal	13,350	8.4	643	14,001
Plastic	619	28.9	30	678
Glass	760	531.1	45	1,336
Commingled	1,716	777.1	0	2,493
Yard Waste (composted or mulched)	5,225	0.0	516	5,741
Waste wood (chipped or mulched)	987	4,999.7	920	6,907
Textiles	120	0.0	95	215
Secondary Recyclable Materials	14,054	30	3,261	17,345
Waste Tires	250	5.5	91	346
Used Oil	1,192	12.6	83	1,288
Used Oil Filters	254	0.0	0	254
Used Antifreeze	63	0.8	3	67
Abandoned automobiles removed	0		3,080	3,080
Batteries	210	10.8	4	225
Sludge (composted)	11,158		0	11,158
Electronics	114		0	114
Tree Stumps (>6" diameter)	83		0	83
Other	730		0	730
Secondary Recyclable Materials Reused	0	0	0	0
Construction Waste	0	0	0	0
Demolition Waste	0	0	0	0
Debris Waste	0	0	0	0
Ash	0	0	0	0
Other	0	0	0	0
Base Recycling Rate	38.0%	31.2%	18.5%	32.8%
Adjusted Recycling Rate				35.2%
Total Waste	152,261	21,426	49,190	222,877
Population	133,596	24,783	17,638	176,017
Per Capita	1.14	0.86	2.79	1.27
Expected Waste (Based on EPA .84 tons avg. per capita)	112,154	20,805	14,807	147,766

Source: Local facility operator; Weldon Cooper Center

*The Rivanna Solid Waste Authority reports the recycling numbers for Albemarle County, the City of Charlottesville, and Town of Scottsville as a combined number.

**Adjusted recycling rates incorporate credits for reuse and source reduction.

***Nelson County data was included in the 2006 regional recycling rate calculations. This is the rate that was reported to the DEQ and is thus recorded here.

2007 Waste Generation by Type

The following figures are based on reports submitted by localities to DEQ in 2008.

TABLE 15. TJPD 2007 WASTE GENERATION RATES (IN TONS)

	RSWA*	Fluvanna	Greene	Region
Municipal Solid Waste Disposed	94,129	14,745	37,746	146,620
Household	94,129	3,686	20,760	118,575
Commercial	0	10,971	16,986	27,957
Institutional	0	88	0	88
Primary Recyclable Materials	63,429	8,739	8,383	80,551
Paper	9,541	324.6	4,437	14,303
Metal	35,290	107.9	1,993	37,391
Plastic	237	27.2	32	296
Glass	854	718.5	76	1,648
Commingled	2,297	809.8	0	3,107
Yard Waste (composted or mulched)	6,565	0.0	531	7,096
Waste wood (chipped or mulched)	258	6,713.7	990	7,962
Textiles	396	0.0	106	502
Tires	176	7.5	108	292
Used Oil	441	21.7	98	561
Used Oil Filters	0	0.0	0	0
Used Antifreeze	100	0.4	2	102
Batteries	10	7.2	10	27
Electronics	253	0.0	0	253
Inoperative Motor Vehicles	0	0.0	0	0
Other - cooking oil and grease	813	0.0	0	813
Other - sludge compost	6,198	0.0	0	6,198
Solid Waste Reused	718	0	0	718
Crushed Concrete	0	0	0	0
Clothing, etc.	0	0	0	0
Flooring, Joists & Other Wood	0	0	0	0
UVA Equipment Auction Waste	10	0	0	10
Encore Shop Ivy	3	0	0	3
UVA Move-Out	60	0	0	60
Housing Material	585	0	0	585
Freecycle	60	0	0	60
Base Recycling Rate	40.3%	37.2%	18.2%	34.1%
Adjusted Recycling Rate				36.5%
Total Waste Generated	158,276	23,483	46,129	227,888
Population	134,395.0	25,253	18,017	177,665
Per capita	1.18	0.93	2.56	1.28
Expected waste	113,315	21,292	15,191	149,798

Source: Local facility operator; Weldon Cooper Center

*The Rivanna Solid Waste Authority reports the recycling numbers for Albemarle County, the City of Charlottesville, and Town of Scottsville as a combined number.

**Adjusted recycling rates incorporate credits for reuse and source reduction.

***Nelson County data was included in the 2006 regional recycling rate calculations. This is the rate that was reported to the DEQ and is thus recorded here.

2008 Waste Generation by Type

The following figures are based on reports submitted by localities to DEQ in 2009.

TABLE 16. TJPDC 2008 WASTE GENERATION RATES (IN TONS)

	RSWA*	Fluvanna	Greene	Region
Municipal Solid Waste Disposed	99,219	7,915	52,915	160,049
Household	99,219	7,915	27,516	134,650
Commercial			25,399	25,399
Institutional				0
Primary Recyclable Materials	36,004	3,656	12,151	51,811
Paper	8,164	175.5	5,641	13,980
Metal	4,818	23.8	3,840	8,682
Plastic	405	13.2	64	482
Glass	1,123		84	1,207
Commingled	3,184	894.9	0	4,079
Yard Waste (composted or mulched)	5,512		601	6,113
Waste wood (chipped or mulched)	902	2,500.0	1,620	5,022
Textiles	1,015		110	1,125
Tires	181	0.2	120	301
Used Oil	716	44.3	55	815
Used Oil Filters	12	0.9	0	13
Used Antifreeze	51	3.3	4	58
Batteries	6		12	18
Electronics	525		0	525
Inoperative Motor Vehicles	0		0	0
Other - fat, bone, grease	745		0	745
Other - sludge compost	8,645		0	8,645
Solid Waste Reused	377	0	0	377
Building material	345			345
Reclaimed MSW (Encore Shop)	6			6
UVA Move-Out	26			26
Non-MSW Recycled	4,947			4,947
Ash	4,947			4,947
Base Recycling Rate	26.6%	31.6%	18.7%	24.5%
Adjusted Recycling Rate				28.3%
Total Waste Generated	140,546.6	11,571.4	65,066.0	217,183.9
Population	136,112	25,544	17,964	179,620.
Per capita	1.0	0.5	3.6	1.2
Expected waste	111,782	20,978	14,752	147,512

Source: Local facility operator; Weldon Cooper Center

*The Rivanna Solid Waste Authority reports the recycling numbers for Albemarle County, the City of Charlottesville, and Town of Scottsville as a combined number.

**Adjusted recycling rates incorporate credits for reuse and source reduction.

2009 Waste Generation by Type

The following figures are based on reports submitted by localities to DEQ in 2010.

TABLE 17. TJPDC 2009 WASTE GENERATION RATES (IN TONS)

	RSWA*	Fluvanna	Greene	Region
Municipal Solid Waste Disposed	74,002	7,241	43,909	125,152
Household	66,534	7,241	26,345	100,120
Commercial			17,564	17,564
Institutional	7,468			7,468
Other (non-industrial)				0
Primary Recyclable Materials	30,096	3,289	11,134	44,519
Paper	9,555	75	5,712	15,342
Metal	1,144	63	3,991	5,198
Plastic	397		71	468
Glass	985		90	1,075
Commingled	3,650	1,837		5,487
Yard Waste (composted or mulched)	2,700		620	3,320
Waste wood (chipped or mulched)	1,088	1,300	359	2,747
Textiles	292		102	394
Tires	172	3	110	285
Used Oil	1,055	11	70	1,136
Used Oil Filters	23			23
Used Antifreeze	65	1	3	69
Batteries	6		6	12
Electronics	88			88
Inoperative Motor Vehicles				0
Other - fat, bone, grease	449			449
Other - composed sludge	8,426			8,426
Solid Waste Reused	947	0	0	947
Building material (Habitat Store)	915			915
UVA Move-Out	32			32
Non-MSW Recycled	8,933	0	0	8,933
MERCI	29			
Ash	8,904			8,904
Base Recycling Rate	28.9%	31.2%	20.2%	26.2%
Adjusted Recycling Rate				31.2%
Total Waste Generated	113,979	10,530	55,043	179,552
Population	137,676	25,732	18,421	181,829
Per capita	0.83	0.41	2.99	0.99
Expected Waste (Based on EPA .79 tons avg. per capita)	109,046	20,381	14,590	144,018

Source: Local facility operator; US Census American Community Survey

*The Rivanna Solid Waste Authority reports the recycling numbers for Albemarle County, the City of Charlottesville, and Town of Scottsville as a combined number.

**Adjusted recycling rates incorporate credits for reuse and source reduction.

4 Future Solid Waste Management Systems

4.1 Estimates of Future Needs

2030 PROJECTED WASTE GENERATION BY TYPE

Estimates in Table 7 are based on reported 2009 totals divided by 2009 population estimates and multiplied by the projected population for 2030. Adjusted 2030 populations, as described in Table 1, were used to estimate future needs.

TABLE 18. TJPDC 2030 ESTIMATED FUTURE WASTE GENERATION RATES (IN TONS)

	Albemarle & Scottsville	Charlottesville	Fluvanna & Columbia	Greene & Stanardsville	Region
Municipal Solid Waste Disposed	66,837	24,207	11,525	61,526	164,095
Household	60,092	21,764	11,525	36,915	
Commercial	0	0	0	24,611	
Institutional	6,745	2,443	0	0	
Other (non-industrial)	0	0	0	0	
Primary Recyclable Materials	27,182	9,845	5,236	15,601	57,864
Paper	8,630	3,126	120	8,004	
Metal	1,033	374	100	5,592	
Plastic	359	130	0	99	
Glass	889	322	0	126	
Commingled	3,297	1,194	2,924	0	
Yard Waste (composted or mulched)	2,439	883	0	869	
Waste wood (chipped or mulched)	982	356	2,069	503	
Textiles	264	96	0	143	
Tires	155	56	5	154	
Used Oil	953	345	17	98	
Used Oil Filters	21	7	0	0	
Used Antifreeze	59	21	1	4	
Batteries	5	2	0	8	
Electronics	80	29	0	0	
Inoperative Motor Vehicles	0	0	0	0	
Other - fat, bone, grease	406	147	0	0	
Other - composed sludge	7,610	2,756	0	0	
Solid Waste (reused)		1,456	0	0	1,456
Building material (Habitat Store)	804	281	0	0	
UVA Move-Out		370	0	0	
Non-MSW Recycled					
MERCI	Unable to project: no figures exist on which to base the growth of these programs				
Ash					
Total Waste Generated	102,891	37,255	16,761	77,127	234,035
2009 Population	95,474	42,218	25,815	18,788	182,295
2030 Population	124,345	45,036	41,091	26,326	236,798

Source: Local facility operators; US Census; VEC

*Localities separated out of RSWA by defining a rate of generation (2009 generation/2009 population of Charlottesville, Albemarle, and Scottsville) and multiplying the rate by 2030 populations of each locality separately.

**UVA Move-out was projected based on an average growth of student population of 0.73%/year, a 30-year average.

***2009 populations of Stanardsville, Scottsville, and Columbia are included in the 2009 and 2030 population figures for the county in which they are located. No projected figures are available for towns.

Growth will impact solid waste generation in the region. Since predominantly residential growth is expected, MSW associated with residential development, as well as commercial and institutional growth that serve residential growth is expected to grow congruently. Figure 6 shows the components of MSW as fractions of the entire waste stream. Recommendations in this plan seek to make solid waste management in the region more efficient and sustainable by exploring avenues of cost avoidance and revenue that support the diversion of materials from the MSW stream.

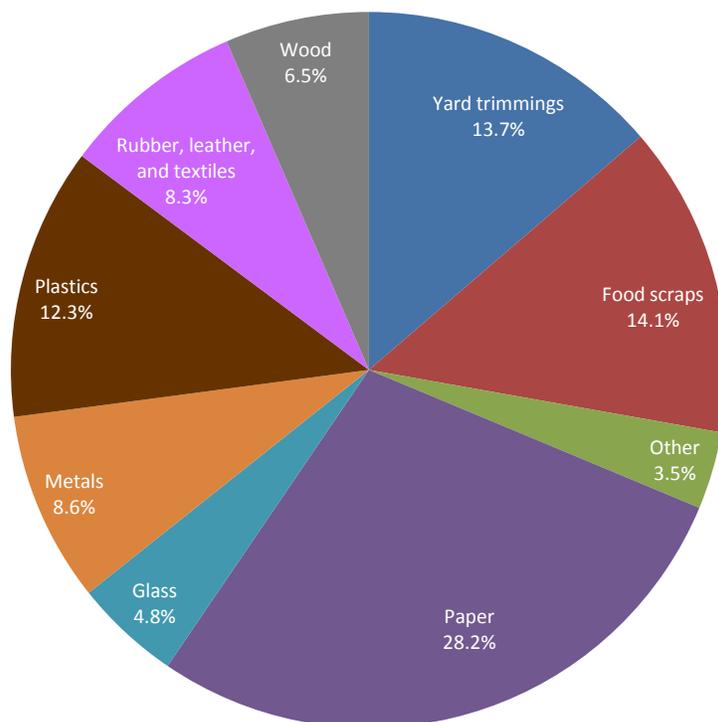


FIGURE 6. THE ESTIMATED COMPONENT PARTS OF THE NATIONAL MSW STREAM

Source: Environmental Protection Agency

With future land development, vegetative waste from land clearing and residential landscape maintenance will increase, adding to annual vegetative waste generation. Land clearing debris may be burned on-site with a permit issued by the Department of Environmental Quality (DEQ). There are also composting and mulching operations in the region to handle this waste stream. Construction and demolition debris (CDD) will also increase as a result of land development. As previously mentioned, the Zion Crossroads Recycling Center recycles CDD at a rate above 90%, which reduces this waste stream very effectively.

Electronics are a major part of the information industry in the region, and a higher than normal amount of this waste is expected, particularly in the urban and university area. This unique waste stream has been difficult and expensive to divert from the landfill, and tight budget conditions have reduced the availability of publicly funded recycling options for electronics, batteries, and other special wastes. However, inexpensive and free options are now being offered by some retailers to individuals for recycling of computers, electronics, batteries, compact fluorescent lights, and cell phones. Recommendations in this plan seek to make the public aware of these options.

4.2 System Capacity for the 20-Year Planning Period

TABLE 19. SOLID WASTE MANAGEMENT SYSTEM CAPACITY (PUBLIC FACILITIES)

	2030 Population Estimate (persons)	2030 Total Projected Annual Waste (Tons)	25% Minimum Recycled¹ (tons)	Net Annual 2030 Waste (Tons)	Permitted Capacity (Tons/day)	Annual Capacity² (Tons)	Annual Capacity at 2030 (Tons) <small>(Annual Capacity - Net Waste)</small>
RSWA's Ivy MUC ³ (Albemarle)	123,779	102,891	25,723	77,168	300	93,600	16,432
Greene County MRF (Greene)	25,950	77,127	19,282	57,845	480	149,760	91,915

Sources: Virginia Employment Commission; Virginia Department of Environmental Quality

NOTES

- ¹ This Plan establishes a goal of maintaining at least 25% recycling
- ² Assuming disposal of full permitted capacity 6 days/week
- ³ Calculated for all residents of Albemarle County. The TJPDC estimates that approximately 25% of Albemarle County's MSW is taken to the Zion Crossroads Recycling Center. However, the actual amount could not be confirmed. Thus this is a conservative estimate of the Annual Capacity at 2030.

The Fluvanna County Convenience Center is not a permitted facility, and its capacity is constrained only by physical space at the facility. Fluvanna County estimates that between 3 and 4 tons of waste is handled at the convenience center daily. The BFI Fluvanna County Transcyclery and the Zion Crossroads Recycling Center also receive waste from the TJSWPU. However, waste received from this planning unit constitutes only a fraction of the waste handled by these facilities. Thus, it is not possible to calculate the capacity of those facilities based on waste received from this region. Table 9 describes information available about the capacity and TJSWPU waste handled by these facilities.

TABLE 20. TJSWPU WASTE HANDLED THROUGH PRIVATE SECTOR FACILITIES (TONS).

	2030 Projected Annual Waste received from TJSWPU	25% Minimum Recycled¹	Net Annual 2030 Waste	Daily Permitted Capacity	Annual Capacity²	Annual Waste Received from TJSWPU at 2030 as % of permitted capacity
Zion Crossroads Recycling Center ¹	49,930	12,483	37,448	1,000	312,000	12%
BFI Fluvanna County Transcyclery ²	26,606	6,652	19,955	950	296,400	7%

¹ Figures represent Charlottesville (MSW only) and Albemarle (25% of total waste)

² Figures represent Fluvanna (total waste) and Charlottesville primary recyclable materials only

Long-Term Disposal Capacity

The Amelia County landfill currently receives the region's solid waste from transfer stations. According to the DEQ, in December of 2010, the Amelia County landfill had 31 of its 43 million cubic yards of design capacity available for future solid waste disposal. The landfill's annual maximum permitted intake is 1,156,000 tons. Over the next 20 years, the landfill could receive a maximum of 23,120,000 tons from all sources (roughly 15,606,000 cubic yards, if assuming one ton = 0.675 cubic yards¹). By taking the difference of today's capacity and the maximum volume the landfill can receive over the next 20 years, at 2030, the landfill will have a minimum of 15,394,000 cubic yards of capacity remaining. Based on 2030 projections of MSW generation, and assuming no change in TJSWPU solid waste programs, the Amelia County landfill will be receiving 164,095 tons (~110,764 cubic yards) annually from the TJSWPU in 2030. This constitutes 9.6% of the landfills annual permitted capacity.

The Amelia County landfill has sufficient capacity over the 20-year horizon of this Plan to accommodate solid waste from the TJSWPU. Additional capacity may be secured from the BFI Henrico County landfill, based on a letter from BFI dated December 3, 2004, included in the Appendices.



TOP ROW: MCINTIRE RECYCLING CENTER (LEFT) & PUBLIC ELECTRONICS RECYCLING AT BEST BUY IN CHARLOTTESVILLE (RIGHT)
 BOTTOM ROW: ITEMS ON DISPLAY IN THE ENCORE SHOP AT THE IVY MUC (LEFT) & STUDENT VOLUNTEERS AT UVA (RIGHT)

FIGURE 7. RECYCLING AND REUSE FACILITIES IN SWPU (A SUBSET)

¹ Bell, Pamela and Melvin Burke (2005) "Waste Management in Maine: The West Old Town Landfill." University of Maine Orono, Orono, Maine.

4.3 Strategic Plan & 20 Year Timeline

Introduction and Guiding Principles

The following goals, objectives, and strategies address the waste management hierarchy of Source Reduction and Reuse, Recycling, Resource Recovery and Incineration, and Landfilling as defined by the Virginia DEQ. The 1998 Sustainability Accords, endorsed by the Thomas Jefferson Planning District Commission and its member localities: Albemarle, Charlottesville, Fluvanna, Greene, Louisa, and Nelson, address waste management with one broad goal and five measurable objectives. They are the guiding principles for this Plan.

Goal: The wasteful use of resources and the creation of non-recyclable waste by-products are reduced and, wherever possible, eliminated.

Objective 1: Increase recycling of usable materials.

Objective 2: Minimize the use and unsafe disposal of hazardous material.

Objective 3: Promote a sense of individual responsibility for limiting waste.

Objective 4: Increase individual and cooperative efforts to reduce waste.

Objective 5: Increase the understanding and practice of the six-step approach to waste reduction: rethink, reduce, reuse, buy recyclables, recycle, and material exchange.

Sustainability Accords

Retain the natural habitat

Ensure water quality and quantity are sufficient to support people and ecosystems

Optimize the use and re-use of developed land and promote clustering

Promote appropriate scale for land uses

Retain farm and forest land

Develop attractive and economical transportation alternatives

Conserve energy

Provide educational and employment opportunities

Increase individual participation in neighborhoods and communities

Strive for a size and distribute the human population in ways that preserve vital resources

Integrated Waste Management Framework & Implementation Plan

Each of the following goals and objectives support the Sustainability Accords and strengthen them with a more in depth examination of how they may be achieved. The goals, objectives, and strategies in this plan were developed by the Solid Waste Committee, which is composed of representatives from each locality. Committee membership is listed in the Appendices. This update to the 2006 Solid Waste Management Plan is consistent with contemporary solid waste issues, and the local political and economic climate. The update also includes a tracking mechanism to document progress toward meeting each goal. The appendices contain the 2006 20-Year Implementation Plan and progress report. Documentation of completed strategies can be found there. Table 21 shows the goals, objectives, and strategies that the TJSWPU will implement pursuant to the solid waste management hierarchy contained in 9VAC20-130-30. A 20-year implementation timeline is also included.

TABLE 21. TJSWPU STRATEGIC PLAN

	Responsible Party	Timeline					Status*			
		2012	2013	2014 - 2015	2016 - 2020	2020 - 2030	Ongoing: All	Ongoing: 1+	Progress made	To Do
Planning										
Goal										
Maintain an efficient and effective solid waste management system.										
Objective 1										
Develop efficient, coordinated, and fiscally sound solid waste management contracts.										
Strategies										
Use Request for Proposals when soliciting contracts, as opposed to Invitations to Bid.	Localities							✦		
Include cooperative procurement language in contracts that would allow the other members of the SWPU to use the contract services under the same cost, terms, and conditions.	Localities, RSWA, UVA	●	●	●	●	●		✦		
Encourage public-private partnerships for waste management when cost efficiencies can be achieved.	TJPDC, RSWA, Localities								✦	
Maintain a regional centralized archive at the TJPDC for reporting to DEQ and cataloging all locality waste management contracts.	TJPDC, RSWA, Localities						✦			
Objective 2										
Prepare for future system capacity needs.										
Strategy										
Review waste streams, markets, programs, and system capacity regularly.	TJPDC, RSWA, Localities	●	●	●	●	●	✦			
Objective 3										
Realize economies of scale through regional collection, disposal, and recycling opportunities.										
Strategies										
Identify and reduce barriers to regional coordination of contracts.	TJPDC, Localities								✦	
Coordinate contracts for special waste collection.	TJPDC, RSWA, Localities	●	●	●	●	●		✦		
Jointly sponsor convenience centers for communities straddling jurisdictional lines, or for adjacent communities in separate jurisdictions.	Localities							✦		

*** Status Definitions:**

Ongoing - the need is met but requires upkeep; "All" and "1+" refer to localities in the SWPU

Progress made - some work has been done to address the need, but more is needed

To Do - the need is unmet

	Responsible Party	Timeline					Status*			
		2012	2013	2014 - 2015	2016 - 2020	2020 - 2030	Ongoing: All	Ongoing: 1+	Progress made	To Do
Source Reduction and Reuse										
Goal										
To reduce the quantity of waste generated through source reduction, reuse, and other waste reduction techniques.										
Objective 1										
Support and expand reuse infrastructure and culture in the region.										
Strategies										
Expand the reuse of building materials.	HOME, Habitat for Humanity, Localities	●	●	●	●	●	✦			
Promote online tools, such as Freecycle, Terracycle, and Craigslist that facilitate the reuse of materials before they enter the solid waste stream.	TJPDC, RSWA, Localities	●	●	●	●	●			✦	
Educate public on the importance of, and services available for source reduction, reuse, and recycling through a variety of media: website, brochures, fair display, social media, etc.	TJPDC, Localities	●	●	●	●	●			✦	
Promote home composting through workshops and educational materials.	VCE, TJPDC, Civic groups	●	●	●	●	●			✦	
Reach out to the private sector on waste reduction issues and environmentally preferable purchasing.	TJPDC	●	●	●	●	●			✦	
Establish Environmental Management Systems or source reduction initiatives in localities where they do not currently exist in the region.	Localities, TJPDC		●	●						✦
Objective 2										
Consider how reuse may contribute to the local economy.										
Strategy										
Assess opportunities to facilitate industrial symbiosis between existing public and private facilities, or through recruitment of industries that can use waste generated in the region as raw material for production.	Localities, TJPED, TJPDC, private sector		●	●	●	●				✦

	Responsible Party	Timeline					Status*			
		2012	2013	2014 - 2015	2016 - 2020	2020 - 2030	Ongoing: All	Ongoing: 1+	Progress made	To Do
Recycling										
Goal 1										
Continually improve recycling rate to meet the state mandated rate and maintain a regional rate that is competitive with the national rate.										
Objective 1										
Achieve a minimum 25% recycling rate in each participating locality, while aiming for a minimum of 30% as a region.										
Strategies										
Maintain a map of all recycling facilities in the region. Identify services offered by each; make available to public.	TJPDC	●	●	●	●	●			★	
Ensure local government comprehensive plans and ordinances consider issues related to siting of recycling facilities.	TJPDC, Localities	●	●	●					★	
Promote electronics recycling opportunities available to the community.	TJPDC, Localities	●	●	●	●	●			★	
Develop recycling programs in those schools where they do not currently exist.	TJPDC, Localities, Schools	●	●	●						★
Improve existing recycling facilities and locate new facilities, as need and opportunities arise. Expansion should include options for reuse.	TJPDC, RSWA, Localities	●	●	●	●	●				★
Objective 2										
Divert organic waste from the landfill.										
Strategies										
Continue to support and promote annual Christmas Tree and leaf collection programs.	Participating localities, TJPDC	●	●	●	●	●		★		
Establish a commercial-scale composter to serve region.	TJPDC, Localities, private sector	●							★	
Encourage the use of commercial composting by schools, institutions, and the private sector	Localities, TJPDC	●	●	●	●	●				★
Goal 2										
Stimulate demand for recyclable materials.										
Objective										
Use local government purchasing power to increase demand for products manufactured with post-consumer recycled material.										
Strategies										
Abide by environmentally preferable purchasing (EPP) guidelines whenever possible.	Localities	●	●	●	●	●	★			
Expand EPP guidance.	TJPDC	●	●							★
Adopt EPP policies.				●						★

	Responsible Party	Timeline					Status*			
		2012	2013	2014 - 2015	2016 - 2020	2020 - 2030	Ongoing: All	Ongoing: 1+	Progress made	To Do
Resource Recovery and Waste to Energy										
Goal Address the disposal and energy needs of the region.										
Objective Determine synergies between waste disposal and energy production.										
Strategy Monitor emerging technologies, including bio-fuels and agricultural by-products, designed for reduction, disposal and resource recovery; issue periodic status reports to the public.	TJPDC, RSWA	●	●	●	●	●	✦			
Landfilling and Waste Disposal										
Goal Provide environmentally sound solid waste disposal facilities that are convenient to the region's residents.										
Objective 1 Maximize the efficiency of, and anticipate the future need for additional or expanded transfer stations.										
Strategies Use the recommended regular solid waste systems review to inform the creation of new transfer station capacity or other solid waste management facilities/programs.	RSWA, Localities, private sector	●	●	●	●	●	✦			
Wherever possible, staff convenience centers to ensure proper use of facility services.	Localities, RSWA	●	●	●	●	●	✦			
Objective 2 Minimize the need for future transfer stations and landfills.										
Strategies Minimize the amount of waste generated through implementation of the waste management hierarchy applied in the SWMP.	TJPDC, Localities, RSWA	●	●	●	●	●			✦	
Objective 3 Maintain compliance with state and federal regulations on closed landfills.										
Strategy Continue to monitor and report on closed landfills as required by the DEQ.	RSWA	●	●	●	●	●	✦			

4.4 Meeting 25% Recycling Rate

Participating localities and the region shall attain or exceed a minimum recycling rate of 25% of the total municipal solid waste generated annually in accordance with Virginia regulations (see Appendix for method of rate calculation). This rate will be met through the continuation of existing programs, and the implementation of the above strategies. Keys to meeting the regional rate include:

- Providing convenient drop off locations for citizens
- Public/private partnerships
- Business, school, and industry participation
- Regional contract cooperation
- Increased waste reduction, recycling, and reuse education and outreach
- Increased recycling of electronics and other nonconventional waste
- Commercial and home composting/mulching and yard waste management
- Increased or improved monitoring of sites where recyclables are collected
- Improved data collection and tracking of waste



FIGURE 8. GLASS RECYCLING IN FLUVANNA COUNTY (LEFT) & RECYCLING EVENT HELD IN 2009 (RIGHT)

4.5 Future Treatment Options

Current treatment activities expected to continue include composting sludge, mulching vegetative wastes, and grinding wooden pallets. Other future treatment options include volume reduction actions, such as tire splitting and trash compaction.

It is expected that the Zion Crossroads Recycling Center will expand its MSW recycling operation to recover higher volumes of recyclable materials, and expand the types of materials recycled through investment and further development of MRF technology. This may include separation of some wastes to be utilized at a waste to energy facility if favorable contract terms can be negotiated between facilities.

New state regulations have also cleared the way for further utilization of organic waste. Now, post-consumer food waste can be composted at permitted facilities, clearing the way for major reductions in the MSW stream. As Figure 3 depicts, food waste constitutes 14.1% of MSW. It is expected that the private sector will provide food waste composting services to public and private customers in the future.

Public/private partnerships are also expected to continue increasing in the future, as solid waste management has proven to be a profitable enterprise for entrepreneurs. Localities recognize the value of services provided by retailers such as Best Buy, Whole Foods, and Goodwill Industries, who offer recycling services to the public within the planning unit.

4.6 Public Outreach Programs

Outreach programs in most localities generally include descriptions of waste management services available to residents on the website, in annual county services brochures, postings at the courthouse and county office buildings, and in ads and articles for special events (waste amnesty days, Christmas tree collection, etc.) in local newspapers. In the RSWA service area, outreach also includes an RSWA specific website, public forums, flyers at the recycling center, radio advertisements, and inserts in local newspapers. General public service announcements on radio and television also help educate the public. Adopt-a-Street programs and highway signs promote litter control. The TJPDC also maintains a recycling website as a resource to citizens of the solid waste planning unit, and displays solid waste reduction/reuse/recycling information and resources at fairs and other public events.

Public participation in solid waste management and planning occurs at advertised meetings of public bodies that discuss and act on the issues. RSWA has a Citizens Advisory Committee, which meets regularly to discuss budgetary, operational, and environmental issues, and makes recommendations to the Board of Directors. "Keep the County Clean" programs in Fluvanna and Greene promote recycling and waste reduction as well as periodic clean-up days. The TJSWPU staffs an advisory committee to maintain and implement the Solid Waste Management Plan. Citizen members of this committee provide vital input and feedback in development and implementation of the Plan. The TJSWPU also holds legally required public hearings for 5-year updates to the plan and if any major changes are made to the plan.

4.7 Funding Arrangements & Options

EXISTING FUNDING ARRANGEMENTS

Each locality determines the ratio of general revenue funds and tipping fees used to fund solid waste management activities. Each locality has tipping fees for disposal at transfer stations or convenience centers. General revenue funds are often used to cover costs of additional facilities, including reuse facilities, and recycling centers. A portion of the cost of recycling is covered by revenue from sales of recyclable materials. Individual localities are also responsible for long-term liabilities, landfill closure, and post-closure costs, which must be built into locality budgets.

Transfer stations in the region operate with a tipping fee that covers much of the cost of collecting, transporting, disposing of wastes, and making up the cost of recycling programs at times when recycling revenue fails to cover the cost of administration. General fund tax revenue is often used to cover costs above those that are covered by tipping fee revenue. In the City of Charlottesville, trash stickers must be purchased to participate in curbside pickup. RSWA sells trash stickers that citizens must use for self-delivery of MSW to the Ivy MUC. The income from trash stickers is used to help pay for operations and administration.

Recyclables are generally collected for free, and the locality may or may not break even on collection and distribution after receiving market value for the materials. Some materials are dealt with at little or no cost to the community, while the markets are less favorable for others. However, market fluctuation is common for all recyclable material. This is also true of re-use items. The Encore Shop at the Ivy MUC sells items for reuse at a low cost to help recover the time and resources needed to store and sell them.

Grants are another source of funding, and are often used for special waste events such as household hazardous waste and bulky waste amnesty days. State funds assist in tire cleanup and recycling.

Closed landfills in Albemarle, Fluvanna, and Greene Counties have closure plans and local funds allocated for proper closure and maintenance that comply with DEQ regulations. Funding options include setting aside a portion of tipping fees and allocation of tax revenue.

FUTURE FACILITY DEVELOPMENT

Currently, transfer stations operate within permitted capacity, and none are under significant pressure of reaching capacity by 2030, as described in Tables 8 and 9. The region has increasingly relied on private sector facilities to receive MSW and recyclables from private haulers, citizens, and locality contractors. As demand for recycled materials increases, private sector operations are expected to increase, further reducing expansion pressure on public facilities. If new facilities are needed, it is expected that localities will continue to use a mix of tipping fees and general funds to support them. Until the time that future recycling markets yield sufficient revenue to fully support recycling operations, local funds will subsidize these programs.

4.8 Solid Waste Systems Evaluation

PROGRAMS

Localities with permitted solid waste facilities and joint locality authorities prepare Solid Waste Information and Assessment reports and submit copies to the Department of Environmental Quality (DEQ) and TJPDC by March 31 of each year. Localities will also submit recycling rate reports to the PDC prior to the April 30 deadline for submission of a regional recycling rate report to DEQ, which the PDC will prepare and submit. The regional recycling rate is the figure used for the solid waste planning unit (all localities in the designated planning region), and is binding for the purposes of the recycling rate mandate and solid waste plans. As provided in §10.1-1411 of the Code of Virginia as amended in 2006, the mandatory recycling rate for the region is 25%. Should the mandatory recycling rate not be met, the PDC will prepare a Recycling Action Plan for the region.

The PDC staffs a committee of local designees, which meets quarterly, to review solid waste data collected to include in the above referenced reports, and compare it to growth trends, plan goals, and other relevant issues to monitor compliance with this plan and applicable codes, policies, and regulations. Committee members will report progress back to their elected officials annually.

COLLECTION

Two solid waste collection systems are available in the region: curbside collection by private haulers, and collection at the transfer stations and convenience centers from individuals who drop it off. Procedures for evaluating transfer stations include tracking the weight of material processed over time at each station in order to gauge usage by residents and to plan for additional permitted capacity, as needed. The data used for these evaluations is collected to draft annual Solid Waste Information and Assessment reports, and is therefore available to be reviewed annually.

The City of Charlottesville's curbside collection is provided by contract with the City and thus is available to all residents. Collection operations are evaluated over the course of the contract term, and new contracts reflect changes made as a result of the analysis. In evaluating efficiency, the County of Albemarle has concluded that a joint contract with the City may be desirable in urban areas of the County. Residents in the City and counties are free to use the private hauler of their choosing, or deliver their own solid waste to transfer stations individually.

5 Summary & Conclusion

The TJSWPU is committed to serving the citizens of the planning region with fiscally sound solid waste management systems that ensures sanitary conditions in our communities, proper disposal of waste, and seeks to further reduce the region's solid waste footprint on the environment. In this pursuit, the region will implement the strategies in this plan to build upon the consistent success in exceeding the mandated 25% recycling rate, and to support the goals of the Sustainability Accords. Implementation will continue to focus on regional cooperation, cost efficiency, and targeting easily recyclable or particularly environmentally damaging wastes. Another cornerstone strategy of the plan is to provide outreach, education, and resources to citizens and business to promote greater utilization of waste reduction, reuse, and recycling services available in the region. The Solid Waste Committee will continue to track progress on plan implementation and ensure that solid waste needs of the region are met.

Glossary

Agricultural Waste: solid waste produced from farming operations, or related commercial preparation of farm products for marketing.

Commingled: refers to the collection of recyclable materials in a manner so that the producer does not have to separate the materials by type; this is done after collection.

Commercial Waste: solid waste generated by establishments engaged in business operations other than manufacturing or construction. This category includes, but is not limited to, stores, markets, offices buildings, restaurants, and shopping centers.

Compost: a stabilized organic product produced by the controlled aerobic decomposition of organic material so that the product can be handled, stored and applied to the land. Compost can be utilized in a number of different applications, allowing for the beneficial reuse of organic wastes.

Construction and Demolition Debris (CDD): solid waste produced during construction, remodeling, repair or destruction of pavements, houses, commercial buildings, and other structures. CDD includes, but is not limited to, lumber, wire, sheetrock, broken brick, shingles, glass, pipes, concrete, paving materials, and metals and plastics if they are part of the construction material or empty containers for such materials. Paints, coatings, solvents, asbestos-containing material, any liquid, compressed gases, or semisolids and garbage are not CDD.

Debris Waste: waste resulting from land clearing operations, including, but not limited to, stumps, wood, brush, leaves, soils and road spoils.

Domestic (or Household/Residential) Waste: any waste material, including garbage, trash and refuse from households, such as single and multiple residences, hotels, and motels.

Disposal: discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous 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.

Hazardous Waste: is defined by the Virginia Hazardous Waste Management Regulation, 9VAC20-60-12 et seq.

Incineration: controlled combustion of solid waste for disposal.

Industrial Waste: any solid waste generated by manufacturing or industrial processes that is not a regulated hazardous waste, including waste from the following manufacturing processes: electric power generation; fertilizer/agriculture chemicals; food and related by-products; inorganic chemicals' iron and steel manufacturing; nonferrous metals/foundries; organic chemicals; plastics and resins; pulp and paper manufacturing; rubber; stone, glass, clay and concrete products; textile manufacturing; transportation equipment; and water treatment. Industrial waste does not include mining waste or oil or gas waste.

Inert Waste: solid waste that is physically, chemically, and biologically stable, including dirt, concrete, and rock, which are not regulated. Metal, construction debris, stumps, logs, and scrap lumber are regulated as of 1994 and must be disposed in a single-lined cell.

Integrated Solid Waste Management: the practice of managing solid waste using several complementary components, including source reduction, reuse, recycling, resource recovery, and incineration.

Landfill: an area of land where solid waste is buried.

Leachate: the liquid resulting from precipitation percolating through landfills and containing soluble or suspended degradation products of waste.

Litter: all non-biodegradable material discarded illegally on public or private land.

Materials Recovery Facility (MRF): a solid waste facility for the collection, processing and recovery of material such as metals from solid waste or for the production of fuel from solid waste.

Monitoring Well: a well point below the ground surface at a landfill site used for obtaining periodic water samples from groundwater for analysis.

Mulch: 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.

Municipal Solid Waste (MSW): waste that is normally composed of residential, commercial and institutional solid waste and residues derived from the combustion of these wastes.

Non-Regulated Landfill: a landfill accepting certain inert materials not regulated by the state, including rubble, concrete, broken bricks, and bricks and blocks.

Principal Recycled Material (PRM): paper, metal (except automobile bodies), plastic, glass, yard waste, wood, and textiles. This does not include large diameter tree stumps.

Recycling: 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. Recycling does not include processes that only involve size reduction.

Resource Recovery: the creation of usable energy from solid waste through the burning of solid waste to produce steam or electricity or other fuels.

Re-use: the practice of repeating use of a material rather than disposing of or recycling it.

Sanitary Landfill: an engineered land burial facility for the disposal of solid waste which is so located, designed, constructed and operated to contain and isolate the solid waste so that it does not pose a substantial present or potential hazard to human health or the environment.

Septage/Sludge: Any solid, semisolid, or liquid waste with similar characteristics and effects generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, air pollution control facility, or any other waste producing facility.

Solid Waste: any garbage, refuse, sludge, or other discarded material, including solid, liquid, semisolid, or contained gaseous material, resulting from industrial, commercial, mining and agricultural operations, and from community activities, but not including (i) solid or dissolved material in domestic sewage, (ii) solid or dissolved material in irrigation return flows or in industrial discharges which are sources subject to permit from the State Water Control Board, or (iii) source, special nuclear, or byproduct material as defined by the Federal Atomic Energy Act of 1954, as amended.

Solid Waste Management: Systematic administration of activities which provide for the collection, source reduction, storage, transportation, transfer, processing, treatment, and disposal of solid waste or resource recovery.

Source Reduction: reducing the amount of waste generated by an activity at the point of creation. This may occur through the design, manufacture, and sale of products and packaging with minimal volume and toxicity and longer lifetimes.

Source Separation: the segregation of various materials from the waste stream at the point of generation for recycling. For example, household glass and newsprint collection apart from trash.

Supplemental Recyclable Material (SRM): waste tires, used oil, used oil filters, used antifreeze, automobile bodies, construction waste, demolition waste, debris waste, batteries, ash, sludge or large diameter tree stumps.

Tipping Fee: a fee levied in the disposal of solid waste, generally at a landfill. The fee is usually on a per-ton basis, but can be on other units of measure, such as per-truck.

Transfer Station: 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.

Treatment: Process designed to change the physical, chemical, or biological nature or composition of any waste to render it more stable, safer for transport, or more amenable to use, reuse, reclamation, or recovery.

Vegetative Waste: decomposable materials generated by yard and lawn care or land-clearing activities and including, but not limited to, leaves, grass trimmings, and woody wastes such shrub and tree prunings, bark, limbs, roots, and stumps.

White Goods: stoves, refrigerators, water heaters, and other large appliances.

Yard Waste: decomposable waste materials generated by yard and lawn care and including 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.

Terms not defined above have the meanings assigned to them by RCRA, EPA and/or DEQ.

Appendices

2011 Thomas Jefferson Solid Waste Planning Unit Committee & Commissioners

	SOLID WASTE COMMITTEE	COMMISSIONERS
FLUVANNA COUNTY	John Robins <i>Director of Public Works</i>	Joe Chesser, Chair Keith Smith
GREENE COUNTY	Allen Morris <i>Solid Waste Manager</i>	Carl Schmitt Andrea Wilkinson, Vice Chair
CITY OF CHARLOTTESVILLE	Kristel Riddervold <i>Environmental Administrator, Public Works</i>	Satyendra Huja Genevieve Keller
ALBEMARLE COUNTY	Michael Freitas <i>Chief of Public Works</i> Andy Lowe <i>Environmental Compliance Manager</i>	Ann Mallek Dennis Rooker
UNIVERSITY OF VIRGINIA	Sonny Beale <i>Recycling Programs Director</i>	
THOMAS JEFFERSON PLANNING DISTRICT COMMISSION	Billie Campbell <i>Chief Operating Officer</i> Erin Yancey <i>Environmental Planner</i>	
OTHER	Bruce Edmonds <i>Environmental Research Solutions</i> Eric Walter <i>Black Bear Composting</i> Chad Freckmann <i>Blue Ridge Clean Fuels</i> Jason Halbert <i>Oak Hill Fund</i>	

Locality Recycling Rate Calculations

Example: 2009 Recycling Rate Report Calculation

Each year, the regional recycling rate is calculated using regional totals for Primary Recyclable Materials (PRMs), Municipal Solid Waste (MSW) Disposed, and credits from the categories described in Step 2, below. A 2% credit is given for source reduction programs (SRP), of which the TJSWPU has several. Credit may account for a maximum of 5 percentage points above the region's base recycling rate.

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

$$\boxed{44,519} / \boxed{44,519 + 125,152} \times 100 = \boxed{26.2} \%$$

Step 2: CREDITS calculation:

a. Total Recycling Residue	<u>0</u> tons
b. Total Solid Waste Reused	<u>947</u> tons
c. Total Non-MSW Recycled	<u>8,933</u> tons
CREDITS	<u>9,881</u> tons

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

$$\boxed{44,519} + \boxed{9,881} / \boxed{44,519} + \boxed{9,881} + \boxed{125,152} = \boxed{30.3} \%$$

Step 4: Source Reduction Program (SRP) Credit does not apply; or

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

$$\boxed{30.3} + 2\% = \boxed{32.3} \%$$

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

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

2006 20-Year Implementation Plan Progress Log

Status Code

T = Not Done/To Do
C = Complete

O = Ongoing
P = In Progress

D = Discarded due to Irrelevance
or Infeasibility

Implementation Plan Year	Responsible Parties	Status
Year 1		
Study the feasibility of coordinating contracts for special waste collection and make recommendations to local governments.	TJPDC, RSWA, Localities	O
Study means of expanding the reuse of building materials.	TJPDC's HOME Consortium, Localities	T
Identify methods to increase the reuse of collected solid waste material.	TJPDC, RSWA, Localities	T
Determine how best to encourage private-sector mulch manufacturing operations.	RSWA, TJPDC	P
Monitor daily tonnages received at the region's transfer stations and compare against existing capacity. Monitoring conducted on an ongoing basis.	TJPDC, RSWA, Localities	O
Establish TJPDC as regional centralized archive for reporting to DEQ and create format for annual review of waste stream, market, and programs.	TJPDC, RSWA, Localities	O
Support Freecycle, an online community reuse program, as a way to increase reuse without increasing storage capacity for items to be reused.	Community members, Civic Groups	P
Establish regular electronics recycling opportunities.	RSWA, UVA, Private Sector	P
Develop and distribute brochure to inform area residents of recycling program details.	TJPDC, Localities	C
Develop unified recycling information website.	TJPDC, Localities	C
Develop recycling display that can be used at fairs.	TJPDC	C
Establish one documented public entity Environmental Management System including source reduction and reuse strategies.	Localities	C
Year 2		
Improve economies of scale by finding ways to set the parameters for future contracts.	TJPDC	T
Develop educational materials that specifically identify ways to purchase goods that support source reduction and reuse.	TJPDC, RSWA, Localities, Civic Groups	C
Complete development of methods to expand existing recycling facilities and determine the location of new facilities in order to achieve or exceed a 25% recycling rate.	TJPDC, RSWA, Localities	P
Study the feasibility of using a portable wood chipper to be rotated among all the region's landfills and transfer stations.	TJPDC, Localities, RSWA	C, D

Implementation Plan Year	Responsible Parties	Status
Explore the possibility of providing adequate landfill disposal for waste collected at transfer stations within the region.	TJPDC, Localities, RSWA	D
Promote home composting through workshops and educational materials.	VCE, TJPDC, Civic Groups	O
Review local codes to determine possible impediments to implementation of plan goals.	TJPDC, Localities	D
Develop radio public service announcements about recycling.	TJPDC, RSWA, Localities	T
Explore means of print advertising, including newspapers and phone books.	TJPDC	T
Year 3-5		
Define the source reduction and reuse criteria best suited for large-scale procurement contracts.	TJPDC, Locality Procurement Officers	T
Provide information on the source reduction and reuse criteria best suited for large-scale procurement contracts to public and private procurement officials.	TJPDC	T
Coordinate the timing and parameters of all solid waste management contracts in the region.	TJPDC, RSWA, Localities	T
Study the possibility of establishing manufacturing facilities within the region that will reuse the region's recyclable materials.	Localities, Economic Development Orgs., & Private Sector	T
Assuming it has been found cost effective, identify possible location(s) for siting a materials recovery facility (MRF) with an emphasis on locations(s) that already have solid waste management facilities.	TJPDC, RSWA, Localities	C
Study potential markets for recyclables collected regionally and/or through a MRF, based on estimates of tonnages collected at the MRF.	TJPDC, RSWA	D
Site convenience centers in designated growth areas as shown in local comprehensive plans.	RSWA, Localities	T
Study the feasibility of rail service as an option to trucks for the hauling of solid waste from transfer stations to disposal facilities.	TJPDC, RSWA	C, D
Establish speakers' bureau for recycling topics.	TJPDC, Civic Groups	D
Develop recycling and composting programs in those schools where they do not currently exist.	TJPDC, Localities, Schools	T
Explore ways to increase interest in recycling among local businesses.	TJPDC, Localities, Civic Groups	P
Establish five documented public entity Environmental Management Systems including source reduction and reuse strategies.	Localities	C
Year 10		
Establish a MRF within the region, if proven cost-effective.	RSWA, Localities, Private	C
Study emerging technologies designed for reduction, disposal and resource recovery.	TJPDC, RSWA	O

Implementation Plan Year	Responsible Parties	Status
Year 20		
New facilities for solid waste disposal and recycling proposed in this plan are in place and fully operational.	TJPDC, RSWA, Localities	P
Regional recycling rates exceed 25% annually.	TJPDC, RSWA, Localities	O
Per capita tonnages reduced through source reduction and reuse.	TJPDC, RSWA, Localities	O

Letter from BFI



BFI Waste Systems of Virginia, Inc.
2001 Charles City Road
Richmond, Virginia 23231



December 3, 2004

Mr. Harrison B. Rue
Executive Director
District 10 – Thomas Jefferson
300 E Main Street, 1st Floor
P.O. Box 1505
Charlottesville, VA 22902

Dear Mr. Rue:

BFI Waste Systems of Virginia, Inc. (BFI) plans to construct and operate an expansion of the Old Dominion Landfill located at 2001 Charles City Road, Henrico County, Virginia. Pursuant to Virginia Code 1408.1.B.6, BFI is required to contact the localities in the Commonwealth to notify them that they may reserve disposal capacity in this landfill up to the requirements specified in the applicable approved solid waste management plan. BFI respectfully requests that you forward this letter to all solid waste entities or authorities for the counties, cities, and towns within your district.

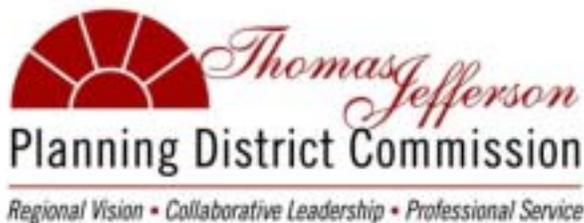
To the locality, BFI is offering you the opportunity to reserve disposal capacity in the proposed landfill expansion up to the requirements specified in your approved solid waste management plan. If the locality signs the acceptance agreement, then BFI agrees to guarantee the Old Dominion Landfill will reserve the requested disposal capacity for *the locality* upon the acceptable negotiation and execution of a disposal contract between both parties. BFI and *the locality* must sign a contract that stipulates the conditions of the agreement. By signing the denial statement, *the locality* agrees that it does not wish to reserve disposal capacity. If the acceptance agreement is not returned within 60 days from the date of this letter, it will be assumed that *the locality* has refused the offer to reserve disposal capacity.

Please return the attached document to Resource International, Ltd., P.O. Box 6160, Ashland, VA 23005, Attn: Anthony Creech

Sincerely,

BFI Waste Systems of Virginia, Inc.
2001 Charles City Road
Richmond, Virginia 23231

2010 Recycling Rate Press Release



City of Charlottesville

Satyendra Hoja
Jason Pearson

Albemarle County

Ann H. Maliek
Dennis S. Rooker, Treasurer

Fluvanna County

Joe Chesser
Keith Smith

Greene County

Carl Schmitt, Chair
Andrea Wilkinson

Louisa County

Tommy Barlow
Fitzgerald Barnes

Nelson County

Fred Boger
Connie Brennan

Executive Director

Stephen Williams

For Immediate Release July 22, 2011

Contact: Erin Yancey at (434) 979-7310 Ext 320 or eyancey@tjpd.org

Billie Campbell at (434) 979-7310 Ext 230 or bcampbell@tjpd.org

THOMAS JEFFERSON REGION EXCEEDS REQUIRED RECYCLING RATE IN 2010 BUT SHOWS DECLINE FROM 2009

The Virginia Department of Environmental Quality (DEQ) has officially accepted data calculating a 29.2% recycling rate for the Thomas Jefferson Solid Waste Region, which includes the City of Charlottesville and the Counties of Albemarle, Fluvanna, and Greene. The 2010 rate reflects a 2% decrease from 2009's rate of 31.2%. The 2010 rate had to be calculated without data from the van der Linde Materials Recovery Facility, since the data could not be obtained by the locality.

The TJPDC has compared 2009 and 2010 recycling and MSW data collected for the Recycling Rate Report to estimate the amount of missing data. Using this information, and the van der Linde facility recycling rate, the TJPDC was able to estimate a more accurate regional recycling rate for internal use. The estimated 2010 recycling rate based on this analysis for the region was 31.1%, narrowing the decrease in recycling to a tenth of a percent under last year's rate. The official rate will be recorded as 29.2%, as accepted by the state.

Submitted Data to DEQ		
Locality	2009 Rate	**2010 Rate
*Rivanna Solid Waste Authority (RSWA)	35.1%	33.8%
Fluvanna	31.2%	26.5%
Greene	20.2%	20.1%
Region – recycling rate	31.2%	29.2%
Region – Total Reused	947 tons	1,427 tons
Region – Total Recycled Material	44,519 tons	31,022 tons
Region – Total MSW Disposed	125,152 tons	97,003 tons

*Albemarle, Charlottesville, and Scottsville are reported together by RSWA

**TJPDC estimates the 2010 tonnages to be approximately 25% underreported, and the actual 2010 regional rate to be approximately 31.1% (see above)

The region also claims credit in the Recycling Rate Report for reused MSW, which increased by 34% in 2010, due mainly to an increase in reused building materials processed through the Habitat Store. Reuse is a more desirable waste management strategy than recycling because it saves energy that would be used in the recycling process, and further utilizes an item's embodied energy, which is energy that went into the initial manufacturing of the item. Other reuse options available to the region's citizens include Freecycle, Craigslist, and the Encore Shop at the Ivy transfer station. In addition, state regulations provide a 2.0% allowance for source reduction initiatives, which the region has in place. Source reduction initiatives involve changing the way an entity uses, purchases, designs, or manufactures materials or products to reduce their amount and/or toxicity. This practice decreases the amount of solid waste generated over the lifecycle of the material or product.

State law (10.1-1411) requires that each locality or region maintain a twenty-five percent recycling rate for the calendar year, with the exception of localities with population density less than 10 persons per square mile, who must maintain a minimum rate of 15%. The Thomas Jefferson Region remains committed to exceeding the 25% rate and to continuing to plan and implement waste reduction strategies.

The TJPDC serves as the administrative agent for the Thomas Jefferson Solid Waste Region and the region's Solid Waste Committee. The committee includes representatives from participating localities, other solid waste professionals, and interested citizens. The committee prepared a website designed to make recycling and waste reduction as practical and easy as possible. It explains what, why and where to reuse and recycle. Our goal is to increase the amount of reused and recycled materials in the region to reduce the impact of disposed solid waste to our land, water, and atmosphere. Visit www.tjpd.org/recycle to learn more.

* * *

Advertisement for October 6, 2011 Public Hearing

ORANGE COUNTY REVIEW The Madison Eagle The Daily Progress GREENE COUNTY RECORD THE NEWS VIRGINIAN

Central Virginia Newspapers Review Order Confirmation for Ad #0002428319-01

Client	THOMAS JEFFERSON PLANNING DIST	Payor Customer	THOMAS JEFFERSON PLANNING DI
Client Phone	434-979-7310	Payor Phone	434-979-7310
Account#	3309593	Payor Account	3309593
Address	PO BOX 1505 CHARLOTTESVILLE VA 22902 USA	Payor Address	PO BOX 1505 CHARLOTTESVILLE VA 22902
Fax	000-000-0000		
EMail	dtoughton@tjpd.org		

NOTICE OF PUBLIC HEARING

**Thomas Jefferson Planning
District Commission
5-year Update to Regional
Solid Waste Management Plan
Thursday, October 6, 2011 7 p.m.
401 E. Water St.
Charlottesville, VA 22902**

Total Amount	\$166.90	Status		Material
Payment Amt	\$0.00	Tear Sheets	Proofs	PO Number
Amount Due	\$166.90	1	0	1
Payment Method		Color		Production Color
Confirmation Notes:		<NONE>		
Text:		Ad Number	Ad Type	Production Notes
Order Notes:		0002428319-01	CLP Legal Liner	
		Pick Up Number	Ad Size	
		0002353667	1.0 X 34 LI	
		Product	Placement/Class	# Inserts
		Run Schedule Invoice Text	Position	
		Run Dates		
		Tag Line		

The Thomas Jefferson Planning District Commission will hold a public hearing to solicit public comments on the draft 5-year update to the regional Solid Waste Management Plan, originally adopted in 2006. The Plan details the existing and planned waste management systems in the City of Charlottesville and the counties of Albemarle, Fluvanna, and Greene. The Plan also sets goals, objectives, and recommendations for the future of solid waste management in the region.

Copies of the Plan and additional information may be obtained online at <http://tjpd.org/environment/solidWaste.asp>, or at the Thomas Jefferson Planning District Commission office, 401 E. Water Street, Charlottesville, VA, telephone number (434)979-7310, info@tjpd.org.

CVL Daily Prog CLP: _Legal Ads - CLP _Meetings and Events-Legal-CI 1
 NOTICE OF PUBLIC HEARING Thomas Jefferson Planning District Commission 5-year Update to Regional Solid Waste Management Plan 9/23/2011
 NOTICEOFPUBLICHEARINGTHOMASJEFFERSONPLANNINGDISTRICTCOMMISSIONSYEARUPDATETOREGIONALSOLIDWASTEMAN
 CVL dailypro CLP.com:Onl Any: _Legal Ads - CLP _Meetings and Events-Legal-CI 7
 NOTICE OF PUBLIC HEARING Thomas Jefferson Planning District Commission 5-year Update to Regional Solid Waste Management Plan 9/23/2011, 9/24/2011, 9/25/2011, 9/26/2011, 9/27/2011, 9/28/2011, 9/29/2011
 NOTICEOFPUBLICHEARINGTHOMASJEFFERSONPLANNINGDISTRICTCOMMISSIONSYEARUPDATETOREGIONALSOLIDWASTEMAN

Extract from Public Hearing & Adoption, October 6, 2011

EXTRACT

Thomas Jefferson Planning District Commission
Minutes of the October 6, 2011 Meeting

Public Hearing & Adoption of Solid Waste Management Plan Update: Environmental Planner Erin Yancey made a presentation on the process of updating the regional Solid Waste Management Plan. The state mandates that all localities have a plan or participate in a regional plan. The plan, originally adopted in 2006, is required to be updated every 5 years. Over the past year, the TJPDC and the Solid Waste Committee undertook the overarching tasks of making the data in the plan current, review system capacity, and updating the strategic plan. Data was updated for demographics, waste generation and recycling rates, and the facilities inventory. The capacity analysis compared future generation rates to permitted capacity at the Greene County Transfer Station, the Ivy Materials Utilization Center, the Zion Crossroads Recycling Center, the BFI Transcyclery, and the Amelia County Landfill. The result of the analysis was that there is ample system capacity to handle the Solid Waste Region's estimated future waste until at least 2030. Finally, the 2006 strategic plan was revisited. The committee assisted with a progress report on strategies from the 2006 plan, and the group brought the goals, objectives, and strategies up-to-date. Among others, new strategies include outreach to citizens and businesses on new options for recycling special wastes being offered at retail outlets, and the evaluation of contracting for food waste composting from facilities such as schools that create a large amount of food waste. Carl Schmitt requested that a typo on page 27 be corrected, and for clarification on the tables on page 16, regarding the location of the full 2010 data. Chair Joe Chesser then opened the public hearing. One member of the public, Eric Walter, commented. Mr. Walter informed the Commission on the details of his new, commercial composting business. **On a motion by Carl Schmitt, seconded by Satyendra Huja, the Commission adopted the 5-year update of the Solid Waste Management Plan, subject to the requested modifications.**

Attested to



Stephen Williams
Executive Director
Thomas Jefferson Planning District Commission