Cumberland Plateau Regional Waste Management Authority
Regional Solid Waste Management Plan For:
Buchanan County
Dickenson County
Russell County
(PER 9 VAC 20-130-10 ET SEQ)

Submitted to DEQ
February18, 2016

CUMBERLAND PLATEAU
Regional Waste Management Authority

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EXECUTIVE SUMMARY

The following solid waste management plan prepared for the Cumberland Plateau Regional Waste Management Authority (Authority) is submitted in accordance with 9 VAC 20-130-40 et seq. The region under the umbrella of the Authority is composed of Buchanan County and the incorporated town of Grundy, Dickenson County and the incorporated towns of Clinchco, Clintwood and Haysi, and Russell County and the incorporated towns of Cleveland, Honaker, and Lebanon. The region was formed in 1991 under the original solid waste management plan prepared by the Cumberland Plateau Planning District Commission in conjunction with Thompson and Litton for the Counties of Buchanan, Dickenson, and Russell. The plan was dated July 1, 1991. The documentation forming the region is included in Appendix 1.

Since 1991, the region has moved from landfill operations within each County to transfer operations with disposal outside of the region. In addition, since 1991, a regional authority has been established. This Authority has the oversight of the plan and control of the transfer operations. The Authority is responsible for the following activities:

- Financing of the transfer stations. The Authority took out $3,000,000 in bonds in 1993 to cover the estimated cost of the construction of the three stations. These bonds were refinanced in 2001 leaving the Authority with a $2,356,400 debt. Final payment on this initial bond was completed on December 1, 2008. In 2009, the Authority reviewed the conditions of all three facilities and decided to secure a bond for $1.3 million for rehabilitating the facilities. In 2010 all work was completed for extending the life of the facilities for fifteen additional years. Final payment on the 2009 Bond was completed in November 2015.
- Oversight of and provision of funding to the Counties for the operations of the transfer stations. The localities can chose to provide manpower or to privatize the manpower for day to day operations. Only Russell County has privatized their operations.
- Collecting revenues from the Counties for use of the transfer stations.
- Permit compliance.
- Negotiating and holding the contract on hauling from the transfer stations to the landfill. Currently Advanced Disposal/Eco Safe Landfill holds the contract for hauling. CEI is sub-contracted by Advanced Disposal for hauling services.
- Negotiating and holding the contract on disposal. The Authority currently holds the contract with Advanced Disposal/Eco Safe Lanfill for disposal at the Blountville, TN landfill located in Sullivan County Tennessee.
- Negotiating and holding the contract for periodic household hazardous waste collection programs.
- The Authority has been actively involved in the promotion of recycling efforts in the region. In 1995, the Authority encouraged the establishment of County operated recycling drops off centers. Buchanan, Dickenson and Russell County embraced the program which still operates today.

The counties and some towns are responsible for some or all of the following activities:

- Collection services
- Recycling activities
- Litter control activities including clean-up of open dumps and enforcement of litter laws
- Public education
- Post closure activities at all closed landfills as required by DEQ.
- Both Buchanan and Dickenson Counties completed their PCC termination at the Hoot Owl Landfill Permit #218 and the Dickenson County Landfill Permit #261. Russell County has completed a partial PPC termination on Russell County Landfills Permits #258 and #515. Russell County is currently seeking out alternatives to treat their Leachate rather than pump and haul.

No treatment of any waste as defined in Section 1.6 occurs within the region.

In addition to the daily record keeping, the Region documents its solid waste activities in several ways:

- Annual reports to the Cumberland Plateau Regional Waste Management Authority prepared by the Executive Director of the Authority
- Annual reports to the Board of Supervisors of the member Counties based on information provided by the Authority
- Periodic updates to the Authority and Boards by the Executive Director
- Annual submittal by March 31 of each year of the Waste Information and Assessment Report (Form 50-25) to DEQ
- Annual submittal by April 30 of each year of the Recycling Rate Report (Form 50-30) to DEQ
- Annual submittal usually by December of each year of the update to the financial assurance forms to DEQ

All these reports, updates and DEQ submittals as well as all background and permitting information relative to the transfer stations are kept in the central archive (files) of the Cumberland Plateau Regional Waste Management Authority located at 224 Clydesway Road, Lebanon, Virginia, 24266. Information on the landfills is kept at the Counties. The Director of DEQ or other DEQ representatives receive copies of appropriate information relative to the Region's solid waste management program through the following sources:

- Direct submittal to DEQ of Forms 50-25 and 50-30 on an annual basis
- Permit applications
- Permit amendment applications
- Updates to the solid waste management plan
- General correspondence which may be required from time to time

The following table summarizes important key elements of the Region's existing program:

TABLE 1
KEY ELEMENTS
EXISTING SOLID WASTE PROGRAM

ELEMENT	DESCRIPTION

Collection	• Buchanan County – Residential and commercial door-to-door collection.
	  o Town of Grundy – Residential and commercial door-to-door collection.
	• Dickenson County – Residential and commercial door-to-door collection.
	  o Town of Clintwood – Residential and commercial door-to-door collection.
	• Russell County – 14 green box sites
	  o Town of Cleveland - Residential and commercial door-to-door collection.
	  o Town of Honaker - Residential and commercial door-to-door collection.
	  o Town of Lebanon – Residential and commercial door-to-door collection.

Transfer	• Buchanan County Transfer Station
	  o PBR # 106
	  o Opened March 1996
	  o 5,000 square feet
	  o Scales – (2) B Tek 10'x70'
	  o Cost $73,412.50
	  o Managed by the Authority and staff by the County
	  o Tonnage transferred 2015 – 16,426 tons
	• Dickenson County Transfer Station
	  o PBR #049
	  o Opened December 1993
	  o 5,000 square feet
	  o Scales – (2) B Tek 10'x70'
	  o Cost - $73,412.50
	  o Managed by the Authority and staffed by the County
	  o Tonnage transferred 2015 – 10,049 tons
	• Russell County Transfer Station
	  o PBR #001
	  o Opened April 1994
	  o 7,500 square feet
	  o Scales – (1) B Tek and (1) Meter Toledo 10'x70'
	  o Cost - $73,412.50
	  o Managed by the Authority and staffed by a private contractor
	  o Tonnage transferred 2015 – 16,986 tons

ELEMENT	DESCRIPTION
	• Hauling contract with Advanced Disposal and subcontracted with CEI Trucking, Inc. The contract expires on October 26, 2018. • Permits are held by Authority who owns the buildings and equipment and holds ownership of the properties in Buchanan and Dickenson. The Authority has a 25 year lease on the property at Russell County. • As of December 1, 2015, the Authority does not have any outstanding debt. Bond debt was paid off on December 1, 2015. • As permit holder, the Authority is responsible for permit compliance. • As owner of the buildings, the Authority is responsible for all maintenance/repairs and equipment replacement.
Disposal	• Contract with Advanced Disposal/Eco Safe, Inc. It expires on October 26, 2018. • Location: Sullivan County Tennessee approximately 10 miles south of Bristol • TDEC Permit #SNL 820-000-0282 Ext., Class 1 • Total acreage of site – 655 acres • Total acreage available for permitting – 255 acres • Life remaining – 78 years at 675 tons per day (2094).
Recycling	• DEQ Recycling Form for region – Recycling rate 2014 = 30% • Buchanan County – Currently Buchanan County offers a drop off site located in the town of Grundy for paper, plastic and cardboard. White goods collected and recycled. Tires collected. Individual recycling rate in 2014 of 25.2%. o Town of Grundy – No formal program but county operates drop off site in town limits. Shreds leaves, brush, and Christmas trees for mulch. • Dickenson County – Currently Dickenson County offers drop off location in Clintwood and Haysi. Have one scrap metal dealer in County who recycles white goods, aluminum, scrap metal, and abandoned autos. Tires are collected. Individual recycling rate in 2014 of 33.4%. o Town of Clintwood – no formal program but county operates drop off site in town limits. • Russell County – 7-8 drop off sites; plastic, newspaper, cardboard, aluminum and oil are collected. White goods and scrap metal recycled at transfer station. Tires sent off site for recycling. Individual recycling rate in 2014 of 31.9%. o Town of Lebanon – No formal program. • Since original submittal of this plan on 06/25/04, the Authority has hired a full time recycling coordinator to work to improve the programs in the Region.
Treatment	• The region does not treat any waste per the definition in Section 1.6.

During preparation of the plan, the following goals and objectives were developed for the program. See Section 8.0 for a more detailed description of the activities.

Collection - Goals and Objectives:

- Towns and Counties will continue to handle their own collection.
- Authority to evaluate the possibility of developing a private contract for collection in the region.
- Town of Lebanon may consider servicing citizens in immediately adjacent areas of Russell County with door-to-door service if practical.

Transfer

- Current hauling contract expires on October 26, 2018. Authority has been instructed to continue in its oversight role and will begin competitive bid process in early 2018.
- Repair work was completed in 2010, e.g. floor repairs, door repairs, lighting, new scales, new scale house, etc. Authority preformed oversight during the repairs. Following completion of the repairs, the Authority agreed to create a line item in its budget for long term maintenance and repairs.

Disposal - Goals and Objectives:

- Current disposal contract expires on October 26, 2018. Authority has been instructed to continue in its oversight role and will begin competitive bid process in early 2018.
- The Advanced Disposal/Eco Safe waste disposal facility in Sullivan County, Tennessee has a life expectancy estimated to the year 2094. Thus, prior to the end of the planning period, the Authority will need to consider alternative disposal locations unless this facility is expanded.

Recycling - Goals and Objectives:

- Authority has hired a regional recycling coordinator to work with the Counties, Towns and the commercial sector. Coordinator is responsible for pursuing markets, assisting with the establishment of collection programs, developing educational programs, and expanding the overall interest in recycling in the region.
- Authority to consider assisting directly with the recycling programs but coordinator will need to research markets and develop a specific plan for the Authority to act on.
- Authority has established a periodic electronic waste collection program.
- Authority has established a periodic household hazardous waste collection program.
- The Authority will continue to encourage its localities to increase programs offered and public participation in annual environmental events.
- The Authority will continue to encourage the localities to increase the percentage of residents that are educated about proper disposal and recycling practices within the region.
- Secure additional competitive state grants to fund additional environmental education programs.
- Continue to expand and increase programs in the schools and community.

Litter Prevention and Control

- The regional coordinator has been tasked with involvement in regional coordination of litter prevention and enforcement.
- The Authority through the coordinator will seek out alternative funding sources for litter prevention and clean up.
- The Authority through the coordinator will encourage the organization of grassroots environmental groups to assist in litter prevention and litter control activities. An example is the already established Keep Southwest Virginia Beautiful.
- The Counties will continue to map illegal dump sites and will coordinate clean up as funding is available.
- The Counties will continue to support existing Adopt a Highway and Adopt a Stream campaigns.
- The Counties will continue to provide periodic cleanup days throughout the year to encourage the collection of bulk items.
- The Counties will continue to provide and improve enforcement activities relative to illegal dumping and littering.

Treatment

- The Region does not have any plans to incorporate treatment into their solid waste program.

1.0 INTRODUCTION

1.1 Legislation

The following solid waste management plan has been prepared in accordance with the Virginia Waste Management Board's, Regulations for Solid Waste Management Planning, Amendment 1, 9 VAC 20-130-40 et seq., effective date August 1, 2001.

1.2 Authority (9 VAC 20-130-40)

The regulations were promulgated pursuant to Chapter 14 (Sec.10.1-1400 et seq. and specifically Sections 10.1-1402, 10.1-1411 and 10.1-1413 of Title 10.1 of the Code of Virginia which authorized the Virginia Waste Management Board to promulgate and enforce such regulations as may be necessary to carry out its duties and power, and the intent of the Virginia Waste Management Act and the federal acts.

1.3 Purpose (9 VAC 20-130-40)

The purpose of the regulations as generally stated in 9 VAC 20-130-40 and elsewhere in the regulations is to:

1. Establish minimum solid waste management standards and planning requirements for protection of public health, public safety, the environment, and natural resources throughout the Commonwealth;
2. Require the development of a comprehensive and integrated solid waste management plan that addresses all components of the solid waste hierarchy established by the United States Environmental Protection Agency (EPA) as embraced by the Commonwealth as follows:
    - Source Reduction (most desirable activity)
    - Reuse
    - Recycling
    - Resource Recovery (waste-to-energy)
    - Incineration
    - Landfilling (least desirable activity)
3. Promote local and regional planning that provides for environmentally sound and compatible solid waste management with the most effective and efficient use of available resources;
4. Establish procedures and rules for designation of regional boundaries for solid waste management plans;
5. Establish state, local government, or regional responsibility for meeting and maintaining the minimum recycling rates of 25%;
6. Establish the requirement to withhold permits for failure to comply with the regulations;
7. Provide a method to request reasonable variance or exemptions from the regulations;
8. Provide for reporting and assessment of solid waste management in the Commonwealth.

1.4 Planning Area

The region under the umbrella of the Authority included in this solid waste management plan is composed of Buchanan County and the incorporated town of Grundy, Dickenson County and the incorporated towns of Clinchco, Clintwood and Haysi, and Russell County and the incorporated towns of Cleveland, Honaker and Lebanon. See Figure 1 for a vicinity map indicating the location of the region within Virginia and Figure 2 for Region Map. The region was originally formed in 1991.

1.5 Planning Period

The planning period for this solid waste management plan is 20 years from 2016 – 2036.

1.6 Critical Definitions (9 VAC 20-130-40)

It is important that the reader of this solid waste management plan have a clear understanding of the terms used throughout the report. The following selected definitions are taken directly from the regulations:

Construction, demolition and debris waste (CDD) – Construction and demolition waste means solid waste which is produced or generated during construction, remodeling, repair or destruction of pavements, houses, commercial buildings, or other structures. Construction wastes include, but are not limited to lumber, wire, sheetrock, broken brick, shingles, glass, pipes, concrete, paving materials, and metal and plastics if the metal or plastics are a part of the materials of construction or empty containers for such materials. Paints, coatings, solvents, asbestos, any liquid, compressed gases or semi-liquids and garbage are not construction wastes. Debris waste means wastes resulting from land clearing operations.

Household hazardous waste (HHW) – means any waste material derived from households (including single and multiple residences, hotels and motels, bunk houses, ranger stations, crew quarters, campgrounds, picnic grounds and day-use recreation areas which, except for the fact that it is derived from a household, would otherwise be classified as a hazardous waste in accordance with 9 VAC 20-60.

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

Principle recyclable materials – means paper, metal (except automobile bodies), plastic, glass, yard waste, wood, and textiles. It does not include large diameter tree stumps.

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

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

Source reduction – means any action that reduces or eliminates the generation of waste at the source, usually within a process. Source reduction measures include process modifications, feedstock substitutions, improvements in feedstock purity, improvements in housekeeping and management practices, increases in the efficiency of machinery, and recycling within a process.

Supplemental recyclable material – means 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, or material as may be authorized by the director.

Treatment – means any method, technique, or process, including but not limited to incineration, designed to change the physical, chemical or biological character or composition of any waste to render it more stable, safer for transport, or more amenable to use, reuse, reclamation or recovery. Per email from D. Gwinner, DEQ, treatment includes tire shredding but not mulching.

Used or reused material - means a material which is either:

1. Employed as an ingredient (including use as an intermediate) in a process to make a product, excepting those materials possessing distinct components that are recovered as separate end products; or
2. Employed in a particular function or application as an effective substitute for a commercial product or natural resource.

2.0 BACKGROUND INFORMATION

To provide background to the discussions contained in this solid waste management plan, a discussion of the status of solid waste management nationally and an overview of the key points of the Region's original Solid Waste Management Plan dated July 1, 1991 are being provided in this Section.

2.1 Status of solid waste management nationally

The following information is taken from "Municipal Solid Waste in the United States: 2001 Facts and Figures Executive Summary," produced by the Office of Solid Waste and Emergency Response, United States Environmental Protection Agency (EPA), EPA530-S-03-011, dated October 2003. This report provides data on the national municipal solid waste stream for 1960 through 2001.

It should be noted that as used by the EPA, the term municipal solid waste (MSW) consists of "everyday" items such as product packaging, grass clippings, furniture, clothing, food scraps, newspapers, appliances, and batteries. It does not include materials that may also be landfilled but are not generally considered MSW, such as construction and demolition debris, sludge, and non-hazardous industrial wastes. Virginia's definition is similar defining MSW as waste that is normally composed of residential (household), commercial (businesses other than manufacturing or construction) and institutional solid waste. However, record keeping of localities may not segregate the waste materials in a similar way. Thus, when comparing the information in this section with the data in the solid waste plan, care must be given to the term MSW.

2.1.1 Waste generation

According to the EPA report, the United States generated approximately 88.1 million tons of MSW in 1960 and approximately 254.1 million tons in 2013. This represents a 260% increase in the solid waste generated over the 53-year period. At the same time the United States population increased from 180.0 million persons in 1960 to 316.12 million persons in 2013 or a 158% increase over the 41-year planning period. Clearly, the increase in tonnage is not just a factor of population but is also impacted by other factors including the commercial sector. The following table summarizes the waste generation for 1960 – 2013 on a pounds per person per day basis:

TABLE 2
USA WASTE GENERATION (MSW)
1960 – 2015
POUNDS PER PERSON PER DAY
AS REPORTED BY EPA JUNE 2015

YEAR	POUNDS PER PERSON PER DAY
1960	2.7
1970	3.2
1980	3.7
1990	4.5

YEAR	POUNDS PER PERSON PER DAY
1995	4.5
1999	4.6
2000	4.7
2005	4.6
2010	4.44
2013	4.4
2014	4.4

The report noted that residential waste is estimated to be 55% - 65% of the total MSW generated, and that commercial waste (including institutional wastes, some industrial sites where packaging is generated and businesses) constitutes between 35% and 45% of the total MSW generated.

2.1.2 What is in the waste?

In evaluating waste generation, the report examined the composition of the waste materials as discarded before recycling and the amount of the material recovered through recycling programs. The following table summarizes the findings from this report:

TABLE 3
USA WASTE COMPOSITION
BY MATERIAL TYPE
AS SUMMARIZED IN EPA REPORT
2014 DATA

MATERIAL	% OF TOTAL WASTE STREAM	RECOVERY AS A PERCENT OF GENERATION
Paper	26.6	49.7
Glass	4.4	3.3
Metals	9.0	8.8
Plastics	12.9	3.5
Rubber, leather, & textiles	9.5	0
Wood	6.2	2.9
Yard trimmings	13.3	23.6
Food scraps	14.9	2.2
Other	3.2	6.0

Based on this information a significant portion of the yard waste, paper and metal wastes are being recovered while there remains limited recovery of plastics, wood, and food scraps.

2.1.3 Disposal

The report tracks the ultimate handling of the wastes generated and indicates that 12.8% of the waste generated is combusted, 34% of the waste is recovered and that 53% of the waste is landfilled. In the 2014 report, it noted that the number of landfills has decreased from nearly

8,000 in 1988 to 1,858 in 2001 while the average landfill size increased. It further states that, "At the national level, capacity does not appear to be a problem, although regional dislocation sometimes occur."

2.1.4 Recycling

According to the report, the United States recycled approximately 5.6 million tons of materials in 1960 and approximately 89 million tons in 2014. This represents a 900% increase in recycling over the period. In addition, composting of yard trimmings, food scraps, and other MSW organic material has increased from negligible reported quantities in 1960 to 21.1 million tons in 2014. This does not include back yard composting projects. Thus, in 1960, the recycling rate as calculated as recyclables over total MSW was 6.4%, and in 2014 is 34% without composting or 29.7% with composting. The following table summarizes the recycling and composting rates for 1960 – 2014 on a pounds per person per day (PPPD) basis:

TABLE 5
USA RECYCLING AND COMPOSTING RATES
1960 – 2014
AS REPORTED BY EPA

YEAR	RECYCLING (PPPD)	COMPOSTING (PPPD)	TOTAL (PPPD)
1960	.2	Neg.	.2
1970	.2	Neg.	.2
1980	.4	Neg.	.4
1990	.6	.1	.7
2000	1.0	.3	1.3
2005	1.1	.4	1.5
2010	1.1	.4	1.5
2012	1.1	.4	1.5
2013	1.1	.4	1.5
2014	1.1	.4	1.5

2.1.5 Waste reduction and reuse

The following information is taken from the EPA document, "Advancing Sustainable Materials Management: 2014 Fact Sheet," and republished November 2016 as cited above. When EPA established its waste management hierarchy in 1989, it emphasized the importance of reducing the amount of waste created, reusing whenever possible, and then recycling what is left. When municipal solid waste is reduced and reused, this is called "source reduction", meaning that the material never enters the waste stream. Instead it is managed at the source of generation. Source reduction includes the design, manufacture, purchase or use of materials, such as products and packaging, to reduce their amount or toxicity before they enter the MSW waste stream. Examples of source reduction activities are:

- Designing products or packaging to reduce the quantity or the toxicity of the materials used, or to make them easier to reuse.

- Reusing existing products or packaging; for example, refillable bottles, reusable pallets, and reconditioned barrels and drums.
- Lengthening the lives of products so less material is thrown away over time.
- Using packaging that reduces the amount of damage or spoilage of a product.
- Managing non-product organic wastes through onsite composting or other alternative disposal techniques.

According to the EPA, the United States prevented more than 55 million tons of MSW from entering the waste stream using 1990 as the baseline year. The EPA believes that reducing the amount of yard trimmings is particularly important in reducing the MSW in landfills across the United States. The following table taken from the EPA indicates the source reduction by major material categories:

TABLE 6
USA SOURCE REDUCTION BY MAJOR CATEGORY
2014
AS REPORTED BY EPA

MATERIAL	TONNAGE (million tons)	% OF TOTAL REDUCTION
Durable goods (e.g. appliances, furniture)	5.4	9.8%
Nondurable goods (e.g. newspapers, clothing)	9.3	16.8%
Containers and packaging (e.g. bottles, boxes)	15.5	28.1%
Other MSW (e.g. yard trimmings, food scraps)	25.0	45.3%
Total Source Reduction (1990 baseline year)	55.1	100.0%

Source reduction avoided an increase in the waste stream from 1999 to 2000 of nearly 25 percent. According to EPA, between 2 and 5% of the waste stream is potentially reusable and reflecting the interest in reuse is the establishment of over 6,000 reuse centers throughout the country ranging from specialized programs for building materials, to salvage facilities at landfills, to local/national programs such as Goodwill and Salvation Army.

2.2 Highlights from original solid waste plan (1991)

The original solid waste management plan for the Cumberland Plateau Region was prepared by the Cumberland Plateau Planning District Commission in conjunction with Thomson and Litton and was dated July 1, 1991. The following sections provide highlights from the original plan.

2.2.1 Waste generation projections

The following table summarizes the estimated waste tonnages in 1991, the projections during the original planning period and provides the actual 2003 tonnage data. In 1991, scales did not exist

at the landfills so tonnages were estimated from temporary weighing programs. When the transfer stations were constructed, scales were installed and the 2003 data represents actual reported values. The original plan stressed that without accurate scale information the projections could vary considerably.

TABLE 7
TONNAGE PROJECTIONS FROM ORIGINAL SWMP

COUNTY	1991 TONNAGE ESTIMATED FOR PLAN (Tons per year)	PROJECTED MINIMUM TONNAGE (Tons per year)	PROJECTED MAXIMUM TONNAGE (Tons per year)	TONNAGE DATA 2003 SCALE RECORDS
Buchanan	31,200	28,600	47,190	20,472
Dickenson	15,600	15,730	28,600	10,607
Russell	35,880	14,300	28,600	22,945
TOTAL	82,680	58,630	104,390	54,024

Projected minimum and maximum tonnage taken from Page 18 of the original Solid Waste Management Plan. Values in the Plan were reported as tons per day based on a 5.5 day, week.

The tonnage as recorded for 2016 is significantly lower than that estimated in the original plan. While the Counties may have realized a slight decrease in tonnage due to the declining population, the reduction most likely indicates an over estimation of the tonnage during preparation of the original study.

2.2.2 System components

The solid waste management system consisted of the following components in 1991:

TABLE 8
1991 SOLID WASTE SYSTEM COMPONENTS

COMPONENT	DESCRIPTION
Buchanan County	**Collection:** The County provided door-to-door service to approximately 7,200 residences and 700 business pick-up points excluding the Town of Grundy. The Town had its own sanitation service and offered door-to-door collection to its residences.
	Disposal: The County landfill, Permit 218, was placed into operation in 1974 and had an estimated closure date of June 1992. The landfill consisted of approximately 28 acres, which would require closure under the 1988 regulations. Tires were collected and shredded prior to placement in the landfill. No scales existed at the landfill. No tipping fees were charged. The landfill was operated on a 6-day work week.
	Recycling: White goods only.
	Estimated cost of system: • $122.70 per ton for collection and disposal • $63.57/year per person
Dickenson County	**Collection:** The County contracted the collection of solid waste to M.T.D., Inc., a locally owned and operated private company. The contract included collection of waste at County-owned, 6-yard green boxes and waste hauling to the County owned and operated landfill. In 1991, approximately 44 green box sites existed. Commercial businesses had to contract directly with the private contractor for collection. The contractor also collected white goods, scrap metal, tires and debris. The Town of Clintwood owned and operated its own sanitation department servicing businesses and residences within the town limits. Town residences were paying $4.25 per month for service. The Town did not pay a tipping fee at the landfill. Haysi and Clinchco were served by the County green boxes.
	Disposal: Disposal of all waste collected was at the Dickenson County landfill Permit 261, permit date November 14, 1978. The landfill is located on a previously developed surface mine bench. The property on which the landfill was situated was leased in 1991 from Clinchfield Coal Company by the Board of Supervisors. As of 1991, the landfill consisted of two asbestos waste disposal sites, a sanitary fill area, a debris disposal area and a tire disposal area.

COMPONENT	DESCRIPTION
	Approximately 11.2 acres had been used for fill activities and of that approximately 8.3 acres would require closure under the new solid waste regulations. The landfill had an estimated life expectancy to early 1994. No tipping fees were charged at the landfill. The landfill was operated on a 5-day work week.
	Debris and yard waste: These materials were burned on site at the landfill.
	Recycling: Only scrap metal and white goods were recycled.
	Estimated cost of system: • $69.91 per ton for collection and disposal • $56.32 per person per year
Russell County	**Collections:** The County had an annual lease with Harold Beasley Disposal Service to provide service to 15 drop-off centers. The Towns of Cleveland, Honaker and Lebanon operated their own sanitation services and provided door-to-door collection to residents and businesses.
	Disposal: Disposal of waste collected in the County was at the County landfill, Permit 515. The landfill had been in operation since July 20, 1988 and in 1991 approximately 12 acres were active. The landfill is equipped with a single synthetic liner system, leachate collection system, leachate storage facilities and groundwater monitoring system. The landfill was expected to be full by July 1992. A potential 2-acre expansion area existed with an estimated life of 10 – 15 years. The County was considering the expansion option seriously. No tipping fees were charged at the landfill. The landfill was operated on a 6-day work week.
	Recycling: Scrap metal, tires and white goods
	Estimated cost of system: • $61.16 per ton for collection and disposal • $17.98 per person per year

* Costs for collection and disposal include the Town and Counties collection costs.

2.2.3 Goals of Original Plan

Under the original plan, the following goals were identified:

TABLE 9
SUMMARY OF GOALS AND ACTION ITEMS

ORIGINAL GOAL	ACTION ITEM
To address solid waste management from a regional standpoint, thereby enhancing project economics and the environment and public health.	ARC Planning Grant late 1991 funded planning services of Thompson & Litton, Inc. Regional solution means reduced tipping fees, minimizing impact on citizens and business.
To view solid waste as a resource, not simply "trash"	Private sector to investigate markets for

ORIGINAL GOAL	ACTION ITEM
which should be buried and forgotten	recyclables
To minimize reliance on landfilling as a sole or principal means of solid waste management.	Recycling to become part of management plan
To provide an opportunity for the creation of jobs in the planning area upon implementation of the solid waste management system.	Contracts require that local qualified personnel be hired as truck drivers, fuel and parts for trucks be purchased in the CPPDC.
To meet the recycling mandates as set forth by the DWM in the most feasible and practical manner.	In addendum 7/2/93, CPRWMA to initiate RFP to solicit services of private waste management firms for recycling
To address the short term and long term needs of the planning area with respect to solid waste management.	
To provide an update to DWM with respect to ongoing and future work necessary to implement a regional solid waste system	Completed as part of the addendum to the Waste Management Plan dated August 2, 1993.
To file a petition to the DWM for the establishment of a regional boundary between the counties of Buchanan, Dickenson, and Russell.	Spring of 1992, SCC issued a charter to the Authority, thereby deeming it to have been lawfully and properly created.
To develop the most cost-effective and environmentally sound solid waste management system for the planning area.	All counties have signed User Agreements with the CPRWMA

2.2.4 Long Term Vision for Integrated Waste Management System

The three Counties under the original plan envisioned a regional system overseen by a solid waste authority. The long-term vision included the following activities:

TABLE 10
PROPOSED ACTIVITIES LONG TERM VISION

ACTIVITY	DESCRIPTION
Collection	Each county and town in the planning area would collect solid waste and deliver the materials to a transfer station for haulage to the regional facility. Russell and Dickenson Counties were to evaluate their collection systems relative to "flow control."
Transfer Stations	The Authority would operate three solid waste transfer stations (one in each county) for the delivery of solid waste to the regional facility. These transfer stations would be centrally located to best facilitate delivery of waste to the regional facility.
Central Processing Facility	Solid waste would be delivered to a central processing facility for recycling purposes. It was envisioned that the system would separate such materials as ferrous metals, glass, non-ferrous materials, and plastics. Such a system was considered feasible only from a regional perspective.
Further Waste Reduction	Two further waste reduction techniques were being evaluated while the original 1991 plan was being prepared. The first was composting and the second was waste to energy. The evaluation had not been

ACTIVITY	DESCRIPTION
	completed.
Landfilling	Residual materials from the central processing facility, which could not be composted or combusted, and possible ash from the waste-to-energy facility would be landfilled in a modern, state-of-the-art landfill. It was estimated that if all the facilities were constructed as outlined above, the landfill would only need to handle approximately 10% of the waste materials delivered to the landfill.

2.2.5 Short-term (interim) vision for Integrated Waste Management System

The three Counties under the original plan envisioned a regional system overseen by a solid waste authority. The short-term (interim) vision included the following activities:

TABLE 11
PROPOSED ACTIVITIES SHORT TERM VISION

ACTIVITY	DESCRIPTION
Collection	The existing collection system currently in place in each of the counties would remain in place.
Landfilling	Landfills would continue in each of the counties until completion of the regional system. Vertical or lateral expansions may have been needed for Buchanan and Dickenson Counties or interim disposal alternatives within the region explored.

2.2.6 Twenty-year milestones

The following twenty-year milestones were set in the original plan:

TABLE 12
TWENTY-YEAR MILESTONES

ITEM	TIMETABLE	CURRENT STATUS
1. Transfer Stations (Developmental)		
Finalize Waste Management, Inc agreement	August/September 1993	In 2013, agreement was made with Advanced Disposal, LLC.
Rehabilitation – Dickenson Co.	Opened December 1993	Completed 2010
Rehabilitation – Russell Co.	Opened April 1994	Completed 2010
Rehabilitation – Buchanan Co.	Opened March 1996	Completed 2010
Commence Operations (Full Scale)	April 1994	See above.
2. Transfer Stations (operational)		
Procure Equipment	Ongoing/As needed	Three new loaders were leased in Jan 2016
Hire Staff	September 1993-March 1994	Authority provides funding to Counties for operation

ITEM	TIMETABLE	CURRENT STATUS
Develop Operational Procedures	September – November 1993	Done
Negotiate Service Agreements for utilities	September – December 1993	Done
3. Recycling Program		
Evaluate existing system performance	September – November 1993	Using money received from an ARC grant, the Authority contracted with TH&P Environmental Engineering to complete a report on recycling in the region. The report was dated 1996 and made recommendations for drop off collection.
Evaluate Alternatives	November 1993-February 1994	See above.
Develop RFP	February – April 1994	No activity
Evaluate proposals	April – June 1994	No activity
Consider Privatization	June – August 1994	No activity
Implementation	August 1994- January 1995	The Authority started to implement the recommendations of the recycling study by purchasing collection boxes. However, only Russell County availed themselves of the program and still continues to run it today. The other Counties did not have funding available to proceed with recycling.
Hire a Regional Coordinator	Spring 2004	The Authority hired a regional litter and recycling coordinator to assist the member counties with development and implementation of recycling programs.
4. Future Landfilling Alternatives		
Evaluate potential CPRWMA landfill in Planning Area	Spring 2012	The Authority and its member counties did a study in 2012 that determined that the cost saving of a transfer station system veruses a landfill would not be needed.
Decision on CPRWMA landfill	Spring 2012	Completed 2012

ITEM	TIMETABLE	CURRENT STATUS
5. Solid Waste Management Plan Amendments		
Amend plan per DEQ regulations	September 1998 September 2003 September 2008 September 2013 March 2016	Plan being updated in 2016 per Amendment 1 of the regulations.
6. Future recycling program (Re-evaluation of item #3)		
Evaluate recycling program	July 2017	No activity
Develop additional alternatives	Aug-September 2017	No activity
Develop RFP	September 2017	No activity
Evaluation of proposals	September–November 2017	No activity
Award contract for recycling	January 2018	No activity
7. Repeat Step #4	5 year increments up to 2021	No activity
8. Repeat Step #6	5 year increments up to 2026	No activity

As the current plan will indicate, consideration of a regional central processing facility and/or a landfill have been dropped from further consideration and limited recycling activities have been implemented in the region due to the expense.

3.0 DEMOGRAPHIC DATA

3.1 Buchanan County, Virginia

3.1.1 Location

Buchanan County, Virginia is located in the southwestern portion Virginia along the border of Kentucky, which lies to the west. The county shares a border with West Virginia to the northeast. This 508 square mile community is bounded by Dickenson County to the southwest, Russell to the south and Tazewell to the east.

Roanoke is approximately 200 miles east and Richmond, the state capital, is 389 miles east.

3.1.2 Population

Grundy, the county seat, functions as the trade center for Buchanan County and for portions of neighboring counties in Kentucky and West Virginia. According to the 2014 Census Bureau American Community Survey Estimates, the town had a total population of 1,063. Vansant, a few miles to the south of Grundy, is the other population center with a total population of 433.

Table 13
Population - Buchanan County, Virginia
1990-2014

Population
Town of Grundy & Vansant CDP, Virginia

					Grundy		Vansant	
Census	Year	Population	% Annual Change		Population	% Annual Change	Population	% Annual Change
Census	1990	31,333						
Estimate	1991	31,400	0.21%					
	1992	31,200	-0.64%					
	1993	30,700	-1.60%					
	1994	30,300	-1.30%					
	1995	29,700	-1.98%					
	1996	28,900	-2.69%					
	1997	28,400	-1.73%					
	1998	27,900	-1.76%					
	1999	27,500	-1.43%					
Census	2000	26,978	-1.90%		1,105		989	
Estimate	2001	26,319	-2.44%					
	2002	25,945	-1.42%					
	2003	25,407	-2.07%					
	2004	24,950	-1.80%					
	2005	24,452	-2.00%					
	2006	23,992	-1.88%					
	2007	23,526	-1.94%					
	2008	23,090	-1.85%					
	2009	22,860	-0.99%		1,041		805	
Census	2010	24,028	5.10%		1,021	-1.92%	470	-41.61%
Estimate	2011	23,888	-0.58%		1,247	11.13%	573	21.91%
	2012	23,837	-0.21%		1,081	-13.31%	411	-28.27%
	2013	23,555	-1.18%		1,254	16.00%	293	-28.71%
	2014	23,106	-1.90%		1,063	-15.23%	433	47.78%

Source: US Census Bureau & US Census Bureau American Community Survey Estimates

The entire coal-producing region of southwest Virginia has seen significant population decline since the mid-1980's due to dramatic job loss in the coal industry. The weak economy forced workers to move to find jobs elsewhere. Another factor in the decline is the loss of young adults leaving the area for education or employment. Isolation, poor transportation routes and limited commercial variety make it difficult to attract new residents and new industry.

Population projections from the Virginia Employment Commission show population decreases for Buchanan County through 2020 of about -3.00% a year. For the next twenty years (2030-2040) the county is projected to gain population at rates of approximately 0.14%.

In the county, the population is spread out with 19.5% under the age of 19, 5.5% from 20 to 24, 24.5% from 25 to 44, 31.0% from 45 to 64, and 19.4% who are 65 years of age or older. The median age is 45.3 years.

Table 14
Population Projections - Buchanan County, Virginia
1990-2040

Year	US Census Bureau	VEC Projections	% Annual Change By Decade	
1990	31,333			
2000	26,978		1990-2000	-13.90%
2010	24,098		2000-2010	-10.67%
2020		23,383	2010-2020	-2.96%
2030		23,263	2020-2030	-0.51%
2040		23,296	2030-2040	0.14%

Source: Virginia Employment Commission

Table 15
Population by Age - Buchanan County

Age	Buchanan County								
	2000			2010			2014 Estimates		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Total population	26,978	13,681	13,297	24,098	12,310	11,788	23,106	11,770	11,336
Under 5 years	1,288	654	634	1,114	591	523	1,020	520	500
5 to 9 years	1,582	838	744	1,176	589	587	1,108	583	525
10 to 14 years	1,671	818	853	1,349	692	657	1,190	612	578
15 to 19 years	1,925	1,016	909	1,416	789	627	1,186	611	575
20 to 24 years	1,588	882	706	1,316	706	610	1,282	714	568
25 to 29 years	1,737	899	838	1,440	784	656	1,424	801	623
30 to 34 years	1,929	1,034	895	1,418	802	616	1,346	740	606
35 to 39 years	2,300	1,206	1,094	1,519	802	717	1,351	756	595
40 to 44 years	2,440	1,319	1,121	1,739	895	844	1,541	806	735
45 to 49 years	2,219	1,150	1,069	1,982	1,024	958	1,692	876	816
50 to 54 years	2,086	1,026	1,060	2,086	1,102	984	1,854	917	937
55 to 59 years	1,647	825	822	1,936	971	965	1,950	1,010	940
60 to 64 years	1,474	737	737	1,739	816	923	1,675	813	862
65 to 69 years	1,043	523	520	1,352	669	683	1,548	714	834
70 to 74 years	820	333	487	1,107	502	605	1,200	582	618
75 to 79 years	576	211	365	686	318	368	886	370	516
80 to 84 years	361	115	246	415	153	262	485	212	273
85 and over	292	95	197	308	105	203	368	133	235

According to the US Census American Community Survey of 2014, there were 23,106 people, 9,406 households, and 6,618 families residing in the county, which calculates to a population density of 48 persons/mi². There are 11,508 housing units at an average density of 24 units/mi².

The racial makeup of the county is 96.1% White, 2.3% Black or African American, and 1.6% from other races. There were 9,406 households, with the average household consisting of 2.41 persons and the average family size being 2.89 persons.

The median income for a household in the county is $29,678, and the median income for a family is $39,722. Males have a median earnings of $40,587 versus $18,883 for females. The per capita income for the county is $18,357 with 24.0% of the population and 20.6% of families living below the poverty line.

Table 16

Selected Racial Data Estimates By Population and Percentage

Jurisdiction	Population	White	Percent	Black or African American	Percent	Other	Percent
Buchanan County	23,106	22,204	96.1%	531	2.3%	370	1.6%

Table 17

HOUSEHOLD INCOME AND BENEFITS IN THE PAST 12 MONTHS (IN 2014 INFLATION-ADJUSTED DOLLARS)

Income Group	Buchanan County Households	% of Households
Less than $10,000	1,139	12.10%
$10,000 to $14,999	957	10.20%
$15,000 to $24,999	1,897	20.20%
$25,000 to $34,999	1,190	12.70%
$35,000 to $49,999	1,165	12.40%
$50,000 to $74,999	1,328	14.10%
$75,000 to $99,999	916	9.70%
$100,000 to $149,999	630	6.70%
$150,000 to $199,999	112	1.20%
$200,000 or more	72	0.80%
Total	9,406	100.00%

Median Household Income Dollars	29,678
Per Capita Income Dollars	18,357
Poverty all families	20.60%
Poverty all people	24.00%

Source: Unites States Bureau American Community Survey Estimates

3.1.3 Geographic conditions

The surface of the entire county is rugged and mountainous. Flat lands are rare and valley slopes are steep so that the entire area is covered with ridges, valleys and streams. Some of the ridges in the southern section of the county are sufficiently wide for roads and a few houses.

The maximum relief of the county is 2,890 feet, the lowest point being on Levisa Fork at the Kentucky boundary, where the elevation is 845 feet, and the highest on Big A Mountain, where the elevation is 3,735 feet. Sandy Ridge, the divide that forms the county boundary on the southeast, is the natural barrier that separates the county from other parts of Virginia. Another main divide that forms the boundary between Buchanan County and McDowell County, West Virginia is called State Line Ridge.

All the drainage of the county is tributary to Big Sandy River through its three main branches Russell Fork, Levisa Fork, and Tug Fork. Although most streams and creeks contain some water all year round, none has a very large flow. The topography of Buchanan County limits development somewhat to the low laying areas along streams and rivers.

Buchanan County lies in the Cumberland Plateau Physiographic Province where formations are mostly sandstone and shale with mineable coal deposits. The Province, for the most part, contains weather-resistant sandstone, which accounts for the steep V-shaped mountains.

3.1.4 Climate

Buchanan County lies in the warm temperate region. Latitude, mountainous topography, and prevailing winds exert considerable influence upon the climate.

The area receives an average annual rainfall of 40.95 inches and an average snowfall of 23 inches. The average maximum temperature is 72 degrees, and the average minimum temperature is 36 degrees for the Cumberland Plateau region. Buchanan County's average July temperature is 76 degrees and for January the average temperature is 36 degrees.

Thunderstorms and cloudbursts, normally occurring in the summer months, produce heavy rainfall over sections of the county and runoff is significant. Prevailing winds are westerly at an average velocity of 8 miles an hour but can reach high speeds during storms.

3.1.5 Transportation

A. Highways

There is no Interstate running through the County but U.S. Route 460 runs through its center from Richlands (Tazewell County) to the state line in common with Pike County, Kentucky. Route 460 is a major collector road providing direct access to Grundy, Keen Mountain, Vansant, and other communities. Route 83 runs east through the center of the county from Haysi

(Dickenson County) to McDowell County, West Virginia. Route 460 and Route 83 converge at Grundy.

Virginia Primary Route 80 provides access to the southwest and northwest corners of the county. It enters Buchanan County from Honaker in Russell County, enters Davenport, and exits Buchanan County to Haysi in Dickenson County.

B. Air

The nearest airport is the Mercer County Airport, located 42.3 miles to the north in West Virginia and is served by U.S. Airways. Raleigh County Memorial Airport is 57.2 miles away and is also served by U.S. Airways. The Tri-Cities Regional Airport lies 62.4 miles to the southeast in the Bristol/Johnson City, Tennessee area. It is served by five of the major airlines or their regional partners.
General aviation services can be found at Grundy Municipal Airport or at the Tazewell County Airport.

C. Rail

Norfolk Southern provides freight rail service to Buchanan County.

D. Water

The nearest ports are located in Richmond (389 miles) and Norfolk (480 miles).

3.1.6 Infrastructure

A. Electricity

American Electric Power provides power to the County.

B. Natural Gas

Virginia Natural Gas provides natural gas to the County.

C. Water

Buchanan County Public Service Authority oversees the water supply in the County.

D. Sewage

Buchanan County Public Service Authority oversees the sewage treatment in the County.

3.1.7 Economic Growth

Buchanan County's unemployment rate hit a high in 1994 at 18.3%. Since that high, the rate has been falling each year. In early 2004, the unemployment rate was between five and six percent. Between 2002 and 2004, the number of individuals in the labor force and the number of

unemployed declined by approximately the same amount. This could indicate that "discouraged workers" have stopped looking for work and have permanently left the work force. The high rates of individuals below the poverty level and on Medicaid also indicate that many are no longer looking for work.

Table 18

Buchanan County Unemployment Rates 2000 - 2014

Year	Labor Force	Employed	Unemployed	Annual Unemployment Rate
2000	8,738	8,223	515	5.90%
2001	8,881	8,344	837	6.00%
2002	8,983	8,344	639	7.10%
2003	8,838	8,220	618	7.00%
2004	8,317	7,834	483	5.80%
2005	8,401	7,947	454	5.40%
2006	8,419	7,997	422	5.00%
2007	8,657	8,235	422	4.90%
2008	8,950	8,502	448	5.00%
2009	9,236	8,448	788	8.50%
2010	8,326	7,497	829	10.00%
2011	8,474	7,755	719	8.50%
2012	8,598	7,819	779	9.10%
2013	8,174	7,286	888	10.90%
2014	7,874	7,058	816	10.40%

Source: Virginia Employment Commission

Buchanan County sees fewer of its workers leaving the county to work elsewhere than does its neighbor, Dickenson County. According to the 2014 Census estimates, the worker retention rate was 50.6%, with 4,168 individuals, (out of a workforce of 8,235) traveling to surrounding counties to work. The median travel time to work was 33.4 minutes in the year 2014.

Table 19
Commuting Patterns

People who live and work in the area		3,060
In-Commuters		4,767
Out-Commuters		4,168
Net In-Commuters (In-Commuters minus Out-Commuters)		599

Source: U.S. Census Bureau,On The Map Application and LEHD Origin-Destination Employment Statistics, 2012

Table 20
Major Employers - Buchanan County

Company	Product	Employees
Buchanan County School Board	Educational Services	500 to 999 employees
Consol Buchanan Mining Co. LLC	Mining (except Oil and Gas)	250 to 499 employees
Keen Mountain Correctional Institute	Justice, Public Order, and Safety Activities	250 to 499 employees
Dominion Coal Corporation	Mining (except Oil and Gas)	250 to 499 employees
Sykes Enterprises	Administrative and Support Services	250 to 499 employees
Buchanan General Hospital	Hospitals	100 to 249 employees
Rapoca Energy Company	Mining (except Oil and Gas)	100 to 249 employees
County of Buchanan	Executive, Legislative, &Other General Government	100 to 249 employees
Food City	Food and Beverage Stores	100 to 249 employees
Wal Mart	General Merchandise Stores	100 to 249 employees

The poverty rate in Buchanan County is 24% versus 11.5% in Virginia. The per capita income for the county is only 18,357 versus 33,958 for Virginia. The proportion of county residents over the age of 25 without a high school diploma is much higher than in Virginia.

Table 21
County Versus State Data
Buchanan County

Economic Indicators	Buchanan	Virginia
Population with Public Health Coverage	51.70%	24.20%
Poverty Rate	24.00%	11.50%
Per Capita Income	18,357	33,958
Population Aged 16+ in Labor Force	40.80%	66.70%
Population Aged 25+ w/o High School Diploma	31.80%	12.50%
Source: Unites States Census Bureau American Community Survey Estimat		

Mining jobs are still a significant sector of the employment in Buchanan County. Education services jobs make up the largest segment of jobs with health care and social services right behind mining and education services. Taxable sales for Buchanan County have been steadily

increasing since 2000 when sales totaled $115,923,478. By 2014, sales were up to $147,726,232.

The whole Cumberland Plateau Region is focused on the development of tourism as one way to strength the economy and create jobs. Industrial development is very limited in Buchanan County due to its isolation and the lack of large plots of fairly flat land. Information technology and health care are two areas that could see growth in the county

Table 22
Employment By Industry
Buchanan County

Category	Percentage
Mining	21.66%
Education Services	11.96%
Health Care and Social Assistance	10.74%
Retail Trade	9.83%
Public Administration	9.45%
Construction	6.13%
Admin, Support, Waste Mtg. Remediation	5.80%
Transportation and Warehousing	4.24%
Accomodation and Food Services	4.20%
Professional Scientific & Technical Svc	3.42%
Manufacturing	2.67%
Finance and Insurance	2.27%
Wholesale Trade	2.20%
Other Services	2.14%
Manangement of Companies and Interprizes	1.32%
Real Estate and Rental and Leasing	0.34%
Agriculture, Forestry, Fishing & Hunting	0.24%
Utilities	Confidential
Information	Confidential
Arts, Entertainment, and Recreation	Confidential
Source: Virginia Employment Commission	

Table 23
Taxable Sales
2000-2014

Year	Buchanan
2000	$115,923,478
2001	$114,597,950
2002	$114,720,922
2003	$112,152,118
2004	$116,924,712
2005	$107,211,477
2006	$123,290,187
2007	$127,687,900
2008	$139,948,887
2009	$127,560,716
2010	$125,345,514
2011	$142,304,553
2012	$156,984,874
2013	$148,802,737
2014	$147,726,232

Source: Virginia Department of Taxation

3.1.8 Land Use

A. Residential:

In the coalfields of Virginia, 70% of the land is above a 20 percent slope and 90% is above a 12 percent slope. Much of the county is unsuitable for residential development. Most of the population density in Buchanan County is centered in the northwest-central area where both Grundy and Vansant are located. Of the 11,508 housing units in the county, 18% are vacant. The vacancy rate is 31% for housing in Grundy.

Since the population of the county is expected to continue to decline, there are no future growth areas for subdivision development. Provision of public services would need to be considered a priority before concentrated growth could be expected in new areas of the county.

B. Commercial:

Independent shopping establishments offering a variety of retail goods and services are located throughout the county. The county has one shopping center with 12 retail outlets. Grundy is the county seat and the commercial area as well with approximately 30 retail establishments. This

town was flooded out three times in the 20th century and the town center is being relocated from the banks of the Levisa Fork River to a site on higher ground.

Future commercial development in the county will depend on an increase in the population, an increase in jobs or an increase in tourism.

In 2004, the Virginia Coalfield Economic Development Authority approved a $3 million loan to the Buchanan County Industrial Development Authority (IDA) for the construction of the University of Appalachia School of Pharmacy in Grundy. The University of Appalachia is projected to have an economic impact of approximately $20 million per year and to create 138 new jobs in Buchanan County. The Appalachian School of Law is also located in Grundy.

C. Industrial:

There are a limited number of developed industrial parks in Buchanan County. This is partly due to the lack of large parcels of suitable land for development and the lack of good transportation routes. The decision was made to develop an informational park and service sector jobs as a way to diversify the economy of Buchanan County.

In 2003, the Virginia Coalfield Economic Development Authority granted $1,040,000 to the Buchanan County Industrial Development Authority (IDA) to equip the Virginia Employment Commission's (VEC's) new customer contact center at the Buchanan Information Park. The board also approved up to a $2,090,000 loan to the Buchanan County IDA for construction of a 30,000 sq. ft. addition to the Buchanan Information Park facility.

SITE SPECIFICATIONS - INDUSTRIAL SITES –BUCHANAN COUNTY					
SITE NAME	**LOCATION**	**MILES TO NEAREST INTERSTATE**	**MILES TO NEAREST 4-LANE HWY**	**SQUARE FOOTAGE**	**TOTAL ACREAGE**
Buchanan Informational Park	State Route 83	I-77 - 70 mi	Rt. 460 - 8 mi	38,013	4.75 acres

There is a unique opportunity for significant economic development in the coalfield counties with the plan to build the Coalfields Expressway along the region's ridge tops. Preliminary construction plans indicate that as many as 500 acres of new developable land will be created by the Expressway. With 500 acres of new developable land, the three counties could realize as many as 4,000 to 6,000 new jobs from the successful marketing of these new sites. With a standard accepted multiplier of 1.7 for indirect jobs, a total of 6,800 to 10,200 new jobs are foreseeable for the coal counties of Southwest Virginia.

When construction begins, it is estimated that 1,400 construction jobs will boost the local regional economy over the expected 10-year lifespan of the road's construction. Local income will also be generated by the purchase of supplies, materials, and equipment from local businesses. In the long-term, tourism will increase as destinations that are now remote become accessible. For example, currently the Breaks receives over 400,000 visitors a year, but the TVA estimates that when the Coalfields Expressway is in place, attendance could increase to 1 million visitors per year.

The hope is that local colleges and institutions will see their profiles and enrollment figures rise as more and more people consider higher education a viable alternative. Additionally, technology and industrial parks will finally be able to recruit to their full potential and existing businesses will be able to fan out and offer their goods and services to more and more customers.

D. Agricultural:

The amount of land used for farming is decreasing in Buchanan County. Land in farms decreased 27% from 8,627 acres in1992 to 6,303 acres in 1997, while the average size of farms increased from 85 acres (1992) to 90 acres (1997). The number of full time farms decreased 58% during the same period from 36 farms in 1992 to 15 farms in 1997.

Crops such as burley tobacco and hay account for nearly 60% of the market value of agricultural products sold. Beef cattle and livestock sales make up the remaining 40% of the market.

E. Open Space/Recreation:

Nearly all of Buchanan County is covered in trees. Over 90 percent of the county is covered by hardwood forest growth and about 1% is evergreen forest.

3.1.9 Community Facilities/Activities:

Buchanan County General Hospital, located in Grundy, is a 134-bed hospital that serves the county.

Public schools in the county include 2 elementary, 4 combined, and 4 high schools. Several schools are located in Grundy including Mountain Mission School, a private K-12 school. The town is also home to the Appalachian School of Law and the planned University of Appalachia School of Pharmacy.

The Jefferson National Forest and the Breaks Interstate Park in neighboring Dickenson County offer extensive outdoor recreation activities.

Sources:

U.S. Bureau of the Census, 2000 and 2014 Census, 1990 Census, Economic Census, Census of Agriculture
Virginia Economic Development Partners
Cumberland Plateau Planning District Commission
Virginia Employment Commission

3.2 Dickenson County

3.2.1 Location

Dickenson County, Virginia is located in Southwestern Virginia on the border of Kentucky. Dickenson lies in the coal-bearing hills of the Appalachian Plateau. Though rich in natural resources with abundant coal, natural gas, timber and mineral assets, the economy of the region is transitioning from natural resources to technology.

Dickenson is bounded by Wise County to the southwest, Buchanan County to the northeast and Russell County to the southeast. Roanoke is approximately 184 miles east and Richmond, the state capital, is 255 miles east.

3.2.2 Population

Dickenson County, like the other counties in the Cumberland Plateau Planning District, has seen alternating periods of population growth and decline related to a series of coal-related "booms and busts". But since the 1990's, the region has seen a steady decline in population. Dickenson County declined -3.00% from 2000-2010 and continues to decline although the rate has slowed.

The Virginia Employment Commission projects that Dickenson County will continue to see population decreases through 2040 but at rates considerably less than the 3.0% the county saw over the past decade (2000-2010). Between 2020 and 2030 the decline is projected to level off so that the population remains rather constant at 15,375.

The population centers of the county are the towns of Clinchco (pop. 365), Clintwood (1,448), and Haysi (408). During the last decade (2000-2010), the population of Clintwood lost -8.7% remained constant while Haysi gained 167.7% of its small population. Haysi's population increase was due mainly to the town being annexed.

Table 24
Population - Dickenson County, Virginia
1990-2014

Population
Town of Clintwood, Clinchco & Haysi, Virginia

					Clintwood		Clinchco		Haysi	
Census	Year	Population	% Annual Change		Population	% Annual Change	Population	% Annual Change	Population	% Annual Change
Census	1990	17,620								
Estimate	1991	17,600	-0.11%							
	1992	17,700	0.57%							
	1993	17,600	-0.56%							
	1994	17,500	-0.57%							
	1995	17,400	-57.00%							
	1996	17,000	-2.30%							
	1997	16,900	-0.59%							
	1998	16,700	-1.18%							
	1999	16,600	-0.60%							
Census	2000	16,395	-1.23%		1,549		424		186	
Estimate	2001	16,240	-0.94%							
	2002	16,134	-0.65%							
	2003	16,080	-0.33%							
	2004	16,079	0.00%							
	2005	16,175	0.59%							
	2006	16,024	-0.93%							
	2007	16,033	0.56%							
	2008	16,176	0.89%							
	2009	16,087	-0.55%							
Census	2010	15,903	-1.14%		1,414		337		498	
Estimate	2011	15,765	-0.86%		1,594	12.72%	666	97.60%	380	-23.69%
	2012	15,668	-0.61%		1,620	1.63%	567	-14.86%	458	20.52%
	2013	15,449	-1.40%		1,565	-3.39%	472	-16.75%	418	-8.70%
	2014	15,308	-0.91%		1,448	-7.47%	365	-22.66%	408	-2.39%

Source: US Census Bureau & US Census Bureau American Community Survey Estimates

Table 25
Population Projections - Dickenson County, Virginia
1990-2040

Year	US Census Bureau	VEC Projections	% Annual Change By Decade	
1990	17,620			
2000	16,395		1990-2000	-6.95%
2010	15,903		2000-2010	-3.00%
2020		15,600	2010-2020	-1.90%
2030		15,375	2020-2030	-1.44%
2040		15,193	2030-2040	-1.18%

Source: Virginia Employment Commission

According to the 2014 Census Bureau Estimates, there were 15,308 people, 6,200 households, and 4,289 families residing in Dickenson County. This calculates to a population density 49.4/mi². There are 7,548 housing units in the county and 17.9% are vacant.

In the county, the population is spread out with 22.38% under the age of 19, 5.65% from 20 to 24, 12.83% from 25 to 44, 14.73% from 45 to 64, and 8.477% who are 65 years of age or older. The median age is 43.5 years.

The racial makeup of the county is 99.% White, 0.4% Black or African American, and 0.6% from other races. There were 9,406 households, with the average household consisting of 2.41 persons and the average family size being 2.89 persons.

Table 26
Population by Age - Buchanan County

Age	Dickenson County								
	2000			2010			2014 Estimates		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Total population	16,395	8,017	8,378	15,903	7,950	7,953	15,308	7,771	7,537
Under 5 years	875	442	433	875	446	429	794	411	383
5 to 9 years	945	473	472	914	468	446	879	456	423
10 to 14 years	1,079	555	524	970	484	486	901	463	438
15 to 19 years	1,215	643	572	959	486	473	852	424	428
20 to 24 years	971	507	464	754	399	355	866	452	414
25 to 29 years	944	454	490	921	481	440	822	452	370
30 to 34 years	1,017	487	530	954	509	445	940	501	439
35 to 39 years	1,223	592	631	1,001	498	503	936	492	444
40 to 44 years	1,349	657	692	1,003	520	483	1,006	520	486
45 to 49 years	1,350	698	652	1,241	621	620	971	517	454
50 to 54 years	1,239	634	605	1,294	659	635	1,146	573	573
55 to 59 years	959	485	474	1,217	614	603	1,210	626	584
60 to 64 years	856	393	463	1,137	562	575	1,097	540	557
65 to 69 years	714	338	376	893	471	422	1,030	502	528
70 to 74 years	638	291	347	673	316	357	760	394	366
75 to 79 years	460	190	270	464	199	265	516	228	288
80 to 84 years	316	106	210	351	125	226	311	126	185
85 and over	245	72	173	282	92	190	271	94	177

Source: United States Census Bureau American Community Survey

Table 27
Selected Racial Data By Population and Percentage

Jurisdiction	Population	White	Percent	Black or African American	Percent	Asian	Percent	Hispanic Latino	Percent
Dickenson County	15,308	15,078	98.5%	122	0.8%	15	0.1%	107	0.7%

Source : U.S. Census Bureau American Community Survey

The median income for a household in the county is $33,106, and the median income for a family is $42,308. Males have a median earnings of $43,806 versus $29,495 for females. The per capita income for the county is $17,954 with 20.2% of the population and 15.5% of families living below the poverty line.

Table 28

HOUSEHOLD INCOME AND BENEFITS IN THE PAST 12 MONTHS (IN 2014 INFLATION-ADJUSTED DOLLARS)

Income Group	Dickenson County Households	% of Households
Less than $10,000	746	12.03%
$10,000 to $14,999	679	10.95%
$15,000 to $24,999	974	15.70%
$25,000 to $34,999	873	14.08%
$35,000 to $49,999	928	14.96%
$50,000 to $74,999	1,032	16.64%
$75,000 to $99,999	526	8.48%
$100,000 to $149,999	387	6.24%
$150,000 to $199,999	29	0.46%
$200,000 or more	26	0.41%
Total	6,200	100.00%

Median Household Income Dollars	33,106
Per Capita Income Dollars	17,954
Poverty all families	15.50%
Poverty all people	20.20%

Source: Unites States Bureau American Community Survey Estimates

3.2.3 Geographic conditions

Encompassing a land area of 335 square miles, the County lies in the Appalachian Plateau with Pine (Cumberland) Mountain running along its Kentucky border. The southern slopes of the mountain are long and comparatively gentle, but the northern slopes area very steep and descend a vertical distance of nearly 2,000 feet. Elevations in general vary from 1,200 feet above sea level to 3,137 feet on the northwest border. The mountainous surface of the County is characterized by many small streams separated by sharply rising ridges, steep slopes, and narrow valleys. The principal streams are the Russell Fork, Pound, Cranesnest, and McClure Rivers.

All the rivers gather and flow out of the County through a remarkable chasm ripped through the northern end of Pine Mountain known as "The Breaks." In 1954, through a joint action of the legislatures of Virginia and Kentucky, the Breaks Interstate Park was created.

The topography of Dickenson County limits development somewhat to the low laying areas along streams and rivers. Although some plateaus are suitable for development, access to these sites is a limiting factor.

Dickenson County lies in the Cumberland Plateau Physiographic Province where formations are mostly sandstone and shale with mineable coal deposits. The Province, for the most part, contains weather-resistant sandstone, which accounts for the steep V-shaped mountains.

3.2.4 Climate

Dickenson County lies in the warm temperate region. Latitude, mountainous topography, and prevailing winds exert considerable influence upon the climate.

The area receives approximately 47 inches of precipitation annually with snowfall averaging about 18 inches a year. The average maximum temperature is 72 degrees, and the average minimum temperature is 36 degrees.

Thunderstorms and cloudbursts, normally occurring in the summer months, produce heavy rainfall over sections of the county and runoff is significant. Prevailing winds are westerly at an average velocity of 8 miles an hour but can reach high speeds during storms.

3.2.5 Transportation

A. Highways

There is no Interstate highway running through the County but there are four Virginia Primary Routes serving the area. VA 63/83 runs north/south bisecting the county and serves the towns or Nora, McClure, Clinchco, Haysi and Clintwood. VA 80 enters from the east and continues along this boundary in a north/south direction serving the communities of Birchleaf and Haysi and all the way up to the Breaks Interstate Park. VA 83 enters the county from the west and bisects the county as it runs east to west. It intersects with U.S. Route 460 in Vansant in Buchanan County. VA 72 runs north/south joining VA 83 at George's Fork. All four VA routes intersect with U.S. Routes providing access to eastern Tennessee, eastern Kentucky, West Virginia and eastern Virginia.

B. Air

The nearest airport is the Tri-Cities Regional Airport located 45.6 miles to the southeast in the Bristol/Johnson City, Tennessee area. It is served by five of the major airlines or their regional partners. Mercer County Airport is located 59.7 miles to the north in West Virginia and is served by U.S. Airways.

General aviation services can be found at Grundy Municipal Airport in Buchanan County.

C. Rail

Freight rail service is available in the county from CSX Transportation and Norfolk Southern.

D. Water

The nearest ports are located in Richmond (370 miles) and Norfolk (439 miles).

3.2.6 Infrastructure / Utilities & Services

A. Electricity

American Electric Power provides power to Dickenson County.

B. Natural Gas

Equitable Resources Exploration provides gas to the County.

C. Water

Water is handled by the following entities:

- Dickenson County Public Service Authority
- Town of Clintwood

D. Sewage

Sewage is handled by the following entities:

- Dickenson County Public Service Authority
- Town of Clintwood

3.2.7 Economic Growth

Throughout the 20th century, the economy of Dickenson County and the entire Cumberland Plateau Planning District has been primarily dependent on coal. With almost 35 percent of the local economy and 40 percent of wages dependent on the coal industry, the economy has been tied to the trends in the price and demand for coal. Job losses have been staggering and the manufacturing and wholesale/retail trade have not been able to absorb these losses. Unemployment rates in the coal region of Virginia generally run the highest of anywhere in the state. The weak economy has been the main cause of the population decline.

Industrial development outside the area of mining has been slow. Access to markets has been a major hindrance to development. The last twenty years have seen a dramatic change in the mining industry. Coal mining in the region is still strong, however, the increased mechanization of the industry has resulted in fewer job opportunities for residents. Dickenson County has led the Commonwealth with its high unemployment rate for the last few years.

Table 29

Dickenson County Unemployment Rates 2000 - 2014

Year	Labor Force	Employed	Unemployed	Annual Unemployment Rate
2000	5,365	5,052	313	5.80%
2001	5,491	5,104	387	7.00%
2002	5,650	5,206	444	7.90%
2003	5,796	5,304	492	4.10%
2004	5,558	5,206	352	6.30%
2005	5,720	5,350	370	6.50%
2006	5,660	5,369	291	5.10%
2007	5,787	5,484	303	5.20%
2008	6,074	5,727	347	5.70%
2009	6,442	5,884	558	8.70%
2010	5,513	4,934	579	10.50%
2011	5,454	4,923	531	9.70%
2012	5,214	4,669	545	10.50%
2013	5,342	4,761	581	10.90%
2014	5,239	4,720	519	9.90%

Source: Virginia Employment Office

About half of the workforce is traveling out of the county to work each day and commuting an average of 35.8 minutes. Unemployment rates are still running very high in 2014. Mining employment paid well and workers have not been able to replace their lost jobs with comparable salaries. Even new industries are having a hard time as Travelocity announced plans (2004) to close its 3-year old operation in Dickenson County.

Table 30

Dickenson Commuting Patterns

People who live and work in the area	1,676
In-Commuters	2,206
Out-Commuters	5,789
Net In-Commuters (In-Commuters minus Out-Commuters)	-3,583

Source: U.S. Census Bureau,OnTheMap Application and LEHD Origin-Destination Employment Statistics, 2

Table 31
Major Employers - Dickenson County

Company	Product	Employees
Paramont Coal Company Virginia	Mining (except Oil and Gas)	500 to 999 employees
Dickenson County School Board	Educational Services	500 to 999 employees
Serco Inc.	Professional, Scientific, and Technical Services	100 to 249 employees
County of Dickenson	Executive, Legislative, and Other General Government Support	100 to 249 employees
Food City	Food and Beverage Stores	100 to 249 employees
Range Resources - Pine Mountain, Inc.	Oil and Gas Extraction	100 to 249 employees
Sw Virginia Regional Jail Auth	Justice, Public Order, and Safety Activities	100 to 249 employees
Heritage Hall	Nursing and Residential Care Facilities	50 to 99 employees
Dickerson Russell Coal Company	Mining (except Oil and Gas)	50 to 99 employees
Dickenson County Community	Ambulatory Health Care Services	20 to 49 employees

Source: Virginia Employment Commission

The population of Dickenson County is less prosperous than the population of Virginia. The poverty rate is more than two and a half times higher than the average for the state. The per capita income of residents of Dickenson County is only 53% of the per capita income of Virginians. The proportion of county residents over the age of 25 without a high school diploma is significantly higher than in Virginia.

Table 32
County Versus State Data
Dickenson County

Economic Indicators	Dickenson	Virginia
Population with Public Health Coverage	46.80%	24.20%
Poverty Rate	16.60%	8.00%
Per Capita Income	18,215	33,493
Population Aged 16+ in Labor Force	43.50%	66.70%
Population Aged 25+ w/o High School Diploma	27.60%	12.50%

Source: Unites States Census Bureau American Community Survey Estimat

Mining jobs are still a significant sector of the employment in Dickenson County. Mining jobs make up the largest segment of jobs with Education Services and Health Care and Social Services close behind. Taxable Sales for Dickenson County have been increasing most years over the past decade.

Table 33
Employment By Industry
Dickenson County

Category	Percentage
Mining	25.15%
Education Services	14.02%
Health Care and Social Assistance	12.99%
Retail Trade	11.08%
Public Administration	7.77%
Construction	6.33%
Professional Scientific & Technical Svc	5.97%
Accomodation and Food Services	5.19%
Transportation and Warehousing	4.30%
Other Services	1.77%
Finance and Insurance	1.74%
Manufacturing	0.91%
Admin, Support, Waste Mtg. Remediation	0.69%
Utilities	0.44%
Agriculture, Forestry, Fishing & Hunting	0.38%
Wholesale Trade	0.38%
Manangement of Companies and Interprizes	0.22%
Information	Confidential
Arts, Entertainment, and Recreation	Confidential
Real Estate and Rental and Leasing	Confidential
Source: Virginia Employment Commission	

Table 34
Taxable Sales
2000-1014

Year	Dickenson
2000	$48,398,260
2001	$47,977,617
2002	$49,531,310
2003	$50,249,767
2004	$52,914,791
2005	$50,357,215
2006	$57,182,687
2007	$60,083,344
2008	$63,232,095
2009	$64,054,957
2010	$65,984,411
2011	$68,042,398
2012	$66,417,728
2013	$65,552,723
2014	$69,962,263

Source: Virginia Department of Taxation

What is the outlook for transforming the economy of the counties in "coal country"? One strategy to attract new jobs has been the construction of shell buildings by the Cumberland Plateau Planning District Commission (PDC). Eight buildings have been constructed since 1987 and four have been sold, providing about 450 jobs to regional residents. Only one of these buildings, the Happy Valley Industrial Park is located in Dickenson County. It is a 40,000 sq ft. shell building and is being marketed through the PDC.

The more recent economic development strategy is to provide the region with an advanced communications infrastructure that can offer a competitive advantage in attracting and retaining industry. It also serves to educate and train or retrain the workforce, as the county attempts to transition to a technology based economy.

The Dickenson County Wireless Integrated Network "DCWIN" will provide wireless service to enhance local government services to citizens and enhance small business' ability to compete in world markets, while additionally improving high-speed data transmission and high-speed Internet services to its citizenry. It is expected that DCWIN will serve as a catalyst to improve infrastructure within Dickenson County and the utilization of DCWIN will enhance economic development throughout the entire coalfield region. Dickenson County looks to the future and joining the technology corridor within the Commonwealth of Virginia.

The development of regional tourism is still an area of focus for improving the economy. The Breaks Recreation Area is recognized as having potential for further development. In addition, Health care provision could bring with it good paying jobs.

Dickenson County will have a section of the proposed Coalfield Expressway, currently under discussion. This route will be a wider, more direct route through the mountainous counties in Southwest Virginia into West Virginia, connecting with U.S. Route 460 and I-77.

3.2.8 Land Use

A. Residential

Due to the population decline and housing vacancy rate (about 12%), new housing starts are not expected to be significant in the near future. The county reported approximately 20-25 building permit requests a year from 1998-2002. Future growth in the form of subdivisions is not currently being planned. Sewer/water projects will be dependent on Community Development Block Grant or Appalachian Regional Commission funding.

B. Commercial

Most of the commercial activity is concentrated in and around Clintwood and Haysi. Clintwood has developed several sites, including their historical theater and the Ralph Stanley Museum, as a way to promote itself as a tourist destination. Festivals help bring tourist in during the summer and fall.

C. Industrial

Industrial Park development has been promoted by the Planning District Commission as one way to diversify the regional economy. In Dickenson County progress has been slow with most developed sites remaining vacant. Transportation routes and isolation are two big obstacles to future industrial growth. The planned expressway may change these conditions but the construction schedule remains unclear.

DICKENSON COUNTY INDUSTRIAL PARKS

SITE SPECIFICATIONS - INDUSTRIAL PARKS – DICKENSON COUNTY					
Site Name	**Location**	**Miles to Nearest Interstate**	**Miles to Nearest 4-lane Highway**	**Square Footage**	**Total Acreage**
Dickenson Shell Building	State Route 707	I-81 - 60 mi	Rt.23 - 8 mi	40,000	11.95 acres
Haysi Manufacturing facility	Route 80 West	I-77 - 75 mi	Rt.460 - 20 mi	31,250	13.48 acres
Furniture World Building	T-1001	I-81 - 60 mi	Rt.23 - 10 mi	13,500	0.2 acres

Source: Virginia Economic Development Partners

D. Agricultural

Farmers in Dickenson County primarily raise beef cattle, and grow hay and burley tobacco. In 1997, the Census of Agriculture reported a total of just over 100 full time farms in the county. Most land in the county is unsuitable for growing crops.

E. Open Space/Recreation

About 93% of the county is forested, mainly covered with deciduous trees with a small amount of evergreen forest cover mixed in.

Breaks Interstate Park is located on the Virginia-Kentucky border with most of the 4,500 acres falling within Dickenson County. The park has numerous recreational facilities including a lodge, dining hall, amphitheater, camping and hiking.

The John W. Flannagan Dam and Reservoir is located five miles from Haysi on the Pound River, a tributary of the Russell Fork River. The 7,507-acre facility is operated by the U.S. Corp of Engineers and includes a 1,143-acre lake. Future activities are to include white-water rafting and kayaking.

3.2.9 Community Facilities/Activities

Dickenson County maintains 2 elementary schools, 3 combined schools and 3 high schools. Vocational training can be found at all the high schools plus the Dickenson County Career Center.

The Dickenson County Medical Center, located in Clintwood, is a 50-bed acute care center.

County cultural activities include the Ralph Stanley Music Festival in Clintwood, held in May. A new Ralph Stanley museum will also be located in Clintwood.

Sources:

U.S. Bureau of the Census, 2000 Census, 1990 Census, Economic Census, Census of Agriculture
Virginia Economic Development Partners
Cumberland Plateau Planning District Commission
Virginia Employment Commission

3.3 Russell County

3.3.1 Location

Russell County, Virginia is located in the southwestern portion Virginia and is one of four counties in the Cumberland Plateau Planning District. The county shares a border with Dickenson County to the northwest and Buchanan County to the north. Tazewell County lies to the northeast, Washington County to the south and Scott County to the southwest.

Western Russell County rests on a high, open, relatively level plateau amid a circle of mountains. The high mountain pastures of Clinch River Valley are legendary. Clinch Mountain forms the southern border of the county and the northern section stretches into the coal-bearing hills of the Cumberland Plateau.

Russell County is 35 miles north of Bristol, 150 miles west of Roanoke and 290 miles west of Richmond. This 475 square mile community lies midway between the isolated coal producing counties of Virginia and the dynamic Tri-Cities metropolitan area of Bristol-Kingsport-Johnson City.

3.3.2 Population

There are several small towns in Russell County including Cleveland (pop. 296), Honaker (pop. 1626), and Lebanon (pop. 3,399), which serves as the seat of local government. The county lost population during the 1980's but was the only county in the planning district to gain population during the 1990's. Its location next to Washington County and its proximity to I-81 and the Tri-Cities area makes it the least isolated of the planning district's member counties.

Russell County seems to have dodged the significant population decreases observed in the rest of the coal-producing region of southwest Virginia. The local economy is not as dependent on coal as in Dickenson and Buchanan Counties and residents have more jobs opportunities available within commuting distance in the Tri-Cities area.

Table 35
Population - Russell County, Virginia
1990-2014

Population
Town of Cleveland, Honaker & Lebanon, Virginia

				Cleveland		Honaker		Lebanon	
Census	Year	Population	% Annual Change	Population	% Annual Change	Population	% Annual Change	Population	% Annual Change
Census	1990	28,667							
Estimate	1991	28,800	0.46%						
	1992	28,900	0.35%						
	1993	29,300	1.38%						
	1994	29,400	0.34%						
	1995	29,300	-0.34%						
	1996	29,300	0.00%						
	1997	29,300	0.00%						
	1998	29,200	-0.34%						
	1999	29,200	0.00%						
Census	2000	30,308	3.80%	148		945		3273	
Estimate	2001	29,060	-4.11%						
	2002	28,825	-0.80%						
	2003	28,857	0.11%						
	2004	28,648	-0.72%						
	2005	28,596	-0.18%						
	2006	28,725	0.45%						
	2007	29,029	1.05%						
	2008	29,006	-0.07%						
	2009	29,250	0.84%						
Census	2010	28,897	-1.20%	202		1449		3424	
Estimate	2011	29,657	2.63%	307	51.98%	1873	29.26%	3442	0.52%
	2012	28,426	-4.10%	392	27.68%	1693	-9.61%	3430	-0.34%
	2013	28,274	-0.53%	341	-13.01%	1609	-4.96%	3422	-0.23%
	2014	28,023	-0.88%	296	-13.19%	1626	1.05%	3399	-0.67%

Source: US Census Bureau & US Census Bureau American Community Survey Estimates

Population projections from the Virginia Employment Commission show that Russell County will continue to see population growth through 2020 of about 0.53% a year. For the twenty years thereafter (2030-2040), the county is projected to see continued growth but at rates of approximately 0.81% annually.

Table 36
Population Projections - Russell County, Virginia
1990-2040

Year	US Census Bureau	VEC Projections	% Annual Change By Decade	
1990	28,667			
2000	30,308		1990-2000	5.72%
2010	28,897		2000-2010	-4.65%
2020		29,051	2010-2020	0.53%
2030		29,296	2020-2030	0.84%
2040		29,534	2030-2040	0.81%

Source: Virginia Employment Commission

According to the United States Census Bureau American Community Survey Estimates of 2014, there were 28,897 people, 11,037 households, and 7,386 families residing in the county. That calculates to a population density of 63.9/mi². There are 13,439 housing units with a vacancy rate of 10.2%.

The racial makeup of the county is 98.5% White, 1.4% Black or African American, and 0.1% from other races. The average household consists of 2.54 persons and the average family size is 3.16 persons.

In the county, the population spread is not far from the Virginia average. The 2014 United States Census Bureau Estimates shows that 5.2% of the population is under 5 years old, 10.69 % is under the age of 19, and 8.37% of the population is 65 years of age or older. The median age is 43.6 years.

Table 37
Selected Racial Data Estimates By Population and Percentage

Jurisdiction	Population	White	Percent	Black or African American	Percent	Other	Percent
Russell County	28,023	27,615	98.5%	384	1.4%	24	0.1%

Source : U.S. Census Bureau American Community Survey

Table 38

Population By Gender & Age 2000 - 2010 Census and 2014 Estimates (as of July 1, 2014)

Age	Russell County								
	2000			2010			2014 Estimates		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Total population	30,308	15,319	14,989	28,897	14,155	14,742	28,023	13,679	14,344
Under 5 years	1,584	779	805	1,549	779	770	1,462	729	733
5 to 9 years	1,746	864	882	1,588	799	789	1,518	765	753
10 to 14 years	1,837	907	930	1,678	827	851	1,556	759	797
15 to 19 years	1,942	1,021	921	1,754	908	846	1,490	743	747
20 to 24 years	1,837	1,027	810	1,529	788	741	1,613	854	759
25 to 29 years	2,271	1,281	990	1,561	821	740	1,536	761	775
30 to 34 years	2,138	1,155	983	1,681	864	817	1,577	818	759
35 to 39 years	2,486	1,341	1,145	1,923	938	985	1,627	819	808
40 to 44 years	2,443	1,252	1,191	1,945	964	981	1,852	913	939
45 to 49 years	2,467	1,263	1,204	2,206	1,078	1,128	1,916	936	980
50 to 54 years	2,172	1,143	1,029	2,493	1,225	1,268	2,180	1,069	1,111
55 to 59 years	1,912	897	1,015	2,246	1,098	1,148	2,302	1,114	1,188
60 to 64 years	1,428	697	731	2,004	1,002	1,002	2,120	1,051	1,069
65 to 69 years	1,196	512	684	1,574	737	837	1,809	891	918
70 to 74 years	1,105	522	583	1,198	536	662	1,326	596	730
75 to 79 years	824	364	460	920	383	537	967	412	555
80 to 84 years	469	169	300	562	233	329	644	251	393
85 and over	451	125	326	486	175	311	528	198	330

Source: United States Census Bureau American Community Survey

The median income for a household in the county is $31,491, and the median income for a family is $26,834. The per capita income for the county is $14,863 with 16.3% of the population living below the poverty line. These figures are slightly higher than the averages in the rest of the planning district.

Table 39

HOUSEHOLD INCOME AND BENEFITS IN THE PAST 12 MONTHS (IN 2014 INFLATION-ADJUSTED DOLLARS)

Income Group	Russell County Households	% of Households
Less than $10,000	1,173	10.60%
$10,000 to $14,999	1,192	10.80%
$15,000 to $24,999	1,678	15.20%
$25,000 to $34,999	1,508	13.70%
$35,000 to $49,999	1,377	12.50%
$50,000 to $74,999	1,914	17.30%
$75,000 to $99,999	1,137	10.30%
$100,000 to $149,999	769	7.00%
$150,000 to $199,999	223	2.00%
$200,000 or more	66	0.60%
Total	11,037	100.00%

Median Household Income Dollars	34,768
Per Capita Income Dollars	20,117
Poverty all families	15.00%
Poverty all people	18.70%

Source: Unites States Bureau American Community Survey Estimates

3.3.3 Geographic conditions

The entire Russell coalfield is characterized by steep, mountainous topography. It lies in the southeastern edge of the physiographic province known as the Allegheny Plateau.

The highest point of the county is Big A Mountain (3,735 feet) on Sandy Ridge, which forms the divide between the Clinch River drainage on the southeast and the Big Sandy drainage on the northwest. The lowest point in the area is on the Clinch River at Boody (1,481 feet).

Russell County has fewer topographic constraints than Dickenson or Buchanan Counties but areas around Clinch, Garden and Big A Mountain have limited economic development potential.

The entire Russell coalfield drains into the Clinch River. The principal tributaries are Mill Creek, Swords Creek, Lewis Creek, Hart and Musick Forks of Dumps Creek and Lick Creek in

the western part of the county. There are numerous springs in the coalfield, many of which are located on the outcrops of fields and fed by water percolating along the joints of the coal.

All the drainage of the county is tributary to Big Sandy River through its three main branches: Russell Fork, Levisa Fork, and Tug Fork. Although most streams and creeks contain some water all year round, none has a very large flow. The topography of Buchanan County limits development somewhat to the low laying areas along streams and rivers.

Russell County straddles two distinct physiographic regions. The Valley and Ridge Province extends from east to west through the southern portion. This province is underlain by sedimentary rock strata that has been folded, tilted, and deformed. The chief rock types are limestone, shales, dolomites, and sandstone.

Cumberland Plateau Physiographic Province covers the northern portions of the county that lie north of the Cumberland escarpment. The region is underlain by sandstones, conglomerate sandstones, and shales, with numerous coal beds at varying elevations. The soil of the plateau is very thin so that much of the precipitation in this region penetrates into the ground to shallow depths. The dense vegetation prevents heavy eroding in high precipitation events.

3.3.4 Climate

Russell County lies in the warm temperate region. Latitude, mountainous topography, and prevailing winds exert considerable influence upon the climate.

The area receives an average annual rainfall of 43.1 inches and an average snowfall of 21 inches. The average maximum temperature is 72 degrees, and the average minimum temperature is 36 degrees for the Cumberland Plateau region. Russell County's average July temperature is 74 degrees and for January the average temperature is 35 degrees.

Thunderstorms and cloudbursts, normally occurring in the summer months, produce heavy rainfall over sections of the county and runoff is significant. Prevailing winds are westerly at an average velocity of 8 miles an hour but can reach high speeds during storms.

3.3.5 Transportation

A. Highways

Russell County is served by two U.S. Routes: U.S. Alternate Route 58 runs along the western and southern corners of the county from the common boundary line of Wise and Russell Counties to its junction with U.S. Route 19, which enters Russell from Washington County. U. S. Route 19 runs east/west along the southern portion of the county to the Tazewell/Russell County line.

Virginia Primary Routes 63, 65, and 71 serve the western portion of the county. Primary Routes 67 and 80 serve the eastern portion of Russell County.

B. Air

The Tri-Cities Regional Airport lies 45 miles to the southeast in the Bristol/Johnson City, Tennessee area. It is served by five of the major airline or their regional partners. Mercer County Airport lies about 54 miles north and west in West Virginia.

General aviation services can be found at Grundy Municipal Airport or at the Tazewell County Airport.

C. Rail

Norfolk Southern and CSX Transportation provide freight rail service to Russell County.

D. Water

The nearest ports are located in Richmond (290 miles) and Norfolk (360 miles).

3.3.5 Infrastructure / Utilities & Services

A. Electricity

American Electric Power and Old Dominion Power Company provide power to the County.

B. Natural Gas

Virginia Natural Gas provides gas to the County.

C. Water

Water is provided by the following entities:

- Russell County Water and Sewer Authority
- Three Creek Apparel Waterworks
  Town of Honaker
  Town of Lebanon
  Town of St. Paul

D. Sewage

Sewage is handled by the following entities:

- Town of Honaker
- Town of Lebanon
- Town of St. Paul

3.3.6 Economic Growth

Russell County's unemployment rate hit a high in 2009 at 10.52% due to the recession of 2008. The recession was a major worldwide economic downturn that began in 2008 and continued into 2010 and beyond. Since that high, the rate has remained around 8% for the past four or five years.

Table 40
Russell County Unemployment Rates 2000 - 2014

Year	Labor Force	Employed	Unemployed	Annual Unemployment Rate
2000	11,865	11,248	617	5.20%
2001	11,903	11,139	764	6.40%
2002	12,140	11,369	771	6.40%
2003	12,281	11,519	762	6.20%
2004	11,521	10,840	681	5.90%
2005	11,955	11,265	690	5.80%
2006	11,812	11,099	713	6.00%
2007	11,772	11,165	607	5.20%
2008	11,877	11,194	683	5.80%
2009	12,397	11,095	1,302	10.50%
2010	12,081	10,844	1,237	10.20%
2011	11,949	10,816	1,133	9.50%
2012	11,799	10,780	1,019	8.60%
2013	11,631	10,644	987	8.50%
2014	11,307	10,406	901	8.00%

Source: Virginia Employment Commission

According to the 2014 Census, the worker retention rate was 60%, with 58.5% of the work force traveling out of the county to work. The median travel time to work was 31.2 minutes in the year 2014. Those traveling out the county are mostly commuting southeast to Abingdon, Bristol and beyond. Russell County also sees a significant in-migration of workers with about 36.6% of its workforce residing in surrounding counties.

Table 41
Russell Commuting Patterns

People who live and work in the area	2,533
In-Commuters	4,144
Out-Commuters	6,619
Net In-Commuters (In-Commuters minus Out-Commuters)	-2,475

Source: U.S. Census Bureau,OnTheMap Application and LEHD Origin-Destination Employment Statistics, 2

Table 42
Major Employers - Russell County

Company	Product	Employees
Russell County School Board	Educational Services	500 to 999 employees
Cingular Wireless Employe	Telecommunications	250 to 499 employees
Steel Fab	Fabricated Metal Product Manufacturing	250 to 499 employees
Wal Mart	General Merchandise Stores	100 to 249 employees
CGI Federal Inc	Professional, Scientific, and Technical Services	100 to 249 employees
Mountain States Health Al	Hospitals	100 to 249 employees
County of Russell	Executive, Legislative, and Other General Government Support	100 to 249 employees
Lebanon Apparel Corporation	Apparel Manufacturing	100 to 249 employees
Northrop Grumman Corporation	Computer and Electronic Product Manufacturing	100 to 249 employees
American Management Systems	Professional, Scientific, and Technical Services	100 to 249 employees

Source: Virginia Employment Commission

While the poverty rate in Russell County is significantly higher than the Virginia rate, the county appears to be in better economic health than the other counties in the Cumberland Plateau district. Proportionately fewer residents of Russell County are in the work force and a much smaller percentage has graduated from high school than Virginians in general.

Table 43
County Versus State Data
Russell County

Economic Indicators	Russell	Virginia
Population with Public Health Coverage	40.20%	24.20%
Poverty Rate	15.50%	8.00%
Per Capita Income	19,735	33,493
Population Aged 16+ in Labor Force	49.20%	66.70%
Population Aged 25+ w/o High School Diploma	25.30%	12.50%

Mining/Agricultural jobs are not as significant a sector of employment in Russell County (4.13%) as in Dickenson and Buchanan Counties. Health care & Social Services jobs make up the largest segment of jobs. The economy of Russell County seems to be more diversified than its neighboring counties with the manufacturing sector significantly higher. Wholesale and retail trade also employs a significant portion of the county's residents.

Taxable sales for the county went up dramatically between 2001 and 2002 with a 20% increase. Between 2001 and 2002, sales continued to increase as they jumped another 5.5%.

Table 44
Taxable Sales
2000-2014

Year	Russell
2000	$107,862,419
2001	$101,878,423
2002	$122,525,574
2003	$129,188,820
2004	$138,753,368
2005	$132,085,662
2006	$149,040,720
2007	$156,657,814
2008	$161,030,985
2009	$157,889,960
2010	$158,276,136
2011	$159,840,501
2012	$160,139,687
2013	$153,199,811
2014	$159,893,054

Source: Virginia Department of Taxation

Table 45
Employment By Industry
Russell County

Category	Percentage
Health Care and Social Assistance	15.68%
Retail Trade	12.14%
Professional Scientific & Technical Svc	9.67%
Construction	8.30%
Accomodation and Food Services	7.24%
Public Administration	6.60%
Manufacturing	6.16%
Admin, Support, Waste Mtg. Remediation	5.21%
Mining	4.13%
Transportation and Warehousing	3.83%
Finance and Insurance	3.43%
Other Services	2.28%
Information	0.81%
Wholesale Trade	0.72%
Agriculture, Forestry, Fishing & Hunting	0.44%
Manangement of Companies and Interprizes	0.32%
Real Estate and Rental and Leasing	0.30%
Arts, Entertainment, and Recreation	0.21%
Education Services	Confidential
Utilities	Confidential

Source: Virginia Employment Commission

3.3.7 Land Use

A. Residential

Russell County has more buildable land than the counties to its west and north. The areas around the Clinch River and on the high plateaus have fairly flat lands. New construction of single-family homes is occurring in the town of Lebanon. The Cumberland Plateau Planning District Commission reports that Russell County, especially around Lebanon, is expected to grow because new jobs are being created in the area's industrial parks. Housing vacancy rates in Lebanon and Castlewood in the year 2000 were only 8.3% while that of Cleveland was 28.3%. It is anticipated that new subdivisions will be built in Lebanon and public services may need to be extended to new areas to provide public sewer and water. Building permits for the county have averaged about 70 per year over the last five years (1998-2002).

B. Commercial

Numerous shopping opportunities are available in Russell County, including four shopping centers and 345 retail and service-related businesses. The town of Lebanon serves as the commercial center for the county with over 150 retail establishments located in its downtown area. Additional shopping centers and malls in the Bristol metropolitan area are easily accessible for county residents.

Future commercial development in the county may occur in the Lebanon area in response to future population growth or tourism.

C. Industrial

The Cumberland Plateau PDC has constructed eight shell buildings throughout the region since 1987. Five have been sold, including two in the Russell County Industrial Park located in Lebanon. Teleflex Corporation, Inc. and Lear Corporation are both currently operating in these shell buildings. Grundy, Honaker and Clintwood are sites of three other PDC constructed shell buildings that are currently being marketed. Other sites with space available are listed in the following table:

RUSSELL COUNTY INDUSTRIAL BUILDINGS

SITE SPECIFICATIONS - INDUSTRIAL BUILDINGS – RUSSELL COUNTY					
Site Name	**Location**	**Miles to nearest Interstate**	**Miles to nearest 4-lane Highway**	**Square Footage**	**Total Acreage**
Russell County Authority Building	Route 1, Box 570	I-81 - 36 mi	U.S. Rt. 58 - 6 mi	29,302	0 acres
Custom Vents Building 1	U.S. Route 19 North	I-81 - 15 mi	U.S. Rt.19 - N/A	18,752	2.74 acres
Custom Vents Building 2	U.S. Route 19 North	I-81 - 15 mi	U.S. Rt.19 - N/A	9,056	2.74 acres
Three Creek Apparel Building	Rt. 683, Nicklesville	I-81 - 28 mi	U.S. Rt. 19 Bypass - 0.5 mi	23,700	5.0 acres
Leonard Properties Building	890 E. Main St.	I-81 - 20 mi	U.S. Rt. 58 - 7 mi	172,000	12.6 acres
Honaker Shell Building	Railroad Ave, Honaker	I-81 - 35 mi	U.S. Rt.19 - 5 mi	12,000	1.7 acres

Source: Virginia Economic Development Partners

The proposed new Coalfields Expressway will run to the north of the county but may benefit the county by allowing residents to travel north and west more conveniently. This may open up job opportunities for county residents and make markets in the north and central parts of the United States more accessible to Russell County industry. When the expressway construction begins, it is estimated that 1,400 construction jobs will boost the local regional economy over the expected 10-year lifespan of the road's construction. Local income will also be generated by the purchase of supplies, materials, and equipment from local businesses.

D. Agricultural

Russell County's rolling landscape and high elevations make this area prime pasture, hay and burley tobacco country. It is also a good corn-growing area. Ample rains, productive soils and cool nights help grasses to thrive here. Because of this, Russell County farmers primarily raise beef cattle that graze off pastureland during the growing season and eat hay and corn at other times.

Many of those same farmers also raise burley tobacco. Russell County produced more than 3.12 million pounds of burley tobacco, according to the 1997 census. Russell is also home to smattering of other agricultural enterprises, including nursery stock operations, apple orchards as well as sheep, dairy, chicken and hog farms.

The amount of land used for farming declined slightly between 1992 and 1997 in Russell County decreasing 5%. Over the same period the average size of farms increased slightly from 146 acres (1992) to 149 acres (1997). The number of full time farms decreased 11% from 495 farms in 1992 to 442 farms in 1997. At that time, crops accounted for nearly 31% of the market value of agricultural products sold. Beef cattle and livestock sales made up the remaining 69% of the market.

E. Open Space/Recreation

Although most (approximately 70%) of Russell County is covered in trees, about 30% is cleared land or natural meadows. The non-forested land can be found along Routes 58 and 19 and around the population centers of Lebanon, Castlewood and Honaker. Over 90 percent of the county is covered by hardwood forest growth and about 1% is evergreen forest.

3.3.8 Community Facilities/Activities:

Russell County Medical Center, a 78-bed facility, offers comprehensive services.

Clinch Mountain Wildlife Area, located in the eastern part of the county, offers outdoor recreation activities. Canoe launch sites have been built on the Clinch River. The Jefferson National Forest and the Breaks Interstate Park in neighboring Dickenson County also offer extensive outdoor activities.

Public schools in the county include 9 elementary and 3 high schools. Vocational training is offered at the high schools as well as the Russell County Career and Vocational Center.

Sources:

U.S. Bureau of the Census, 2000 Census, 1990 Census, Economic Census, Census of Agriculture
Virginia Economic Development Partners
Cumberland Plateau Planning District Commission
Virginia Employment Commission

3.4 Population Summary

The following table summarizes the population by year for the three Counties.

Table 46
Population Summary
1990-2040

		Buchanan		Dickenson		Russell	
Census	Year	Population	% Annual Change	Population	% Annual Change	Population	% Annual Change
Census	1990	31,333		17,620		28,667	
Estimate	1991	31,400	0.21%	17,600	-0.11%	28,800	0.46%
	1992	31,200	-0.64%	17,700	0.57%	28,900	0.35%
	1993	30,700	-1.60%	17,600	-0.56%	29,300	1.38%
	1994	30,300	-1.30%	17,500	-0.57%	29,400	0.34%
	1995	29,700	-1.98%	17,400	-57.00%	29,300	-0.34%
	1996	28,900	-2.69%	17,000	-2.30%	29,300	0.00%
	1997	28,400	-1.73%	16,900	-0.59%	29,300	0.00%
	1998	27,900	-1.76%	16,700	-1.18%	29,200	-0.34%
	1999	27,500	-1.43%	16,600	-0.60%	29,200	0.00%
Census	2000	26,978	-1.90%	16,395	-1.23%	30,308	3.80%
Estimate	2001	26,319	-2.44%	16,240	-0.94%	29,060	-4.11%
	2002	25,945	-1.42%	16,134	-0.65%	28,825	-0.80%
	2003	25,407	-2.07%	16,080	-0.33%	28,857	0.11%
	2004	24,950	-1.80%	16,079	0.00%	28,648	-0.72%
	2005	24,452	-2.00%	16,175	0.59%	28,596	-0.18%
	2006	23,992	-1.88%	16,024	-0.93%	28,725	0.45%
	2007	23,526	-1.94%	16,033	0.56%	29,029	1.05%
	2008	23,090	-1.85%	16,176	0.89%	29,006	-0.07%
	2009	22,860	-0.99%	16,087	-0.55%	29,250	0.84%
Census	2010	24,028	5.10%	15,903	-1.14%	28,897	-1.20%
Estimate	2011	24,006	-0.09%	15,762	-0.88%	29,014	-0.40%
	2012	23,990	-0.07%	15,747	-0.09%	28,890	-0.42%
	2013	23,867	-0.50%	15,660	-0.55%	28,311	-2.00%
	2014	23,754	-0.47%	15,741	-0.51%	28,636	1.14%
Estimate	2015	22,983	-3.24%	15,339	-2.55%	28,008	-2.19%
	2016	22,473	-2.21%	14,996	-2.23%	27,697	-1.11%
	2020	23,383	4.00%	15,600	4.23%	29,051	4.88%
	2030	23,263	-50.00%	15,375	-1.44%	29,296	0.84%
	2040	23,296	0.14%	15,193	-1.18%	29,534	0.81%

Source: US Census Bureau & US Census Bureau American Community Survey Estimates

4.0 WASTE GENERATION AND COMPOSITION

Waste tonnages are tracked at the individual transfer stations in the Counties. Annually the Authority completes the reporting to the DEQ for the facilities.

4.1 Existing Conditions (2015)

The Region at the three transfer stations tracks their waste in accordance with the categories outlined on DEQ Form 50-25 which includes the following:

Municipal Solid Waste
Construction/Demolition/Debris
Industrial Waste
Regulated Medical Waste
Vegetative/Yard Waste
Incinerator Ash
Sludge
Tires
White Goods
Friable Asbestos
Petroleum Contaminated Soil

In addition, the Region also expands their tracking at the transfer stations and includes the following categories:

Household Waste
Commercial Waste
Industrial Waste
Construction Debris
Mine Waste
Yard Waste
Flood Debris
Roofing Materials
Shingles
Sawdust
Wood Chips
Pallets
Sludge
Other

The more specific data is then combined into the categories identified in the DEQ 50-25 form.

The Counties also track the following materials under their recycling programs. These materials are listed under 9 VAC 20-130-150.3 as special wastes.

Waste Tires
Used Oil
Used Oil Filters

Used Antifreeze
Abandoned Automobiles Removed
Batteries

The Region does not receive any agricultural waste nor does it accept stumps or large land clearing debris at the transfer stations. Septage is not accepted at the transfer stations and is not tracked by the Region under the solid waste programs. Hence data is not available. Spill residues, if meeting the allowable limits of the regulations, would be recorded as "Other" on Form 50-25.

The following section discusses existing conditions in terms of Form 50-25 data.

Appendix 2 contains the DEQ Forms 50-25 for the three transfer stations for 2015. Based on this information, the Region received 43,461 tons of waste materials at the transfer stations in the following categories (all values represent tons):

TABLE 47
DEQ FORM 50-25 SUMMARY
2015

Waste Type	BUCHANAN COUNTY	DICKENSON COUNTY	RUSSELL COUNTY	TOTAL	% OF TOTAL WASTE
Municipal Solid Waste	12,742.38	7,330.37	13,891.17	33,963.54	78.2%
Construction/Demolition/Debris	327.63	243	683.71	1,231.51	2.83%
Industrial/Commercial Waste	2,867.02	2,335.26	1,969.92	7,172.20	16.5%
Vegetative/Yard Waste	27.09	.65	170.05	197.79	.45%
Sludge*	0	0	0	0	0%
Tires	137.51	120.40	111.60	369.51	.85%
White Goods	.77	0	43.26	44.03	.44%
Other Waste	323.69	19.96	116.44	323.69	.74%
TOTAL	16,426.09	10,049.64	16,986.15	43,461.88	100.0%
% of Total Regional Waste	37.8%	23.1%	39.1%	100.0%	

The table also indicates that Russell County receives the largest percentage of the regions waste (39.1%) and Dickenson County the smallest percentage (23.1%).

The aforementioned table evaluates the tonnage delivered as percent of the waste stream for each County as well as the total. Buchanan receives the most industrial/commercial waste, followed by Dickenson County, and Russell County the most municipal solid waste and Construction debris.

4.3 Historical Waste Generation (2010– 2015)

4.2.1 Total Tonnage Recorded at Transfer Stations

Tables 48 through 50 summarize the data collected at the transfer stations from 2010 through 2015 for Buchanan and Dickenson Counties and for 2010 – 2015 for Russell County. The categories are not identical to those indicated on the DEQ 50-25 forms but are expanded and represent the data as collected across the scales at the transfer stations. These tables also indicate the percent annual change in various categories of waste and indicate a positive increase in household and commercial tonnage especially over the past several years even though the population has been declining. They also indicate that Buchanan County receives a significant percentage (50.79%) of mine waste, and Dickenson County's waste is primarily household as collected by the County with limited amounts of other waste types.

TABLE 48
TRANSFER STATION REPORTING DATA
BUCHANAN COUNTY
2010 – 2015

Waste Type	2010	2011	2012	2013	2014	2015	AVERAGE	% of TOTAL
Household Waste	13,374.07	13,565.02	13,551.90	13,006.11	12,781.03	12,742.38	13,170.08	.64%
Commercial Waste	2,125.43	3,459.87	4,408.16	2,119.38	2,136.72	1,050.25	255	.12%
Construction Debris	459.12	436.20	870.97	535.01	351.84	304.80	493	.02%
Mine Waste	3,223.74	4,860.40	4,666.17	4,902.08	3,070.47	1,816.77	3,756.60	.18%
White Goods	0	.22	.84	1.53	.87	.77	.70	.003%
Tires	467.99	400.58	479.35	225.74	241.12	137.51	325.38	.01%
Yard Waste	268.66	460.79	718.16	0	8.21	27.09	247.15	.011%
Flood Debris	0		25.87	45.81	55.25	238.47	60.9	0.003%
Shingles	0	60.33	18.75	46.48	69.74	22.83	36.35	0.002%
Recyclable								0.0%
Animal Carcass	41.05	3.28	2.54	2.08	13.51	9.74	12.03	.006%
Trash Clean-up	86.91	155.01	117.98	81.68	101.90	75.48	103.16	.005%
TOTAL	**20,046.97**	**23,401.70**	**24,860.69**	**20,965.90**	**18,830.66**	**16,426.09**	**20,755.33**	100.0%
% change total waste stream		16.74%	6.23%	-15.67%	-10.18%	-12.77%		
% change Household only		1.42%	-0.09%	-4.02%	-1.72%	-0.30%		
% change Commercial only		62.77%	27.43%	-51.92%	0.80%	-50.84%		
% change mine waste only		50.79%	-3.99%	5.05%	-37.37%	-40.84%		

TABLE 49
TRANSFER STATION REPORTING DATA
DICKENSON COUNTY
2010 – 2015

Waste Type	2010	2011	2012	2013	2014	2015	AVERAGE	% OF TOTAL
Household Waste	8,209.33	8,189.02	7,782.99	7,476.60	7,224.21	7,330.37	7,702.03	.64%
Commercial Waste	2,250.77	434.25	303.64	389.51	939.37	944.11	876.94	.06%
Construction Debris	276.27	272.84	236.72	218.26	288.53	160.16	242.13	.02%
Mine Waste	1,039.90	3,106.17	4,258.32	5,421.48	3,475.86	1,391.15	3,115.48	.25%
Tires	161.11	164.44	192.14	158.46	125.60	120.40	153.69	.02%
Yard Waste	0.13	.32	2.68	.73	.08	.65	.76	.00062%
Flood Debris	0	0	0	0	0	3.49	.58	.00047%
Carcass	18.09	18.10	17.66	14.81	15.30	12.90	16.14	.0013%
Roofing Material	85.06	119.09	125.37	37.23	61.44	82.84	85.17	.0069%
Sludge	0							0%
Dump Cleanups		11.74	4.27	2.86	.38	3.57	3.80	.00031%
TOTAL	**12,040.66**	**12,315.97**	**12,923.79**	**13,719.94**	**12,130.77**	**10,049.64**	**12,196.79**	**100.0%**
% change total waste stream		2.28%	4.92%	6.16%	-11.58%	-17.15%		
% change Household only		-0.24%	-4.95%	-3.94%	-3.37%	1.46%		
% change mine waste only		198.94%	37.08%	27.31%	-35.89%	-59.97%		

TABLE 50
TRANSFER STATION REPORTING DATA
RUSSELL COUNTY
2010-2015

Waste Type	2010	2011	2012	2013	2014	2015	AVERAGE	% OF TOTAL
Household Waste	17,047.34	16,871.33	16,238.92	15,548.79	14,701.12	13,891.17	15,716.44	.81%
Commercial Waste	2,961.37	2,128.60	2,193.45	1,522.67	1,671.81	1,862.35	2,056.70	.11%
Construction Debris	1,403.16	944.98	1,398.35	730.49	617.15	683.71	962.97	.05%
Mine Waste	143.03	305.17	462.00	374.31	.96	0.00	214.24	.01%
White Goods and Metal	53.92	37.79	26.18	18.97	8.00	43.26	31.35	.0015%
Tires	52.96	52.57	96.20	149.94	134.81	111.60	99.68	.005%
Industrial Waste	146.52	105.90	118.12	112.06	85.48	107.57	112.60	.006
Recycle								0%
Yard Waste	44.48	535.41	778.65	476.75	149.66	170.05	359.16	.001%
Illegal Dump Cleanup	30.41	24.76	33.70	123.72	65.03	95.61	62.20	.0031%
Roofing Material	0	0	0	0	0	0	0	0%
Carcass	26.94	30.39	20.60	24.05	23.49	20.83	24.38	.0012%
TOTAL	**21,910.13**	**21,036.90**	**21,366.17**	**19,081.75**	**17,457.51**	**16,986.15**	**19,639.26**	**100.0%**
% change total waste stream		-3.98%	1.56%	-10.69%	-8.51%	-2.69%		
% change Household + commercial only		-5.04	-2.98%	-7.38%	-4.08%	-3.78%		

The following table summarizes the regional totals for 2010 – 2015 and indicates the percent annual change:

TABLE 51
TRANSFER STATION REPORTING DATA
REGIONAL SUMMARY

YEAR	BUCHANAN COUNTY	DICKENSON COUNTY	RUSSELL COUNTY	TOTAL REGIONAL TONNAGE	% ANNUAL CHANGE
2010	20,046.97	12,040.66	21,910.13	53,997.76	
2011	23,401.70	12,315.97	21,036.90	56,754.57	5.10%
2012	24,860.69	12,923.79	21,366.17	59,150.65	4.22%
2013	20,965.90	13,719.94	19,081.75	53,767.59	-9.1%
2014	18,830.66	12,130.77	17,457.51	48,418.94	-9.94%
2015	16,426.09	10,049.64	16,986.15	43,461.88	-10.23%

4.2.2 Pounds per person per day

The population data from Section 3.1 can be coupled with the tonnage data reported above to consider the waste stream as average pounds per person per day. The following tables summarize the data for the total tonnage received at the transfer stations and regionally:

TABLE 52
EVALUATION OF WASTE TONNAGE
AS POUNDS PER PERSON PER DAY
BUCHANAN COUNTY

YEAR	POPULATION	TOTAL TONNAGE RECEIVED	POUNDS PER PERSON PER DAY
2010	24,028	20,046.97	4.6
2011	23,888	23,401.70	5.4
2012	23,837	24,860.69	5.7
2013	23,555	20,965.90	4.9
2014	23,106	18,830.66	4.5
2015		16,426.09	
Average		20,755.33	

TABLE 53
EVALUATION OF WASTE TONNAGE
AS POUNDS PER PERSON PER DAY
DICKENSON COUNTY

YEAR	POPULATION	TOTAL TONNAGE RECEIVED	POUNDS PER PERSON PER DAY
2010	15,903	12,040.66	4.1
2011	15,765	12,315.97	4.3
2012	15,668	12,923.79	4.5
2013	15,449	13,719.94	4.9
2014	15,308	12,130.77	4.3
2015		10,049.64	
Average			

TABLE 54
EVALUATION OF WASTE TONNAGE
AS POUNDS PER PERSON PER DAY
RUSSELL COUNTY

YEAR	POPULATION	TOTAL TONNAGE RECEIVED	POUNDS PER PERSON PER DAY
2010	28,897	21,910.13	4.2
2011	29,657	21,036.90	3.9
2012	28,426	21,366.17	5.5
2013	28,274	19,081.75	3.7
2014	28,023	17,457.51	3.4
2015		16,986.15	
Average			

TABLE 55
EVALUATION OF WASTE TONNAGE
AS POUNDS PER PERSON PER DAY
REGIONAL TOTAL

YEAR	POPULATION	TOTAL TONNAGE RECEIVED	POUNDS PER PERSON PER DAY	% ANNUAL CHANGE
2010	68,828	53,997.76	4.3	
2011	69,310	56,754.57	4.5	5.1%
2012	67,931	59,150.65	4.6	4.2%
2013	67,278	53,767.59	4.4	-9.1%
2014	66437	48,418.94	4.0	-9.9%
2015		43,461.88		-10.2%
Average				

To put these values in perspective, the national average for MSW generation as reported by the EPA for the year 2001 was 4.4 pounds per person per day, which is up from 2.7 pounds per person per day in 1960. MSW as defined by the EPA does not include CDD waste, sludge or industrial wastes which is included in the values listed above. Thus the Counties and the region are all averaged at or below the national value indicating a limited amount of commercial or industrial waste relative to the municipal solid waste component.

4.3 Projected Waste Generation Rates Relative to Disposal Needs

It is important to consider the various ways in which the waste generation within the region may change to anticipate future needs relative to collection, disposal and recycling. As described in Section 3.0, the region is not expected to grow and is in fact projected to have a decrease in population ranging from –0.04% in the later years of the planning period to a maximum decrease of –0.4% during the earlier years of the planning period.

There is no one methodology for evaluating future waste generation rates as the rates can be impacted by many different factors including population changes, recycling participation and markets, the commercial or industrial sector, natural disasters etc. For rural areas, changes in the waste will track closely with the population trends. For urban or developing areas, changes in the waste are more difficult to predict. Certainly the population factor is one aspect, however the commercial waste must also be considered. The following section will consider various factors that could impact waste generation in region and will propose a final growth factor to be used in the study.

4.3.1 Population Growth Rate

As Section 2.1 discussed, the region has been losing population and population is projected to decrease at a rate of 0.4% per year from 2003 – 2010, at a rate of 0.2% from 2011 - 2020, and finally at a rate of 0.04% from 2021 – 2024. The estimated population for the region for 2004 is 71,619 and the estimated population for 2024 is 68,780. Because of the decline in population, the residential waste tonnage would be expected to decrease proportionately. To be conservative in this report, the residential waste tonnage will be estimated based on the national average rate of change as discussed under Section 4.3.3 below.

4.3.2 Commercial and industrial growth

The region is not anticipating significant growth in the commercial sector, over the planning period although efforts are being made to encourage economic development. Review of tables 56 through 58 indicates that the commercial tonnage is relatively flat over the period from 2010 to 2015. Commercial waste makes up a small component of the Buchanan and Dickenson County collections and, as would be expected, makes up a larger percentage of the Russell County waste stream. Quantifying growth in this sector is difficult as it can be unpredictable. For this report no distinction between the residential and commercial waste will be made, and so the national average rate of change will be used as discussed below.

4.3.3 Annual change in MSW (residential/commercial) tonnages

The following table summarizes the data taken from the transfer station records for household and commercial waste delivered to the three transfer stations and provides a total for the region. The percent annual change was then calculated with this data.

TABLE 56
HOUSEHOLD AND COMMERCIAL WASTE
RECEIVED AT THE TRANSFER STATIONS

Waste Type	2010	2011	2012	2013	2014	2015
Buchanan County						
Household Waste	399	311	832	777	687	371
Commercial Waste	292	212	193	283	287	149
Govt. Household Waste	12,938	11,577	12,914	13,902	14,364	15,308
Govt. Commercial Waste	609	533	522	568	555	518
SUBTOTAL	**14,238**	**12,633**	**14,461**	**15,530**	**15,893**	**16,346**
% Annual Change		**-11.3%**	**14.5%**	**7.4%**	**2.3%**	**2.9%**
Dickenson County						
Household Waste	280	363	394	617	729	550
Commercial Waste	49	47	24	56	29	23
Govt. Household Waste	7,381	7,134	7,461	7,669	7,929	8,289
Govt. Commercial Waste	0	2	0	1	0	0
SUBTOTAL	**7,710**	**7,546**	**7,879**	**8,343**	**8,687**	**8,862**
% Annual Change		**-2.1%**	**4.4%**	**5.9%**	**4.1%**	**2.0%**
Russell County						
Household Waste		14,579	21,394	17,272	17,588	18,504

Waste Type	2010	2011	2012	2013	2014	2015
Commercial Waste		2,928	0	3,018	3,077	3,475
SUBTOTAL		**17,507**	**21,394**	**20,290**	**20,665**	**21,979**
% Annual Change			**22.2%**	**-5.2%**	**1.8%**	**6.4%**
Region						
Buchanan County		12,633	14,461	15,530	15,893	16,346
Dickenson County		7,546	7,879	8,343	8,687	8,862
Russell County		17,507	21,394	20,290	20,665	21,979
SUBTOTAL		**37,686**	**43,734**	**44,163**	**45,245**	**47,187**
% Annual Change			**16.0%**	**1.0%**	**2.5%**	**4.3%**

Of interest is that the total residential and commercial tonnage for the region has been growing over the last three years. From 2010 to 2015 there was a 1.0% increase, from 2001 to 2002, a 2.5% increase and from 2002 to 2003 a 4.3% increase. All three Counties experienced a steady increase in tonnage during this three year period. However, it is not expected that this trend would continue given the projections for the declining population and the difficult economic environment of the region. Thus the national average will be used for this report as described in the paragraph below.

Nationally from 1990 to 2001 the MSW waste stream grew at a rate of 1.0% per year. MSW includes residential, commercial and institutional waste. For this region, a 1.0% growth in the MSW sector will be assumed with no growth assumed for the other waste categories.

4.3.4 Annual change in total tonnage with population considered

Another way to consider the annual change in solid waste is to couple the population with the total tonnage delivered to the transfer stations as determined in the calculation for pounds per person per day. Table 52 in Section 4.2.2 contains this information and indicates regionally a change from 2010 to 2012 of a 5.3% increase and from 2013 to 2015, a 2.5% decrease.

The total tonnage includes all waste delivered to the transfer stations regardless of its handling. Total tonnage includes construction waste, industrial waste, white goods and other waste materials. The following table evaluates the regional population and regional tonnage for the commercial and residential sectors:

4.3.5 Projected tonnages

As stated at the beginning of this section, there is no single methodology to use to predict the future changes in the region's waste stream. The region is facing a decline in population and is currently experiencing economically challenging times in most areas. Thus, as discussed above, the national average of 1.0% per year was used for projecting the residential and commercial tonnages while all other tonnages were assumed to remain constant.

Tables 57 through 60 provide the tonnage projections for the individual Counties and the region by year.

TABLE 57
ESTIMATED WASTE TONNAGE 2010-2040
BUCHANAN COUNTY

Estimated rate of change 2010-2040 1.0%
Estimated rate of change for other waste materials 0%/year
Population growth factor variable/year

YEAR	COMMERCIAL AND RESIDENTIAL TONNAGE	OTHER TONNAGE RECEIVED AT TRANSFER STATION	TOTAL TONNAGE ESTIMATED TO BE DELIVERED TO TRANSFER STATION	TONS PER DAY	POPULATION	POUNDS PER PERSON PER DAY
2010	**17,525**	**4,126**	**21,651**	**83**	**24,028**	**4.5**
2011	17,700	4,126	21,826	84	23,888	5.0
2012	17,877	4,126	22,003	85	23,837	5.1
2013	18,056	4,126	22,182	85	23,555	5.2
2014	18,237	4,126	22,363	86	23,106	5.3
2015	**18,419**	**4,126**	**22,545**	**87**	**23,800**	**5.2**
2016	18,603	4,126	22,729	87	23,680	5.3
2017	18,789	4,126	22,915	88	23,560	5.3
2018	18,977	4,126	23,103	89	23,440	5.4
2019	19,167	4,126	23,293	90	23,320	5.5
2020	**19,359**	**4,126**	**23,485**	**90**	**23,200**	**5.5**
2021	19,552	4,126	23,678	91	23,090	5.6
2022	19,748	4,126	23,874	92	22,980	5.7
2023	19,945	4,126	24,071	93	22,870	5.8
2024	20,145	4,126	24,271	93	22,760	5.8
2030	20,073	4,126	24,199	93	23,263	5.7
2040	20,107	4,126	24,233	93	23,296	5.7

TABLE 58
ESTIMATED WASTE TONNAGE 2010-2040
DICKENSON COUNTY

Estimated rate of change 2010-2040 1.0%
Estimated rate of change for other waste materials 0%/year
Population growth factor variable/year

YEAR	COMMERCIAL AND RESIDENTIAL TONNAGE	OTHER TONNAGE RECEIVED AT TRANSFER STATION	TOTAL TONNAGE ESTIMATED TO BE DELIVERED TO TRANSFER STATION	TONS PER DAY	POPULATION	POUNDS PER PERSON PER DAY
2010	**9,501**	**1,744**	**11,245**	**43**	**15,903**	**3.9**
2011	9,596	1,744	11,340	44	15,675	4.0
2012	9,692	1,744	11,436	44	15,668	4.0
2013	9,789	1,744	11,533	44	15,449	4.1
2014	9,887	1,744	11,631	45	15,308	4.2
2015	**9,986**	**1,744**	**11,730**	**45**	**15,100**	**4.3**
2016	10,086	1,744	11,830	45	15,020	4.3
2017	10,187	1,744	11,931	46	14,940	4.4
2018	10,289	1,744	12,033	46	14,860	4.4
2019	10,391	1,744	12,135	47	14,780	4.5
2020	**10,495**	**1,744**	**12,239**	**47**	**14,700**	**4.6**
2021	10,600	1,744	12,344	47	14,700	4.6
2022	10,706	1,744	12,450	48	14,700	4.6
2023	10,813	1,744	12,557	48	14,700	4.7
2024	10,921	1,744	12,665	49	14,700	4.7
2030	11,158	1,744	12,902	50	15,375	4.6
2040	11,010	1,744	12,754	49	15,193	4.6

TABLE 59
ESTIMATED WASTE TONNAGE 2010-2040
RUSSELL COUNTY

Estimated rate of change 2010-2040 1.0%
Estimated rate of change for other waste materials 0%/year
Population growth factor variable/year

YEAR	COMMERCIAL AND RESIDENTIAL TONNAGE	OTHER TONNAGE RECEIVED AT TRANSFER STATION	TOTAL TONNAGE ESTIMATED TO BE DELIVERED TO TRANSFER STATION	TONS PER DAY	POPULATION	POUNDS PER PERSON PER DAY
2010	**23,564**	**2,233**	**25,797**	**99**	**28,897**	**4.9**
2011	23,800	2,233	26,033	100	29,657	4.8
2012	24,038	2,233	26,271	101	28,426	5.1
2013	24,278	2,233	26,511	102	28,274	5.1
2014	24,521	2,233	26,754	103	28,023	5.3
2015	**24,766**	**2,233**	**26,999**	**104**	**30,600**	**4.8**
2016	25,014	2,233	27,247	105	30,680	4.9
2017	25,264	2,233	27,497	106	30,760	4.9
2018	25,517	2,233	27,750	107	30,840	4.9
2019	25,772	2,233	28,005	108	30,920	5.0
2020	**26,030**	**2,233**	**28,263**	**109**	**31,000**	**5.0**
2021	26,290	2,233	28,523	110	31,080	5.0
2022	26,553	2,233	28,786	111	31,160	5.1
2023	26,819	2,233	29,052	112	31,240	5.1
2024	27,087	2,233	29,320	113	31,320	5.1
2030	24,716	2,233	26,949	104	29,296	5.0
2040	24,717	2,233	26,950	104	29,534	5.0

TABLE 60
ESTIMATED WASTE TONNAGE 2010-2036
REGION

Estimated rate of change 2010-2036	-1.3%
Estimated rate of change for other waste materials	0%/year
Population growth factor	variable/year

YEAR		TOTAL TONNAGE ESTIMATED TO BE DELIVERED TO TRANSFER STATIONS	TONS PER DAY	POPULATION		POUNDS PER PERSON PER DAY
2010		**53,997**	**207**	**68,828**		**6.0**
2011		56,754	218	68,252		6.3
2012		**59,150**	227	67,676		6.7
2013		53,767	206	67,100		6.1
2014		48,416	186	66,437		5.5
2015		**43,461**	**167**	**67,194**		**4.9**
2016		40,307	155	67,404		4.6
2017		42,191	162	67,614		4.8
2018		48,494	186	67,824		5.5
2019		53,924	207	68,000		6.1
2020		**55,721**	**214**	**68,036**		**6.3**
2021		53,052	204	68,016		6.0
2022		**53,920**	207	67,996		6.1
2023		53,904	207	67,976		6.1
2024		53,889	207	67,956		6.1
2030		52,991	203	67,938		6.0
2036		**54,682**	**210**	**68,956**		**6.1**

4.4 Waste Composition

The region does not receive significant quantities of unusual or special wastes or industrial wastes. Therefore its composition would be assumed to be similar to the national estimates discussed in Section 2.1.2. The following tables summarize the expected waste compositions by material type and by product type utilizing the percentages developed by EPA from the 2001 data for the region only:

TABLE 61
REGIONAL WASTE COMPOSITION
BY MATERIAL TYPE
AS SUMMARIZED IN EPA REPORT - 2014 DATA

MATERIAL	% OF TOTAL WASTE STREAM (MSW)	PROJECTED TONNAGE HOUSEHOLD AND COMMERCIAL WASTE ONLY 2015*
Paper	35.7	16,846
Glass	5.5	2,595
Metals	7.9	3,728
Plastics	11.1	5,238
Rubber, leather, & textiles	7.1	3,350
Wood	5.7	2,690
Yard trimmings	12.2	5,757
Food scraps	11.4	5,379
Other	3.4	1,604
TOTAL	100.0	47,187

*Tonnage from Table 45 for region of 47,187.

TABLE 62
REGIONAL WASTE COMPOSITION
BY PRODUCT TYPE

MATERIAL	% OF TOTAL WASTE STREAM (MSW)	PROJECTED TONNAGE HOUSEHOLD AND COMMERCIAL WASTE ONLY 2015*
Durable goods	16.4	7,739
Nondurable goods	26.4	12,457
Containers and packaging	32.0	15,100
Food scraps	11.4	5,379
Yard trimmings	12.2	5,757
Other wastes	1.6	755
TOTAL	100.0	47,187

*Tonnage from Table 45.

5.0 EXISTING SOLID WASTE MANAGEMENT SYSTEM

The following section describes the major components of the region's current solid waste management system in existence in 2003.

5.1 Collection

5.1.1 Overview

The following table summarizes the information relative to collection as provided by the various localities:

TABLE 63
SUMMARY OF INFORMATION ON COLLECTIONS

LOCALITY	DESCRIPTION
Buchanan County	**Equipment:** 13 trucks **Personnel:** 23 collection workers; 1 full time litter control coordinator, 1 full time litter control coordinator, **Collection:** Door to door from 9,485 residential and 1,383 business curbside customers. **Residential:** one time per week **Commercial:** one time per week, fixed or by request; 4cy or 6cy containers. **Other collections:** • Large items collected monthly by request • White good collection is performed by a local recycling business; refrigerant removal by private contractor; materials hauled away by private contractor twice per year • Tires are accepted at the transfer station. The CPRWMA provides services via WV Tire. **Fees:** • Households - $3.00 per month split equally between electric and telephone bill each electric meter and each telephone line. • Commercial - $6.00 per cubic yard (based on size of box) • Tires - $70.00 per ton; sent off site for recycling • Fees do not meet the operations expenses. Operations supplemented from County's general fund. **Annual budget (FY 2015):** $2,329,309.
Grundy	**Equipment:** 2 trucks, 1 brush shredder **Personnel:** 3 employees **Collection:** Door to door from 216 residential and commercial customers. **Residential:** 1 time per week **Commercial:** 1-5 times per week **Other collections:** • Bulky item pickup monthly by request of residential or

LOCALITY	DESCRIPTION
	commercial customers. • Leaves, brush, and Christmas trees collected by request. Town shreds and sells for mulch **Fees:** • Residential - $8.00 per month charged on utility bill • Commercial – based on number of collections. Current billing range from $48 - $240 per month. • Fees covers cost of operations. No additional funding is needed to supplement the system. **Annual budget (FY 2015):** $251,200
Dickenson County	**Equipment:** 7 rear load packer trucks **Personnel:** 15 employees; 2 litter control officers **Collection:** Door to door from 6,352 residential and 891 commercial customers; 3 green box sites with one 6cy box per site on roads where packer trucks cannot service homes. **Residential:** 1 time per week **Commercial:** 1-2 times per week **Other collections:** • No leaf, brush or general bulky item pickup. • Temporary collection sites are established for Christmas tree collection. Trees are hauled to the lake for the Army Corp of Engineers to use as fish attractors. • Tires - $70.00 per ton; sent off site for recycling **Fees:** • Residential - $60 per ton at transfer station and Free crub side collection. • Commercial - $60 per ton at transfer station. • Operations subsidized from general fund. **Annual budget (FY 2015):** $1,333,555
Clintwood	**Equipment:** 2 trucks – 1 regular sized rear loader, 1 smaller truck. **Personnel:** 4 employees **Collection:** Door to door. **Residential:** 1 time per week **Commercial:** Collection frequency variable depending on agreement with town. **Other collections:** • Bulky items, leaves, and brush are picked up on request. Pickup usually on Friday. No additional charge. • Tires are transported by the Town to the transfer station. **Fees:** Residental is $7 per month and Commercial is $10. 4 cy, 6 cy, 8 cy range is from $32.00-$300 per month. **Annual budget (FY 2015):** $76,460
Haysi	No solid waste collection operations
Clinchco	No solid waste collection operations

LOCALITY	DESCRIPTION
Russell County	**Equipment:** System is county managed and staffed with hauling privatized. **Personnel:** 6 personnel to staff the sites **Collection:** 10 convienent sites around County serviced by County staff. Most of the sites have 1-3 boxes or compactors and use 40 – 50 cy open top roll-off boxes. The County owns the sites. Collections is contracted out 10 sites and the County provides staff. The sites are staffed 40 hours per week. **Residential:** 10 Convienent Centers Drop off. **Commercial:** Town of Lebanon and Private Company's. **Other collections:** • Brush or leaf collection is a drop off at Transfer Station. • White goods can be taken to the transfer station. Once collected, the material is managed by the County. • Tires - $83.50 per ton; sent off site for recycling **Fees:** $60.00 per ton for commercial and construction. **Annual budget (FY 2015):** $900,000.
Lebanon	**Equipment:** 2 rear load packer trucks and 2 roll-off trucks **Personnel:** 4 employees plus public works director. 1 driver for the roll-off truck; 3 person crew for the packer truck. **Collection:** Door to door from 1,794 residential and commercial customers. Private collection is not allowed within City limits. **Residential:** 1 time per week **Commercial:** 1 time per week (minimum), can request greater frequency for collection; Town provides containers. **Other collections:** • Bulky item collection: By request each Friday • Leaves and grass: By request as needed. **Fees:** • Residential - $7.20 per month on utility bill • Commercial – o Curbside - $14.20 per week. o 6 cy box - $25 per load o 8 cy box - $25 per load o 40 cy box - $100 per load o Compactor - $150.00 per load **Annual budget (FY 2015):** $285,499.
Cleveland	**Equipment:** 1 rear loader packer truck **Personnel:** 3 **Collection:** Door-to-door **Residential:** Weekly **Commercial:** Weekly **Other collections:** • Bulky item collection: Once per year in May. Leaves and grass: None. **Fees:**

LOCALITY	DESCRIPTION
	• Residential: – $12/month • Commercial: – $18/month **Annual budget (FY 2015):** $16,940
Honaker	**Equipment:** 1 rear loader packer truck **Personnel:** 3 **Collection:** Door-to-door **Residential:** 1/week **Commercial:** 1/week **Other collections:** • Bulky item collection: By request as needed • Leaves and grass: None **Fees:** • Residential – $15.00/month • Commercial – $20-200 per/month **Annual budget (FY 2015):** $95,500

5.1.2 Russell County Collection sites

Russell County is the only one of the localities which uses drop off collection sites for handling garbage collection. There are 14 sites. The following table summarizes the tonnage collected from each site for the years 2010 – 2016:

TABLE 64
RUSSELL COUNTY COLLECTION SITES
TONNAGE
2009 – 2016

Site	2009	2010	2015	2016	Total	AVERAGE	AVERAGE AS % OF TOTAL
Lebanon	1,167.63	1,167.24	1,338.18	1,385.57	5,058.62	*1,264.66*	2.96
Belfast	662.26	720.39	465.81	495.78	2344.24	*586.06*	1.37
Blackford	685.87	431.86	465.81	495.78	2079.32	*519.83*	1.22
Swordscreek	122.75	1,352.40	229.59	857.06	2561.8	*640.45*	1.5
Pjnecreek	1,388.55	1,356.34	1,384.40	**closed**	4129.29	*1,376.43*	3.22
Flatrock	1,100.52	1,078.57	1,495.74	1,558.74	5233.57	*1,308.39*	3.06
Finney	350.44	360.25	308.57	299.25	1318.51	*329.6275*	0.77
Daw Road	201.97	237.03	261.49	250.77	951.26	*237.815*	0.56
Carbo	623.99	630.98	449.17	420.25	2124.39	*531.0975*	1.24
Hamlin	1,124.41	1,120.20	825.88	293.27	3363.76	*840.94*	1.97
Radio Station (Castlewood)	1,288.25	737.48	686.83	713.87	3426.43	*856.61*	2.01
71 (604) Grassy Creek	362.08	387.58	**closed**	**closed**	749.66	*374.83*	0.88
Mocassin	347.79	332.44	455.13	481.30	1616.66	*404.165*	0.95
71 Site	2,623.23	3,834.95	1,300.99	**closed**	7759.17	*2,586.39*	6.05
TOTAL	12,049.74	13,747.71	9,667.59	7,251.64	42,716.68	17,086.67	100

Figure 2 illustrates the location of these sites.

5.2 Transfer Operations

5.2.1 Summary of transfer station information

The following table summarizes the information on the transfer operations. Most of the waste generated within the three County region is delivered to one of the transfer stations. Some waste may be taken directly to one of the private landfills, but this waste is not tracked. As noted below, the Authority owns the buildings, holds the permits, is in charge of operations and maintenance and holds the contracts with the hauling company and the disposal facility.

TABLE 65
SUMMARY OF INFORMATION ON TRANSFER STATIONS

LOCATION	DESCRIPTION
Buchanan County	• PBR # 106 • Opened March 1996 • 5,000 square feet • Scales – BTek 10'x70' • Orginial Cost $609,000 • Operated by the County • Tonnage transferred 2015 – 16,426 tons
Dickenson County	• PBR #049 • Opened December 1993 • 5,000 square feet • Scales – BTek 10'x70' • Orginal Cost - $640,689 • Operated by the County • Tonnage transferred 2015 – 10,049 tons
Russell County	• PBR #001 • Opened April 1994 • 7,500 square feet • Scales – BTek 10'x70' • Orginal Cost - $625,000 • Operated by a private contractor • Tonnage transferred 2015 – 16,986 tons
General Information	• Hauling contract with Advanced Disposal, Inc. The contract expires on October 26, 2018. • Permits are held by Authority who owns the buildings, equipment and property and holds long-term leases with VDOT in Dickenson and Russell Counties on the properties. • As of January 1, 2016, the Authority has no outstanding bond debt. • As permit holder, the Authority is responsible for permit

LOCATION	DESCRIPTION
	compliance. • As owner of the buildings, the Authority is responsible for all maintenance and repairs.

5.2.2 Contractual Relationships

The following table summarizes the contractual relationships between the Authority, Contractor and Counties:

TABLE 66
CONTRACTUAL RELATIONSHIPS

CONTRACT NAME	PARTIES	PURPOSE
Solid Waste Disposal Agreement	Advanced Disposal Inc.	Establishes contract for disposal at Advanced Disposal Landfill and sets fees for disposal. Current contract expires October 26, 2018.
Solid Waste Transportation Agreement	Authority and Advanced Disposal, Inc.	Establishes contract for transportation and sets fees for hauling. Current contract expires October 26, 2018.
User Agreement for Solid Waste Disposal	Authority and each county individually	Establishes contract for use of transfer stations, obligations of users, tipping fees, etc. No specific expiration date. Members can leave Authority when all debt is paid off.
Manpower Service Agreement	Authority and each county individually	Establishes contract for County operation of transfer stations for Authority. Contract renewed annually.
Administrative contract	Cumberland Plateau PDC and Authority	Establishes an agreement for the PDC to administer the Authority's program. Contract renewed annually.

5.2.3 Tipping Charges and Fees at transfer station

Each County holds a user agreement with the Authority and the Authority only has three customers, the three Counties. The Authority sets the tipping charges as follows (taken from the agreement with Russell County): *"The tipping fee shall be calculated by determining the total of (a) the disposal fee charged by any landfill operator with whom the Authority may contract for the ultimate disposal of any Solid Waste delivered under the contract; (b) the transportation*

costs incurred in the transport of the waste from the transfer station to the landfill; (c) the amount of principal premium, if any, and interest or any other amounts due, or to become due, with respect to any indebtedness of the Authority or required to avoid a default with respect to such indebtedness, and (d) all expenses of the Authority relating to the operation and maintenance of the disposal system, including any reserves. This amount is divided by the tonnage projected to be received to derive the cost per ton to be charge for use of the disposal system."

The current tipping charges established by the Authority may be summarized as follows:

TABLE 67
SUMMARY OF AUTHORITY'S TIPPING CHARGES

LOCALITY	FEE	COMMENT
Buchanan County	$34.06/ton	+ Monthly charge of $17,000
Dickenson County	$34.05/ton	+ Monthly charge of $17,000
Russell County	$31.96/ton	+ Monthly charge of $17,000

*Monthly charge covers operations and debt service.

Each County is invoiced on a monthly basis by the Authority for the tonnage delivered to the transfer station. Each County can then chose to charge transfer station users.

The following table summarizes the current tipping fees established by the Counties as of October 2013 at the three transfer stations:

TABLE 68
SUMMARY OF TIPPING FEES AT TRANSFER STATIONS

LOCALITY/WASTE TYPE	FEE	COMMENTS
BUCHANAN COUNTY		
Household waste	$30/ton	Household billed $7.00 per month on utility bill.
Commercial waste	$60/ton	
Tires	$70/ton	
DICKENSON COUNTY		
Household waste	$60/ton	
Commercial Waste	$60/ton	
Construction demolition debris	$60/ton	
Tires	$70/ton	
Sludge	$40/ton	
RUSSELL COUNTY		
Household waste	No charge	
Commercial waste	$60/ton	
Industrial waste	$60/ton	
Shingles	$60/ton	
Tires	$83.50/ton	

Contract fees as negotiated by the Authority with the hauling and disposal company may be summarized as follows. The contracts expire on October 26, 2018:

TABLE 69
SUMMARY OF AUTHORITY AGREEMENTS

CONTRACT	NEGOTIATED FEE	COMMENTS
TRANSPORTATION AGREEMENT		
Buchanan County	$17.18/ton	CPI for agreement shall not exceed 3% and will not be considered until 12/03.
Dickenson County	$17.17/ton	Same as above
Russell County	$15.08/ton	Same as above
DISPOSAL AGREEMENT		
Disposal price	$16.07/ton	3% CPI each year (not to exceed $17.74 in 2018).
State fee	$ 0.10/ton	
Total disposal price	$16.07/ton	

Under the disposal agreement, the current federal, state and local fees/taxes of $0.95/ton shall not exceed a total of $3.00/ton. Should fees/taxes exceed $3.00/ton, the Authority reserved the right to renegotiate the fee schedule.

5.2.4 Materials permitted for acceptance at transfer stations

In accordance with the Virginia Solid Waste Management Regulations, the following materials may be accepted at the transfer stations subject to permit specific limitations:

a. Agricultural waste
b. Ashes and air pollution control residues that are not classified as hazardous waste. Incinerator and air pollution control residues should be incorporated into the working face and covered at such intervals as necessary to prevent them from becoming airborne.
c. Commercial waste
d. Compost
e. Construction waste
f. Debris
g. Demolition waste
h. Discarded material
i. Garbage
j. Household waste
k. Industrial waste meeting all criteria contained in DEQ Regulations
l. Inert waste

m. Institutional waste except anatomical waste from health care facilities or infectious waste as specified in Waste Management Board's Infectious Wastes Regulations.
n. Municipal solid waste
o. Putrescible waste. Occasional animal carcasses may be disposed of within a sanitary landfill. Large number of animal carcasses shall be placed in a separate area within the disposal unit and provided with a cover of compacted soil or other suitable material.
p. Refuse
q. Residential waste
r. Rubbish
s. Scrap metal
t. Sludge
u. Trash
v. White goods
w. Non-regulated hazardous wastes by specific approval only
x. Specific wastes as approved by the Director

5.2.5 Materials not accepted at the transfer stations

The following wastes **are prohibited** at the transfer stations:

1. Under the DEQ regulations (taken from 9VAC 20-80-250.C.16):

a. Free liquids

b. Regulated hazardous wastes

c. Solid wastes, residues, or soils containing more than 1.0 ppb (parts per billion) of Dioxins

d. Solid wastes, residues, or soils containing more than 50.0 ppm (parts per million) of PCB's

e. Unstabilized sewage sludge or sludges that have not been dewatered

f. Pesticide containers that have not been triple rinsed and crushed

g. Drums that are not empty, properly cleaned, and opened

h. Waste oil that has not been adequately adsorbed in the course of a site cleanup

i. Contaminated soil unless approved by the Director

5.3 Disposal

5.3.1 Landfill

Currently the Cumberland Plateau Regional Waste Management Authority is under contract with Advanced Disposal, Inc. for disposal at the Advanced Disposal Landfil located in Sullivan County Tennessee. The landfill is located approximately 5 miles south of Bristol. Distances from the transfer stations to the landfill range from 120 miles one way for Buchanan County, to 95 miles one way for Dickenson County, to 68 miles one way for Russell County.

The following list summarizes information on the landfill:

- Permitted by Tennessee Department of Environment and Conservation (TDEC)
- Permit number SNL 820-000-0282 Ext. Class 1
- Subtitle D liner and cap system
- Total acreage – 655 acres
- Disposal acreage – 255 acres (not all permitted at this time)
- Remaining life expectancy – 78 years @ 675 tpd from 1/1/12. Estimated closure date 2094.

5.3.2 Previously operated landfills

Appendix 3 includes a table summarizing the status of previously operated landfills in the region and location maps for the most recently closed landfills. The information was provided by the Southwest Regional Office of the Department of Environmental Quality. All landfills owned and operated by the Counties have been closed.

One industrial landfill is open in the Russell County. It is operated by American Electric Power (AEP) and is the disposal site for coal combustion by-products produced by the Clinch River Power Plant. Information on this facility is summarized in the following table and was obtained from AEP:

TABLE 70
AEP INDUSTRIAL LANDFILL

ITEM	DESCRIPTION
Permit Number	223
Date Permitted	1974
Materials placed in landfill	Coal combustion by-products: flyash, bottom ash; limited amounts of special waste by permit (contaminated soil, filter media from waste treatment plant, boiler refractory, etc.
Liner system	Subbase of insitu soil, layer of select fill, flexible membrane liner (FML), covered with double sided geocomposite material, leachate collection zone, covered by aggregate drainage layer, buttresses in specified bench areas.
Cap system	Flyash infiltration layer on top of waste, 40 mil FML, covered by layer of topsoil and vegetation.
Leachate collection and handling	Two leachate collection ponds. Discharges are pumped back to the plant for disposal through the waste water treatment system.
Environmental monitoring programs	Daily, monthly, quarterly and annual inspections; groundwater monitoring wells sampled semi-annually.

Information on remaining life, closure date or annual tonnage was not available.

5.3.2.A *Previously operated landfills continued. Please see Possum Hollow Landfill attachment.*

5.3.3 Household hazardous waste collection

Periodically the Authority assists Counties with the collection of household hazardous waste. In the future, the Counties have expressed interest in developing a comprehensive household hazardous waste program that would be run at specific times of the year. The Counties would like to pay for this program out of their general fund instead of raising tipping fees at the transfer stations to cover the expenses.

5.3.4 Central Archive

Records of all closed and active solid waste disposal sites within the region are maintained at the offices of the County Administrators within the Region. The Authority did not take over management of the landfills when it became the regional coordinator for disposal services for the Region. The Counties retain responsibility for all closure and post closure activities at the landfills and for documenting and addressing any open dumps. The Authority however maintains information on the transfer stations and recycling. The addresses for these archives are listed below:

Cumberland Plateau Regional Waste Management Authority
224 Clydesway Road
Lebanon, Virginia 24266
276-889-1778

Buchanan County
PO Box 950
Main Street, 4th Floor
Grundy, VA 24614
276-935-6501

Dickenson County
PO Box 1098
Mainstreet Courthouse
Clintwood, VA 24228
276-926-1676

Russell County
PO 1208
121 E. Main Street
Lebanon, VA 24266
276-889-8000

The files kept in these locations constitute the central archive and operating record for all permitted landfills within the Counties. New landfills, closure and post closure care documentation is kept at the Counties. Transfer station and recycling information is kept at the Authority. All correspondence to and all correspondence from DEQ is kept in the files of the appropriate entity.

In addition, the Solid Waste Management Plan prepared by the Authority for the Region will serve as a central archive and summary of solid waste collection, disposal, recycling and treatment activities within the Region. The plan will be revised as appropriate as activities change and the revised plan will be submitted to DEQ for review and approval.

5.4 Recycling

Recycling programs in the region are implemented on an individual basis by locality. The data is reported regionally. A recycling Action Plan (RAP) has been submitted to VA DEQ and approved.

5.4.1 Description of programs

The following table summarizes the existing programs within each County.

TABLE 71
SUMMARY OF RECYCLING PROGRAMS IN THE REGION

LOCALITY	DESCRIPTION
Buchanan County	• Limited recycling program in County. • White goods are collected at the transfer station and recycled • There is one private collection site at the Anchorage Shopping Center. Information on this center was not available. • There is a private scrap yard in the County which accepts batteries, aluminum, and scrap metal. The company pays for the materials they accept. Detailed information on this facility was not available. • The Town of Grundy collects and mulches their brush. • Some tracking of commercial and industrial recycling.
Dickenson County	• Limited recycling program in County. • Private contractor recycles aluminum, scrap metal, white goods, and abandoned vehicles. • Some tracking of commercial and industrial recycling.
Russell County	• 7-8 drop off sites are located throughout the County. • The drop off program is privatized. • The program accepts plastics, newspaper, cardboard, and aluminum. • The materials are transported to a recycler in Kingsport, TN. • Sites are staffed and contamination is limited. • Used oil is collected at the transfer station and is pumped and hauled away by Necessary Oil. • Scrap metal is collected at the transfer station. • Aggressively tracks commercial and industrial recycling.
Authority	• Hired a recycling coordinator 08/01/04.

5.4.2 Recycling rates

The following table provides information on the recycling rates for the Counties for 2010 and 2015. Appendix 4 contains the DEQ reporting form for 2015 for the region.

TABLE 72

MATERIAL	BUCHANAN COUNTY		DICKENSON COUNTY		RUSSELL COUNTY		TOTAL	
	2010	2015	2010	2015	2010	2015	2010	2015
Total Principle RM								
Paper	408.64	677	263.39	170	915.35	740	1,587.38	1,587
Metal	4,846.36	6,799	4,414.42	3,240	5,713.5	5,200	14,974.28	15,239
Plastic	42.99	16	9.24	10	58.73	26	110.96	52
Glass	.015		.25		.26		.26	0
Commingled							-	0
Yard Waste (composted or mulched)							-	0
Waste Wood (chipped or mulched)	.01	5	40	100	180.02		220.03	105
Textiles	92		23.69	40	0		115.69	40
SUBTOTAL	**5,390.015**	**7,497**	**4,750.99**	**3,560**	**6,867.86**	**5,966**	**17,008.6**	**17,023**
Total Supplemental RM							-	
Waste Tires	66.82	49	299.22	100	190.04	215	556.08	364
Used Oil	82.91	108	2,480.65	220	701.53	580	3265.09	908
Used Oil Filters	3,100	2	8.11	0	8.11	6	111.11	8
Used Antifreeze	10.55	1	2.21	10	24.51	2	37.27	13
Auto Bodies	925	230	250	20	881	20	2,056.73	270
Batteries	200	143	877	60	37.11	28	1,002.22	231
Sludge (composted)							-	
Other (E-Waste)	11.66	2	20	1	17.31	12	48.97	15
Ash								
SUBTOTAL	**4,396.94**	**535**	**3,937.19**	**311**	**1859.61**	**863**	**7,077.47**	**1,809**
Total PRM and SRM	**9,786.955**	**8,032**	**8,688.18**	**3,871**	**8,727.47**	**6,829**	**24,086.07**	**18,832**
Recycling rate as reported to DEQ - Reported as region only								**30.2%**

5.4.3 Composition of materials recycled

The following table summarizes the recycling tonnage for 2014 for the region by percent of total products.

TABLE 73
RECYCLING DATA BY % MATERIAL
(ADJUSTED BY DEQ)

MATERIAL	TOTAL REGIONAL TONNAGE			
	2014	% TOTAL		
Total Principle RM				
Paper	1,703.76	0.8%		
Metal	15,720.92	76.0%		
Plastic	61.97	.29%		
Glass	0	0.00%		
Commingled				
Yard Waste (composted or mulched)	173	.83%		
Waste Wood (chipped or mulched)	5	.024%		
Textiles	100	.48%		
Waste Tires	516.35	.0249%		
Used Oil	1,428.57	.069%		
Used Oil Filters	9.8	.047%		
Used Antifreeze	13.57	.065%		
Auto Bodies	264	.012%		
Batteries	525.22	.025%		
Sludge (composted)				
Electronics	23.88	.115%		
SUBTOTAL	**20,672.19**			
Total	**20,672.19**			

As review of this data indicates the percentages of the materials have shifted dramatically when fly ash and other industrial recycling is eliminated from consideration.

5.4.4 Volunteer Programs

There is some voluntary recycling within the region. In particular, Keep Buchanan County Beautiful is active in educational and promotional programs for recycling and litter control. The litter control personnel in both Russell County and Dickenson County also assist with volunteer programs as interest is expressed by volunteer organizations.

5.4.5 Recycling Markets

Appendix 5 includes a list of recycling markets that would be available to the region. Only scrap metal is marketed directly by the Counties. All other recycling is privatized.

5.4.6 Projected recycling rates

The region's overall rate of recycling rose from 15% in 2004 and peaked in 2013 at 33.1%. As we see a decline in both population and solid waste tonnages the Authory reported a recycling rate of 25.4% in 2016. Not only are markets unstable at this time, citizens are recycling less. The following table projects the recycling rate over the planning period if nothing changes in the recycling program and the waste tonnages increase as discussed in Section 4.3. The table also indicates the amount of additional recyclable material which must be captured to meet the 25% mandate. Programs developed in 2004 are still in place to help improve the recycling rates and educational programs, however, citizens are recycling less in our opinion based on the failing regional economy.

5.5 Public Education

Public education relative to recycling in the region is handled primarily through either volunteer organizations or the litter control departments of each County. The litter control departments try to visit public schools at least once a year and to have a presence at the County Fair. The Russell County Environmental Council works diligently to promote such programs as recycling, litter control, beautification and water quality. Dickenson County hosts a county-wide clean up program each spring. Adopt a Highway, Adopt a Stream and Adopt a School programs are active in the region. Appendix 6 contains information on public education in the region.

5.6 Public/Private Partnership

The region seeks to support all activities relative to reuse, reduction and recycling. Russell County's recycling program is privatized with local company. The Authority holds private contracts with the waste haulers and the private landfill. Each County handles their own contracts for scrap metal recycling.

6.0 BUDGET

The following table summarizes the operating budgets and revenues for the localities of the region for FY 2015:

TABLE 74A
SUMMARY OF OPERATION BUDGETS AND REVENUES
FY 2015

LOCALITY	COLLECTIONS (Information provided by Counties)	RECYCLING	TRANSFER AND DISPOSAL (Estimated from table below)	POST CLOSURE CARE LANDFILLS (Estimated)	TOTAL	ESTIMATED REVENUES (Provided by Counties)	DEFICIT FROM GENERAL FUND
Buchanan County	$ 2,329,309	$ -	$898,621	$0	$ 2,329,309	$285,000	$ (2,329,309)
Dickenson County	$ 1,333,555	$ -	$592,273	$0	$ 1,33,555	$35,000	$ (1,333,555)
Russell County	$ 900,000	$ 0	$933,002	$15,000	$ 900,000	$38,000	$ (900,000)
TOTAL-County only	$ 4,562,864	$ 0	$ 2,423,895	$ 15,000	$ 4,562,964	$ 358,000	$ (4,562,864)

As can be seen from this table, approximately 93% of the operating expenses of the region are addressed through the general funds of the local governments.

The following table evaluates the operating costs for FY 2015 as costs per ton delivered to the transfer station and as cost per person:

7.0 WASTE MANAGEMENT HEIRARACHY

Under 9 VAC 20-130-30, the following policy is set forth:

"It is the policy of the Virginia Waste Management Board to require each region designated pursuant to 9 VAC 20-130-180 through 9 VAC 20-130-220, as well as each city, county and town not part of such a region, to develop comprehensive and integrated solid waste management plans that, at a minimum, consider and address all components of the following hierarchy:

1. *Source reduction*
2. *Reuse*
3. *Recycling*
4. *Resource recovery (waste to energy)*
5. *Incineration*
6. *Landfilling"*

Section 9 VAC 20-130-150.6, also addresses this requirement by stating:

"The local government or regional solid waste management plan shall include data and analyses of the following type for each jurisdiction. Each item below shall be in a separate section and labeled as to content:

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

The following section provides the information as available as required by the regulations.

7.1 Source reduction

Source reduction refers to any change in the design, manufacture, purchase, or use of materials or products (including packaging) to reduce their amount or toxicity before they become municipal solid waste. Source reduction can help reduce waste disposal and handling costs, conserve resources, and reduce pollution. Section 2.1.5 previously discussed the trends in source reduction nationally noting that the reduction of yard waste in landfills is the most significant source reduction activity at the moment as localities and states ban yard waste from landfills.

While individuals can attempt to reduce their volume of waste, source reduction policies will be aimed primarily at businesses and industries. Many source reduction policies are not feasible at the local level but are best handled at the state or federal level. An example of this is the banning of yard waste from landfills, or requiring minimum packaging standards. Financial incentives and disincentives, broad regulations concerning source reduction and changes to manufacturing processes are difficult to implement on a local basis. As waste tipping fees increase at the region's transfer stations and the outside facilities, the commercial sector will become more sensitive to the expenses involved in their disposal programs, and will begin to consider source reduction more closely.

The most effective source reduction activity that can occur at the local level is public education.

It should be noted that the counties within the region seek information annually from their commercial sector relative to recycling activities. This exercise in and of itself can serve as an educational tool as the businesses and industries compile the data and consider the expense of their disposal programs. It is also an opportunity for the businesses or industries to report any major changes in their waste disposal programs, including source reduction.

In summary, the region is currently engaged themselves or entities within the region are currently engaged in the following source reduction efforts:

- Yard waste mulching programs
- White good recycling
- Environmental education programs for citizens relative to the need for source reduction

The following activities are proposed under this plan as interest and funding are available:

- Expansion of yard waste mulching programs
- Enhanced educational programs for the commercial and industrial sector

7.2 Reuse

Reuse is similar to source reduction as it prevents materials from entering the waste stream, but involves separating a given solid waste material from the waste stream and using it, without processing or changing its form, other than size reduction, for the same or another end use.

Examples of reuse include such activities as swap shops or thrift stores, clothing collection centers, pallet reuse, use of refillable bottles, reconditioning of drums or barrels

As with source reduction, private citizens can make an effort to reuse or encourage reuse of many items that would normally be discarded to the landfill. However, the focus of the program would be better aimed at the commercial sector including the region's businesses and industries. The region does not currently focus its educational programs on the commercial sector and does not currently collect specific information on reuse by the commercial sector.

Currently there are multiple reuse centers available to the public in the region including the following:

TABLE 75
SUMMARY OF REFUSE FACILTIES IN REGION

LOCALITY	NAME OF STORE	MATERIALS ACCEPTED
Buchanan County	Bins-Counts Community Center, Stratton, VA	Clothing, appliances, and housewares
	Outreach Community Center Clinchco, VA	Clothing, appliances, and housewares
	Thangs Clintwood, VA	Clothing, appliances, and housewares
Dickenson County	The Attic Grundy, VA	Clothing, appliances, and housewares
	Helping Hand Whitewood, VA	Clothing
	Gift of Love Oakwood, VA	Clothing
Russell County	Christian Center Lebanon and Honaker, VA	Clothing and appliances

The following activities are proposed under this plan relative to reuse, as interest and funding are available:

- Continue to educate public relative to the need for reuse
- Expansion of education to commercial sector to address reuse
- Collection of data on commercial reuse programs

7.3 Recycling

Recycling is 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. Section 5.4 outlined the recycling activities in the region.

The following activities are proposed under this plan as interest is expressed and as funding becomes available:

- Authority as of August 1, 2004 hired a regional recycling coordinator to work with the Counties, Towns and the commercial sector. Coordinator is responsible for pursuing markets, assisting with the establishment of collection programs, developing educational programs, and expanding the overall interest in recycling in the region.
- Authority to consider assisting directly with the recycling programs but coordinator will need to research markets and develop a specific plan for the Authority to act on.
- Authority to consider establishment of a periodic electronic waste collection program.
- Authority to consider establishment of a periodic household hazardous waste collection program.
- The Authority will continue to encourage its localities to increase programs offered and public participation in annual environmental events.
- The Authority will continue to encourage the localities to increase the percentage of residents that are educated about proper disposal and recycling practices within the region.
- Secure additional competitive state grants to fund additional environmental education programs.

7.4 Resource recovery and incineration

Resource recovery refers to a system that provides for collection, separation, recycling and recovery of energy from solid wastes, including disposal of non-recoverable waste residues. Incineration means the controlled combustion of solid waste for disposal. According to the EPA burning MSW can generate energy while reducing the amount of waste by up to 90 percent in volume and 75% in weight. The two activities are similar and are therefore combined for this discussion.

At this time, the region does not generate enough waste to make resource recovery or incineration feasible.

7.5 Landfilling

Landfilling at an out of region facility is the primary disposal mechanism for the region. Sections 5.2 and 5.3 outlined the region's transfer and disposal activities in detail.

8.0 GOALS AND OBJECTIVES OF PROGRAM

The following section outlines the goals and objectives for the region's solid waste management program. Some of the program activities will remain under the supervision of the local governments. Other program activities will remain or become regional as described below. The Authority oversees all regional activities.

8.1 Collections

Collection will remain in the hands of the local governments as indicated below.

TABLE 76
COLLECTION SYSTEM
GOALS AND ACTION ITEMS

ITEM NUMBER	GOAL	ACTION ITEM	SCHEDULE	ESTIMATED COST (2015 dollars)
C-1	Continue to provide cost effective collection systems for the citizens of the region	Buchanan County to continue with its door to door pick up program. Towns to continue with their existing programs	No change proposed	Not applicable.
		Dickenson County to continue with its door to door pick up program. Towns to continue with their existing programs.	No change proposed	Not applicable
		Russell County to continue with its drop off collection sites. Towns to continue with their existing programs.	No change proposed	Not applicable`
C-2	Evaluate the potential for privatizing the collection system of the region	Authority to evaluate privatization through inquiries of the private haulers. May develop a request for proposals if preliminary discussions indicate a potential savings in the collection programs.	2016-2018	No specific budget proposed at this time.
C-3	Increase door to door service to citizens in more densely populated areas.	The Town of Lebanon may consider ways to provide service to Russell County residents who live outside Town limits in a reasonably densely populated area.	2016-2017	No specific budget proposed at this time.

8.2 Transfer

During the planning period, the Counties will continue to transfer their waste to a disposal facility outside of the region and the Authority will continue to oversee the hauling contracts, to provide funding for the transfer operations and to provide maintenance as needed. Towards the end of the planning period, the transfer stations will be 30 years old. Depending on the maintenance provided at the facilities, the buildings might be at the end of their useful life and require replacement or significant renovation. If replacement is required, the Authority in conjunction with the Counties may seek new, more central locations. As noted in previous sections, the waste stream is not anticipated to increase significantly over the planning period and hence the facilities should continue to be appropriately sized for the anticipated waste stream.

TABLE 77
TRANSFER STATION SYSTEM
GOALS AND ACTION ITEMS

ITEM NUMBER	GOAL	ACTION ITEM	SCHEDULE	ESTIMATED COST (2015 dollars)
T-1	Continue to provide for adequate hauling from the transfer stations at a cost competitive price.	The Authority will continue to oversee the hauling contracts and to provide funding for the operations of the transfer stations. The current contract with Advanced Disposal, Inc. expires in October 26, 2018 at which time the Authority will have either renegotiated the contract or selected a new contractor.	January 2018	No cost associated with this action.
T-2	Provide for the care and maintenance of the transfer facilities.	The Authority will continue to oversee the repair and maintenance of the facilities. Maintenance items already identified include floor slab repair and door repair.	As soon as funding becomes available and the need becomes significant.	
T-3	Provide accurate weigh scales at the facilities.	Depending on maintenance and care of scales, scales at the three facilities may need to be replaced or	Annually consider condition of scales. If deterioration	Cost to replace scales assuming that foundation is still intact

ITEM NUMBER	GOAL	ACTION ITEM	SCHEDULE	ESTIMATED COST (2015 dollars)
		significantly overhauled towards the end of the planning period.	is noted, replace or repair as necessary.	estimated at $40,000-80,000 per scale.
T-4	Consider providing additional recycling activities at facilities.	The Authority may consider developing or expanding recycling programs at the transfer stations. Their efforts will be a function of the interest of the localities of the region.	No schedule established for this effort. Will depend on interest of localities.	No cost established for this effort at this time.
T-5	Improve efficiency	Relocation of stations as stations wear out. Authority may consider relocation of stations to more central area.	No schedule established for this effort.	No cost established for this effort at this time.

8.3 Disposal

Disposal will continue through 2018 at the Advanced Disposal Inc. landfill located in Sullivan County Tennessee. Prior to the end of 2018, the Authority will initiate contract renewal. Throughout the planning period, the Authority will need to evaluate the remaining disposal capacity in which ever facility they are contracted with and to consider alternatives as necessary.

TABLE 78
DISPOSAL SYSTEM
GOALS AND ACTION ITEMS

ITEM NUMBER	GOAL	ACTION ITEM	SCHEDULE	ESTIMATED COST (2015 dollars)
D-1	Provide consistent disposal facilities for the Region.	The current contract held by the Authority with Advanced Disposal expires on October 26, 2018. Prior to expiration, the Authority will begin contract negotiations to assure continued and consistent disposal.	January 2018	There is no cost associated with renewal.
D-2	Assure that sufficient	Annually the Authority	Annually	There is no

ITEM NUMBER	GOAL	ACTION ITEM	SCHEDULE	ESTIMATED COST (2015 dollars)
	disposal capacity is available for the region at an economical cost.	will evaluate the remaining disposal capacity at the landfill currently in use and, should it be found that sufficient long term capacity does not exist, seek alternative disposal facilities.		cost associated with this action.
		The Authority will assure the region that any contracts written with the disposal facility will allow termination for lack of capacity.	Evaluate during contract negotiations.	There is no cost associated with this action.
D-3	Assure that post closure is effectively handled at the previously operated landfills within the region.	Each locality will continue to handle the post closure care of their landfills. The Authority may in the future, consider regionalization of the environmental monitoring at the facilities if interest is expressed by the localities.	No specific schedule.	No cost associated with this action.

8.4 Recycling

As indicated above the recycling rate for the region, if the industrial recycling is excluded, fails to meet the mandated 25% as set by the DEQ. To improve the recycling opportunities and to encourage commercial and industrial recycling, the region considered the establishment of a recycling coordinator position within the Authority as indicated below. As of August 1, 2004, the Authority has hired a full time recycling coordinator. This individual is be tasked with evaluating markets, providing proposals to the local governments for the development or expansion of recycling programs, and for educating the public and commercial sector in the importance of recycling.

TABLE 79
RECYCLING SYSTEM
GOALS AND ACTION ITEMS

ITEM NUMBER	GOAL	ACTION ITEM	SCHEDULE	ESTIMATED COSTS (2015 dollars)
R-1	Provide professional oversight of the recycling program	The Authority is considering the establishment of a recycling coordinator position if funding is forth coming from the region. This individual will be tasked with the development of programs and public education.	Coordinator hired 08/01/04.	Funding for position comes directly from local governments.
R-2	Expand the existing recycling programs.	The recycling coordinator will evaluate the existing programs to seek ways to expand or improve the programs in a cost effective manner.	Dependent on the findings of the recycling coordinator.	As funding and interest indicate.
R-3	Develop program for electronic waste recycling.	The Authority will consider pursuing E-Waste recycling with or without the funding of a recycling coordinator position. Will probably be established as a once per year program with citizens charged to deliver their E-waste.	Dependent on interest and funding and ability of Authority to advertise the program effectively.	No cost established for this program. Dependent on funding by local governments.
R-4	Develop an annual collection program for household hazardous waste.	The Authority will consider the best way to annually provide for the collection of household hazardous waste as delivered by the citizens to the transfer stations.	Dependent on interest and funding.	No cost established for this program at this time. Funding will probably be sought from the individual

ITEM NUMBER	GOAL	ACTION ITEM	SCHEDULE	ESTIMATED COSTS (2015 dollars)
				localities outside of tipping fees.
R-5	Seek ways to educate the public and commercial sector relative recycling, waste reduction and reuse.	One of the primary goals of the recycling coordinator is that of public education.	In progress by new coordinator.	No costs established for this program at this time. Coordinator will seek grants for funding education.

8.5 Litter Prevention and Control

The region has a commitment to seek ways to improve the litter prevention and control programs in the region and to reduce the amount of litter and illegal dumps in the Counties.

TABLE 80
LITTER PREVENTION AND CONTROL
GOALS AND ACTION ITEMS

ITEM NUMBER	GOAL	ACTION ITEM	SCHEDULE	ESTIMATED COSTS (2015 dollars)
L-1	Provide oversight of regional litter prevention and control programs.	The Authority is considering the establishment of a recycling coordinator position if funding is forth coming from the region. In addition to the recycling programs, this individual will be tasked with the coordination of regional litter prevention and control programs.	As funding is available.	Funding for position to come directly from local governments or to be subsidized from litter control grants from state to local governments in region.
L-2	Assist local governments with education	Recycling/litter control coordinator will work directly with	As funding is available.	No specific project planned at this time.

ITEM NUMBER	GOAL	ACTION ITEM	SCHEDULE	ESTIMATED COSTS (2015 dollars)
	programs.	governments to assist with the development of educational programs.		
L-3	Encourage the organization of grassroots environmental organizations who will assist with litter prevention and control.	Recycling/litter control coordinator will work with citizens to develop the organizations.	As funding is available.	No specific project planned at this time.
L-4	Seek out alternative funding sources for litter prevention and control.	Recycling/litter control coordinator will work with the Authority to seek funding.	As funding is available.	No specific project planned at this time.
L-5	Continue to support and expand the Adopt a Highway, Assign a Highway and Adopt a Stream programs active in the region	Recycling/litter control coordinator will work with the citizens to promote these programs and will assist in the organization of additional programs.	As funding is available.	No specific project planned at this time.
L-6	Minimize illegal dumping	The Counties will continue to provide bulk collection days to discourage illegal dumping.	As funding is available.	No specific project planned at this time.
L-7	Encourage cleanup of illegal dumps.	The Counties will continue to map illegal dumps and to seek additional funding for clean up as well as to improve enforcement actions.	As funding is available.	No specific project planned at this time.

9.0 IMPLEMENTATION SCHEDULE

The implementation schedule for the region's integrated waste management program has been summarized under separate sections above.

10.0 FUNDING AND FINANCING

The following tables summarize the estimated expenditures for the Authority over the planning period. It does not include collections or recycling which would fall to the individual local governments at this time. Funding for the Authority's program will come from tipping fees and monthly charges billed to the Counties. Funding for the collections and recycling will come from user fees included with utility bills, commercial fees, and/or the general fund of the local government. Program development must be sensitive to the economic environment of the region which is difficult at this time. Local governments do not have the funds available to them to embark on many new programs. Should the tax base improve or the commercial/industrial sectors grow, then the local governments will have a greater ability to embrace new programs.

TABLE 81
PROJECTED MISCELLANEOUS EXPENDITURES
BY AUTHORITY
(Equipment, building repairs etc.)
2004 – 2024

Inflation rate 2.00%

YEAR	RUBBER TIRE LOADER (Buchanan County)	RUBBER TIRE LOADER (Dickenson County)	RUBBER TIRE LOADER (Russell County)	FLOOR REPAIRS (Stagger after 2008)	NEW SCALE HOUSES	SCALE REPLACEMENT	TOTAL
Replacement costs (2004)	$150,000	$150,000	$150,000	$100,000	$20,000	$40,000	
Replacement period	7 Years	7 years	7 years	15 years	Upgrade one time in 2009	20 years	
Current age of equipment	1 year	Needs replacement soon	2 years	1993, 1994 and 1996	1993, 1994, and 1996	1993, 1994, and 1996	
2004							$0
2005		$153,000					$153,000
2006							$0
2007							$0
2008			$162,365	$108,243			$162,365
2009	$165,612			$110,408	$66,245		$165,612
2010							$0
2011				$114,869			$0
2012		$175,749					$175,749
2013						$47,804	$0
2014						$48,760	$0
2015			$186,506				$186,506
2016	$190,236					$50,730	$190,236
2017							$0
2018							$0

YEAR	RUBBER TIRE LOADER (Buchanan County)	RUBBER TIRE LOADER (Dickenson County)	RUBBER TIRE LOADER (Russell County)	FLOOR REPAIRS (Stagger after 2008)	NEW SCALE HOUSES	SCALE REPLACEMENT	TOTAL
2019		$201,880					$201,880
2020							$0
2021							$0
2022			$214,237				$214,237
2023	$218,522			$145,681			$218,522
2024				$148,595			$0

TABLE 82
PROJECTED EXPENDITURES FOR AUTHORITY TRANSFER AND DISPOSAL
2004 – 2024

YEAR	TRANSFER STATION OPERATIONS	DEBT SERVICE	MISCELLANEOUS EXPENDITURES	HAULING	DISPOSAL	TOTAL	TONNAGE	COST PER TON
Description	3 transfer stations at $75,000 per year	From schedule provided by Authority	See Table 71. Includes new loaders, floor repairs, new scales and scale house	2003 Estimated	2003 Estimated			
2004	$225,000	$434,089	$0	$509,000	$1,134,000	$2,302,089	55,762	$41.28
2005	**$229,500**	**$431,011**	**$153,000**	**$519,180**	**$1,156,680**	**$2,489,371**	**56,238**	**$44.26**
2006	$234,090	$436,331	$0	$529,564	$1,179,814	$2,379,798	56,720	$41.96
2007	$238,772	$429,629	$0	$540,155	$1,203,410	$2,411,966	57,206	$42.16
2008	$243,547	$426,617	$162,365	$550,958	$1,227,478	$2,610,965	57,697	$45.25
2009	$248,418		$165,612	$561,977	$1,252,028	$2,228,035	58,193	$38.29
2010	**$253,387**		**$0**	**$573,217**	**$1,277,068**	**$2,103,671**	**58,694**	**$35.84**
2011	$258,454		$0	$584,681	$1,302,610	$2,145,745	59,200	$36.25
2012	$263,623		$175,749	$596,375	$1,328,662	$2,364,409	59,711	$39.60
2013	$268,896		$0	$608,302	$1,355,235	$2,232,433	60,227	$37.07
2014	$274,274		$0	$620,468	$1,382,340	$2,277,082	60,748	$37.48
2015	**$279,759**		**$186,506**	**$632,878**	**$1,409,986**	**$2,509,129**	**61,274**	**$40.95**
2016	$285,354		$190,236	$645,535	$1,438,186	$2,559,312	61,806	$41.41
2017	$291,061		$0	$658,446	$1,466,950	$2,416,457	62,343	$38.76
2018	$296,883		$0	$671,615	$1,496,289	$2,464,786	62,886	$39.19
2019	$302,820		$201,880	$685,047	$1,526,215	$2,715,962	63,433	$42.82
2020	**$308,877**		**$0**	**$698,748**	**$1,556,739**	**$2,564,364**	**63,987**	**$40.08**
2021	$315,054		$0	$712,723	$1,587,874	$2,615,651	64,546	$40.52
2022	$321,355		$214,237	$726,977	$1,619,631	$2,882,201	65,110	$44.27
2023	$327,783		$218,522	$741,517	$1,652,024	$2,939,845	65,680	$44.76
2024	$334,338		$0	$756,347	$1,685,064	$2,775,750	66,256	$41.89

11.0 PUBLIC PARTICIPATION

In the preparation of this plan, the Authority held several meetings with its members and members of the various local governments included in the region. In addition, the Authority met with numerous local groups to gage the needs of the member counties.

The Authority passes a resolution adopting the plan on March 31, 2016. A copy of this resolution and other resolutions are included in Appendix 10.

12.0 RECORD KEEPING

In addition to the daily record keeping, the Region documents its solid waste activities in several ways:

- Annual reports to the Cumberland Plateau Regional Waste Management Authority prepared by the Executive Director of the Authority
- Annual reports to the Board of Supervisors of the member Counties based on information provided by the Authority
- Periodic updates to the Authority and Boards by the Executive Director
- Annual submittal by March 31 of each year of the Waste Information and Assessment Report (Form 50-25) to DEQ
- Annual submittal by April 30 of each year of the Recycling Rate Report (Form 50-30) to DEQ
- Annual submittal usually by December of each year of the update to the financial assurance forms to DEQ

All these reports, updates and DEQ submittals as well as all background and permitting information are kept in the central archive (files) of the Cumberland Plateau Regional Waste Management Authority located at 950 Clydesway Road, Lebanon, Virginia, 24266. The Director of DEQ or other DEQ representatives receive copies of appropriate information relative to the Region's solid waste management program through the following sources:

- Direct submittal to DEQ of Forms 50-25 and 50-30 on an annual basis
- Permit applications
- Permit amendment applications
- Updates to the solid waste management plan
- General correspondence which may be required from time to time

Appendix 1

Regional Documentation

Appendix 2

DEQ Forms 50-25

General Instructions Help

Log Out

SOLID WASTE INFORMATION AND ASSESSMENT PROGRAM REPORTING TABLE - FORM DEQ 50-25

Note: Submission deadline is March 31st for the reporting period. Todays Date: 01/12/2016

◀◀ Annual Reporting Period ▶▶

1	Facility Name	Buchanan County Transfer Station											
2	Permit Number	PBR106				3	Date Last Submitted			4	Annual Reporting Period	2015	
5	Preparer's First Name	Toby	Middle Initial	F.	Last Name	Edwards		Suffix	Mr.	6	Preparer's Telephone Number	(276)889-17	
7	Preparer's Email Address	tobyedwards@bvu.net				An email address will be used to contact you in case of questions about this form submissi							
8	Has there been a change to the Annual Fee Billing Contact, Address or Telephone Number? ○ Yes ◉ No Please select Yes or No.												
	Contact First Name	Toby			Contact Last Name	Edwards					Contact Phone	(276)889-1778	
	Contact Address	224 Clydesway Drive PO Bo			Contact Email Address	tobyedwards@bvu.net							
	City	Lebanon	State	VA		Zip Code	24266				Zip Ext.		

9A and 9B Landfills only	9A	Remaining Permitted Capacity Only enter 10 digits (format:9999999999).		Cubic Yards	9B	Expected Remaining Permitted Life	
10	Does facility use active scales? ◉ Yes ○ No			Landfills not using active scales - Enter the total amount landfilled in cubic yards (sum of all jurisdictions)			
11	Originating Jurisdiction	VA - Virginia		11A	Statement of Economic benefits submitted? ○ Yes ◉ No		

12	Facilities landfilling VA incineration ash : Received from(Permit No,FacilityName)	VA ash amount landfilled measured in ◉ Tons or ○ Cubic Yards
	PBR173 , US Central Intelligence Agency - George Bush Cntr	
	PBR197 , US Department of Defense - Pentagon	
	PBR500 , Wheelabrator Portsmouth Inc - Waste to Energy Fac	
	PBR503 , John C Nordt Company Incorporated	
	PBR545 , Covanta Fairfax Incorporated	
	PBR551 , Covanta Alexandria Arlington Incorporated	
	SWP297 , Hampton City - NASA Steam Plant	

Waste amounts measured in : ◉ Tons or ○ Cubic Yards

	Waste Type	Waste Management - Report Amount by weight or volume (Reporting units must be consistent for all fields of a particular waste type).									
				On-site Management of Waste						Sent Off-Site to be:(i)	
		Total Amount of Waste Received (a)	Mined Materials (b)	Landfilled (c)	Recycled (d)	Composted (e)	Incinerated (f)	Mulched (g)	Other (h)	Recycled	Treated, Stored, Disposed
13	Municipal Solid Waste	14906.44									14906.44
14	Construction /Demolition/Debris	304.80									304.80
15	Industrial Waste										
16	Regulated Medical Waste										
17	Vegetative/Yard Waste	27.09								27.09	
18	Incineration Ash										
19	Sludge										
20	Tires	137.51								137.51	
21	White Goods	.77								.77	
22	Friable Asbestos										
23	Petroleum Contaminated Soil										
24	Enter a total of all other wastes on this line; list other types and their amounts in the comments area Other Waste										
25	Total Do not enter values.	15376.61								165.37	15211.24

Facility Comments:

DEQ Comments:

Clear Submit

◀◀ Annual Reporting Period ▶▶

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Toby Edwards

From: stephan.martin@deq.virginia.gov
Sent: Tuesday, January 12, 2016 4:36 PM
To: tobyedwards@bvu.net
Cc: stephan.martin@deq.virginia.gov
Subject: The Annual SOLID WASTE INFORMATION AND ASSESSMENT PROGRAM report has been Accepted by your DEQ regional contact

SWIA Form 50-25 submitted on: 01/12/2016 has a status of: Accepted for reporting period: 2015.

Facility: Buchanan County Transfer Station Permit Number: PBR106
Jurisdiction: VA - Virginia
Submitter: Toby Edwards Mr.

Please contact your DEQ regional representative with questions.

Toby Edwards

From: stephan.martin@deq.virginia.gov
Sent: Tuesday, January 12, 2016 1:25 PM
To: tobyedwards@bvu.net
Cc: stephan.martin@deq.virginia.gov
Subject: The Annual SOLID WASTE INFORMATION AND ASSESSMENT PROGRAM report has been submitted

DEQ has received SWIA Form 50-25 for reporting period: 2015.

Date: 01/12/2016
Facility: Buchanan County Transfer Station Permit Number: PBR106
Jurisdiction: VA - Virginia
Submitter: Toby Edwards Mr.

This facility reported:
15376.6100 tons of total waste for the current reporting period and
16694.8100 tons of total waste for last year.

You are receiving this message for one of the following reasons, either:

1) Your Facility has submitted the SWIA data on-line to DEQ; or,
2) The SWIA data that you submitted to DEQ in hard copy form has now been entered into the SWIA database by DEQ staff on the date noted above.

To view the data on-line, please click here: http://ecmae:9084/SWIAWebApp/login.jsp

If you need further assistance with SWIA on-line application, please send a message to: swia@deq.virginia.gov

General Instructions Help

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SOLID WASTE INFORMATION AND ASSESSMENT PROGRAM REPORTING TABLE - FORM DEQ 50-25

Note: Submission deadline is March 31st for the reporting period. Todays Date: 01/12/2016

◀◀ Annual Reporting Period ▶▶

1	Facility Name	Dickenson County Transfer Station									
2	Permit Number	PBR049			3	Date Last Submitted			4	Annual Reporting Period	2015
5	Preparer's First Name	Toby	Middle Initial		Last Name	F.Edwards	Suffix		6	Preparer's Telephone Number	(276)889-17
7	Preparer's Email Address	tobyedwards@bvu.net	An email address will be used to contact you in case of questions about this form submissi								

8 Has there been a change to the Annual Fee Billing Contact, Address or Telephone Number? ○ Yes ◉ No Please select Yes or No.

Contact First Name	Toby	Contact Last Name	Edwards	Contact Phone	(276)889-1778
Contact Address	224 Clydesway Drive PO Bo	Contact Email Address	tobyedwards@bvu.net		
City	Lebanon	State VA	Zip Code 24266	Zip Ext.	

9A and 9B Landfills only	9A	Remaining Permitted Capacity (Only enter 10 digits (format:9999999999))		Cubic Yards	9B	Expected Remaining Permitted Life

10	Does facility use active scales? ◉ Yes ○ No	Landfills not using active scales - Enter the total amount landfilled in cubic yards (sum of all jurisdictions)	
11	Originating Jurisdiction: VA - Virginia	11A	Statement of Economic benefits submitted? ○ Yes ◉ No

12	Facilities landfilling VA incineration ash : Received from(Permit No,FacilityName)	VA ash amount landfilled measured in ◉ Tons or ○ Cubic Yards
	PBR173 , US Central Intelligence Agency - George Bush Cntr	
	PBR197 , US Department of Defense - Pentagon	
	PBR500 , Wheelabrator Portsmouth Inc - Waste to Energy Fac	
	PBR503 , John C Nordt Company Incorporated	
	PBR545 , Covanta Fairfax Incorporated	
	PBR551 , Covanta Alexandria Arlington Incorporated	
	SWP297 , Hampton City - NASA Steam Plant	

Waste amounts measured in : ◉ Tons or ○ Cubic Yards

	Waste Type	Waste Management - Report Amount by weight or volume (Reporting units must be consistent for all fields of a particular waste type).									
				On-site Management of Waste						Sent Off-Site to be:(i)	
		Total Amount of Waste Received (a)	Mined Materials (b)	Landfilled (c)	Recycled (d)	Composted (e)	Incinerated (f)	Mulched (g)	Other (h)	Recycled	Treated, Stored, Disposed
13	Municipal Solid Waste	8820.75									8820.75
14	Construction /Demolition/Debris	160.16									160.16
15	Industrial Waste										
16	Regulated Medical Waste										
17	Vegetative/Yard Waste	7.21								7.21	
18	Incineration Ash										
19	Sludge										
20	Tires	110.53								110.53	
21	White Goods										
22	Friable Asbestos										
23	Petroleum Contaminated Soil										
24	Enter a total of all other wastes on this line; list other types and their amounts in the comments area Other Waste										
25	Total Do not enter values.	9098.65								117.74	8980.91

Facility Comments:

DEQ Comments:

Clear Submit

◀◀ Annual Reporting Period ▶▶

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Toby Edwards

From: stephan.martin@deq.virginia.gov
Sent: Tuesday, January 12, 2016 4:34 PM
To: tobyedwards@bvu.net
Cc: stephan.martin@deq.virginia.gov
Subject: The Annual SOLID WASTE INFORMATION AND ASSESSMENT PROGRAM report has been Accepted by your DEQ regional contact

SWIA Form 50-25 submitted on: 01/12/2016 has a status of: Accepted for reporting period: 2015.

Facility: Dickenson County Transfer Station Permit Number: PBR049
Jurisdiction: VA - Virginia
Submitter: Toby F.Edwards

Please contact your DEQ regional representative with questions.

Toby Edwards

From: stephan.martin@deq.virginia.gov
Sent: Tuesday, January 12, 2016 1:28 PM
To: tobyedwards@bvu.net
Cc: stephan.martin@deq.virginia.gov
Subject: The Annual SOLID WASTE INFORMATION AND ASSESSMENT PROGRAM report has been submitted

DEQ has received SWIA Form 50-25 for reporting period: 2015.

Date: 01/12/2016
Facility: Dickenson County Transfer Station Permit Number: PBR049
Jurisdiction: VA - Virginia
Submitter: Toby F.Edwards

This facility reported:
9098.6500 tons of total waste for the current reporting period and
11189.3200 tons of total waste for last year.

You are receiving this message for one of the following reasons, either:

1) Your Facility has submitted the SWIA data on-line to DEQ; or,
2) The SWIA data that you submitted to DEQ in hard copy form has now been entered into the SWIA database by DEQ staff on the date noted above.

To view the data on-line, please click here: http://ecmae:9084/SWIAWebApp/login.jsp

If you need further assistance with SWIA on-line application, please send a message to: swia@deq.virginia.gov

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SOLID WASTE INFORMATION AND ASSESSMENT PROGRAM REPORTING TABLE - FORM DEQ 50-25

Note: Submission deadline is March 31st for the reporting period. Todays Date: 01/12/2016

◀◀ Annual Reporting Period ▶▶

1	Facility Name	Russell County Solid Waste Transfer Station										
2	Permit Number	PBR001				3	Date Last Submitted		4	Annual Reporting Period	2015	
5	Preparer's First Name	Toby	Middle Initial	F.	Last Name	Edwards	Suffix	Mr.	6	Preparer's Telephone Number	(276)889-17	
7	Preparer's Email Address	tobyedwards@bvu.net	An email address will be used to contact you in case of questions about this form submissi									

8 Has there been a change to the Annual Fee Billing Contact, Address or Telephone Number? ◉ Yes ○ No Please select Yes or No.

Contact First Name	Toby	Contact Last Name	Edwards	Contact Phone	(276)889-1778
Contact Address	224 Clydesway Drive PO Bo	Contact Email Address	tobyedwards@bvu.net		
City	Lebanon	State VA	Zip Code 24266	Zip Ext.	

9A and 9B Landfills only	9A	Remaining Permitted Capacity (Only enter 10 digits (format:9999999999))		Cubic Yards	9B	Expected Remaining Permitted Life

10	Does facility use active scales? ◉ Yes ○ No	Landfills not using active scales - Enter the total amount landfilled in cubic yards (sum of all jurisdictions)	
11	Originating Jurisdiction: VA - Virginia	11A	Statement of Economic benefits submitted? ○ Yes ◉ No

	12 Facilities landfilling VA incineration ash : Received from(Permit No,FacilityName)	VA ash amount landfilled measured in ◉ Tons or ○ Cubic Yards
	PBR173 , US Central Intelligence Agency - George Bush Cntr	
	PBR197 , US Department of Defense - Pentagon	
	PBR500 , Wheelabrator Portsmouth Inc - Waste to Energy Fac	
	PBR503 , John C Nordt Company Incorporated	
	PBR545 , Covanta Fairfax Incorporated	
	PBR551 , Covanta Alexandria Arlington Incorporated	
	SWP297 , Hampton City - NASA Steam Plant	

Waste amounts measured in : ◉ Tons or ○ Cubic Yards

	Waste Type	Waste Management - Report Amount by weight or volume (Reporting units must be consistent for all fields of a particular waste type).									
				On-site Management of Waste						Sent Off-Site to be:(i)	
		Total Amount of Waste Received (a)	Mined Materials (b)	Landfilled (c)	Recycled (d)	Composted (e)	Incinerated (f)	Mulched (g)	Other (h)	Recycled	Treated, Stored, Disposed
13	Municipal Solid Waste	14007.61									14007.61
14	Construction /Demolition/Debris	683.71									683.71
15	Industrial Waste	107.57									107.57
16	Regulated Medical Waste										
17	Vegetative/Yard Waste	170.05								170.05	
18	Incineration Ash										
19	Sludge										
20	Tires	111.60								111.60	
21	White Goods	43.26								43.26	
22	Friable Asbestos										
23	Petroleum Contaminated Soil										
24	Enter a total of all other wastes on this line; list other types and their amounts in the comments area Other Waste										
25	Total Do not enter values.	15123.80								324.91	14798.89

Facility Comments:

DEQ Comments:

Clear Submit

◀◀ Annual Reporting Period ▶▶

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Toby Edwards

From: stephan.martin@deq.virginia.gov
Sent: Tuesday, January 12, 2016 4:33 PM
To: tobyedwards@bvu.net
Cc: stephan.martin@deq.virginia.gov
Subject: The Annual SOLID WASTE INFORMATION AND ASSESSMENT PROGRAM report has been Accepted by your DEQ regional contact

SWIA Form 50-25 submitted on: 01/12/2016 has a status of: Accepted for reporting period: 2015.

Facility: Russell County Solid Waste Transfer Station Permit Number: PBR001
Jurisdiction: VA - Virginia
Submitter: Toby Edwards Mr.

Please contact your DEQ regional representative with questions.

Toby Edwards

From: stephan.martin@deq.virginia.gov
Sent: Tuesday, January 12, 2016 1:34 PM
To: tobyedwards@bvu.net
Cc: stephan.martin@deq.virginia.gov
Subject: The Annual SOLID WASTE INFORMATION AND ASSESSMENT PROGRAM report has been submitted

DEQ has received SWIA Form 50-25 for reporting period: 2015.

Date: 01/12/2016
Facility: Russell County Solid Waste Transfer Station Permit Number: PBR001
Jurisdiction: VA - Virginia
Submitter: Toby Edwards Mr.

This facility reported:
15123.8000 tons of total waste for the current reporting period and
15785.7000 tons of total waste for last year.

You are receiving this message for one of the following reasons, either:

1) Your Facility has submitted the SWIA data on-line to DEQ; or,
2) The SWIA data that you submitted to DEQ in hard copy form has now been entered into the SWIA database by DEQ staff on the date noted above.

To view the data on-line, please click here: http://ecmae:9084/SWIAWebApp/login.jsp

If you need further assistance with SWIA on-line application, please send a message to: swia@deq.virginia.gov

DICKENSON COUNTY 2014-2015 TONNAGE REPORT

	MSW	CONST. DEMOL	INDST.	MEDICAL	YARD	SLUDGE	TIRES	WHITE GOODS	ASBESTOS	OTHER	TOTAL
December-14	725.68	6.56	0.00	0.00	6.56	0.00	9.87	0.00	0.00	0.00	748.67
January-15	561.28	8.17	0.00	0.00	0.00	0.00	8.40	0.00	0.00	0.00	577.85
February-15	540.13	0.67	0.00	0.00	0.00	0.00	7.36	0.00	0.00	0.00	548.16
March-15	745.82	32.85	0.00	0.00	0.00	0.00	7.67	0.00	0.00	0.00	786.34
April-15	617.81	6.89	0.00	0.00	0.00	0.00	16.89	0.00	0.00	0.00	641.59
May-15	719.68	29.84	0.00	0.00	0.00	0.00	7.90	0.00	0.00	0.00	757.42
June-15	801.65	14.70	0.00	0.00	0.00	0.00	11.43	0.00	0.00	0.00	827.78
July-15	896.70	20.13	0.00	0.00	0.00	0.00	10.89	0.00	0.00	0.00	927.72
August-15	912.17	11.16	0.00	0.00	0.00	0.00	11.04	0.00	0.00	0.00	934.37
September-15	794.64	19.96	0.00	0.00	0.00	0.00	10.80	0.00	0.00	0.00	825.40
October-15	768.48	3.84	0.00	0.00	0.65	0.00	9.85	0.00	0.00	0.00	782.82
November-15	736.71	5.39	0.00	0.00	0.00	0.00	8.30	0.00	0.00	0.00	750.40
TOTAL	8,820.75	160.16	0.00	0.00	7.21	0.00	110.53	0.00	0.00	0.00	9,098.65

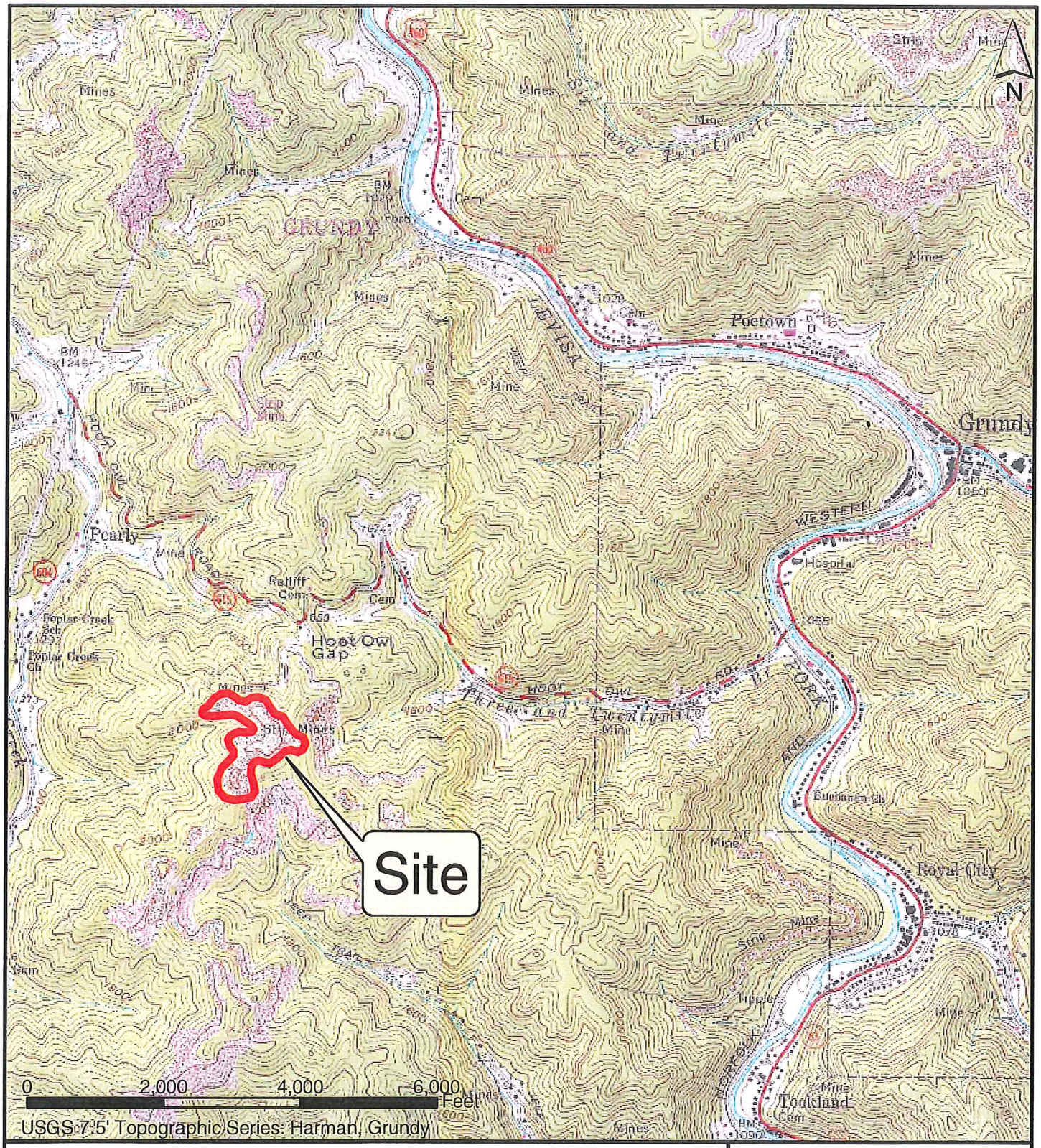
BUCHANAN COUNTY 2014-2015 TONNAGE REPORT

	MSW	CONST DEMOL	INDST.	MEDICAL	YARD	SLUDGE	TIRES	WHITE GOODS	ASBESTOS	OTHER	TOTAL
December-14	1,188.46	8.70	0.00	0.00	1.88	0.00	8.87	0.00	0.00	0.00	1207.91
January-15	998.19	15.84	0.00	0.00	0.00	0.00	25.17	0.00	0.00	0.00	1039.2
February-15	939.34	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.00	939.85
March-15	1,288.81	57.10	0.00	0.00	1.42	0.00	22.69	0.00	0.00	0.00	1370.02
April-15	1,226.54	16.14	0.00	0.00	0.97	0.00	8.97	0.00	0.00	0.00	1252.62
May-15	1,192.28	3.31	0.00	0.00	6.41	0.00	6.24	0.00	0.00	0.00	1208.24
June-15	1,387.36	4.67	0.00	0.00	2.54	0.00	12.78	0.77	0.00	0.00	1408.12
July-15	1,381.63	30.89	0.00	0.00	0.88	0.00	14.06	0.00	0.00	0.00	1427.46
August-15	1,435.28	16.32	0.00	0.00	1.22	0.00	7.50	0.00	0.00	0.00	1460.32
September-15	1,314.43	110.03	0.00	0.00	0.14	0.00	15.85	0.00	0.00	0.00	1440.45
October-15	1,277.01	21.74	0.00	0.00	4.83	0.00	4.82	0.00	0.00	0.00	1308.4
November-15	1,277.11	20.06	0.00	0.00	6.80	0.00	10.05	0.00	0.00	0.00	1314.02
TOTAL	14,906.44	304.80	0.00	0.00	27.09	0.00	137.51	0.77	0.00	0.00	15,376.61

RUSSELL COUNTY 2014-2015 TONNAGE REPORT

	MSW	CONST DEMOL	INDST.	MEDICAL	YARD	SLUDGE	TIRES	WHITE GOODS	ASBESTOS	OTHER	TOTAL
December-14	1,132.90	22.65	5.51	0.00	6.97	0.00	7.63	0.05	0.00	0.00	1,175.71
January-15	988.57	116.91	6.33	0.00	3.09	0.00	12.63	0.00	0.00	0.00	1,127.53
February-15	891.76	6.32	6.50	0.00	0.00	0.00	6.50	0.00	0.00	0.00	911.08
March-15	1,418.22	26.99	9.32	0.00	9.03	0.00	9.04	5.31	0.00	0.00	1,477.91
April-15	1,239.02	51.15	7.01	0.00	4.86	0.00	7.16	3.81	0.00	0.00	1,313.01
May-15	1,273.59	41.38	4.74	0.00	29.39	0.00	13.17	8.50	0.00	0.00	1,370.77
June-15	1,255.48	74.92	9.14	0.00	58.37	0.00	9.58	3.60	0.00	0.00	1,411.09
July-15	1,257.81	80.79	10.27	0.00	30.57	0.00	10.38	2.98	0.00	0.00	1,392.80
August-15	1,227.57	109.41	13.88	0.00	2.93	0.00	9.01	5.20	0.00	0.00	1,368.00
September-15	1,096.04	65.74	14.62	0.00	14.52	0.00	8.50	3.41	0.00	0.00	1,202.83
October-15	1,101.62	54.24	10.58	0.00	10.32	0.00	10.66	3.24	0.00	0.00	1,190.66
November-15	1,125.03	33.21	9.67	0.00	0.00	0.00	7.34	7.16	0.00	0.00	1,182.41
TOTAL	14,007.61	683.71	107.57	0.00	170.05	0.00	111.60	43.26	0.00	0.00	15,123.80

TOTAL TONNAGE FOR 3 COUNTIES	39,599.06



USGS 7.5' Topographic Series: Harman, Grundy

Location Map

Buchanan County Closed Landfill - Permit #218

Buchanan County, Virginia

SCALE: 1" = 2000'

PLAN NO. B03205-01

Draper Aden Associates

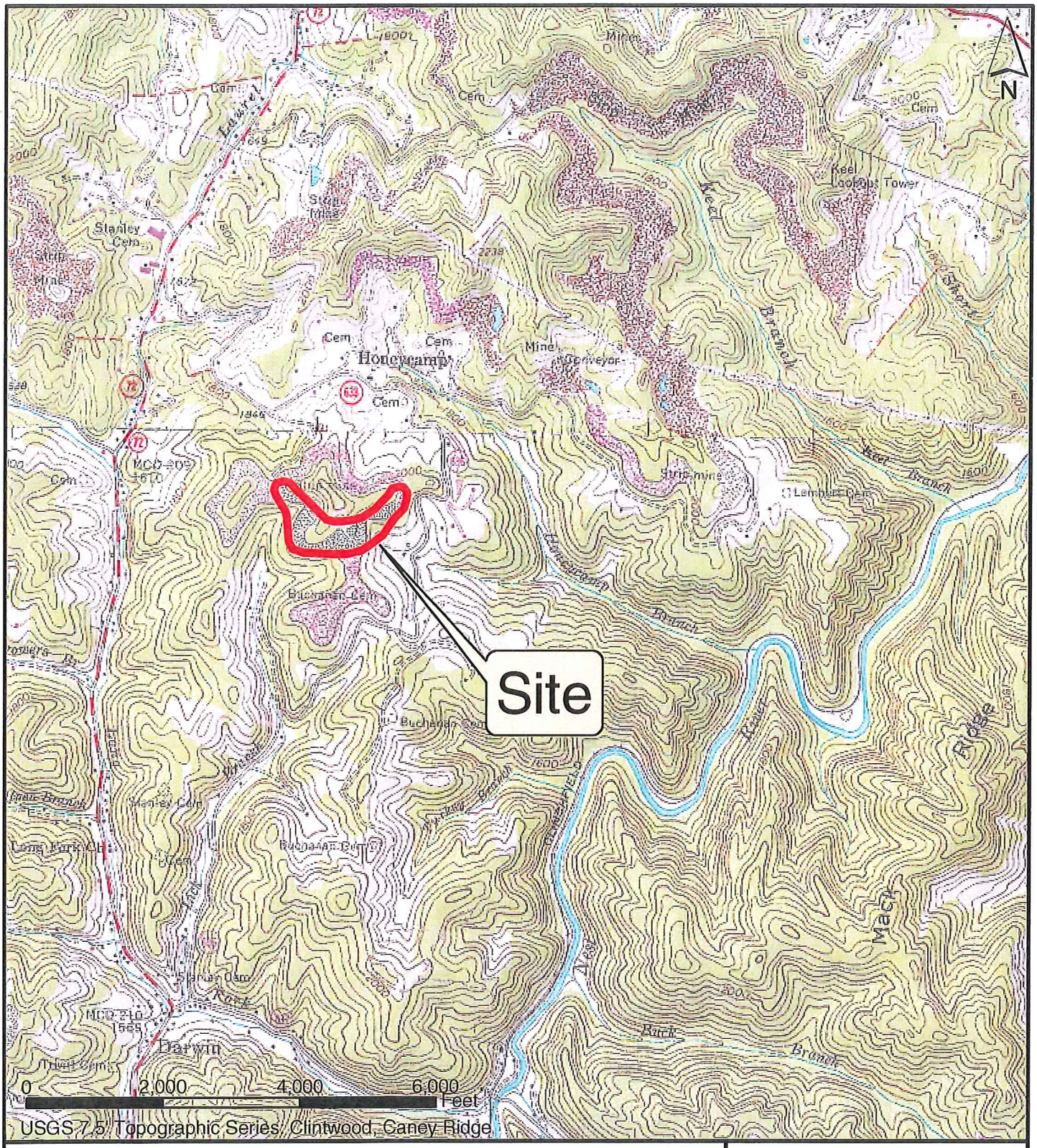
Engineering ◆ Surveying ◆ Environmental Services

2206 South Main Street
Blacksburg, VA 24060
540-552-0444 Fax: 540-552-0291

Richmond, VA
Charlottesville, VA
Hampton Roads, VA
Raleigh-DEurham, NC

DESIGNED	
DRAWN	MF
CHECKED	LC
DATE	05-10-04

FIGURE 3



Location Map

Dickenson County Closed Landfill - Permit #261

Dickenson County, Virginia

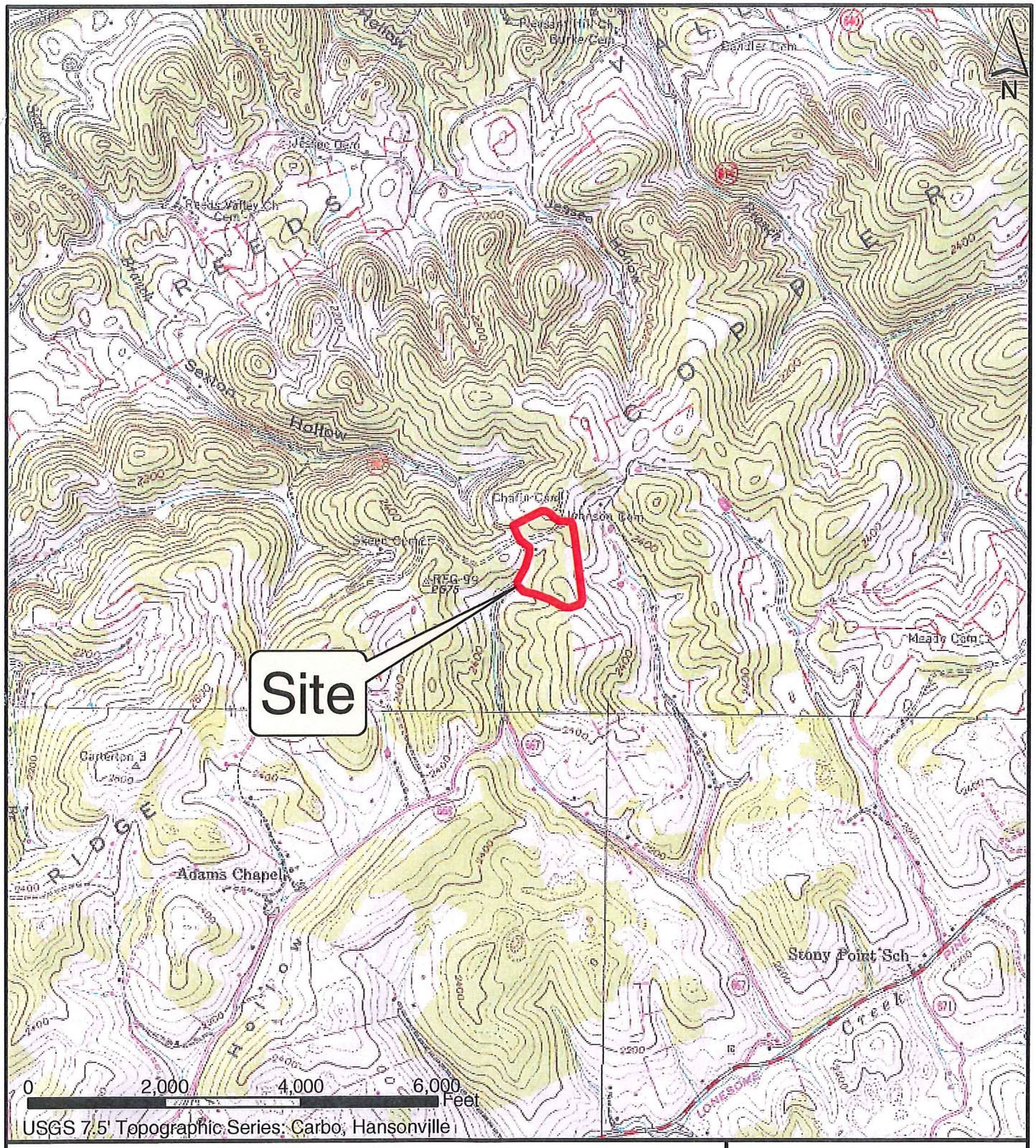
SCALE: 1" = 2000'

PLAN NO. B03205-01

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services
2206 South Main Street
Blacksburg, VA 24060
540-552-0444 Fax: 540-552-0291
Richmond, VA
Charlottesville, VA
Hampton Roads, VA
Raleigh-DEurham, NC

DESIGNED	
DRAWN	MF
CHECKED	LC
DATE	05-10-04

FIGURE 4



Location Map

Russell County Closed Landfill - Permit #515

Russell County, Virginia

SCALE: 1" = 2000'

PLAN NO. B03205-01

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services
2206 South Main Street
Blacksburg, VA 24060
540-552-0444 Fax: 540-552-0291
Richmond, VA
Charlottesville, VA
Hampton Roads, VA
Raleigh-DEurham, NC

DESIGNED	
DRAWN	MF
CHECKED	LC
DATE	05-10-04

FIGURE 5

Appendix 3

Summary of Previously Permitted Landfills and Location Maps

LANDFILL PERMIT NUMBER	OWNER	TYPE OF LANDFILL	ACREAGE	DATE PERMITTED	DATE CLOSED	ADDITIONAL INFORMATION (Monitoring status, cap type, current usage)
052	Buchanan County	Sanitary	Approx. 10	01/01/1972	10/12/1982	Permit revoked 10/1982 No monitoring required 2' soil cover-closure cap
472	Beaver Construction Landfill	CDD	0.5	05/30/1985	05/27/1987	Final receipt of waste 07/1985 Permit revoked 05/1987 No monitoring required
218	Buchanan County	Sanitary	28.8	01/10/1977	10/17/1995	Post-closure care (groundwater, gas) GCL closure cap
578	Buchanan County	Sanitary	Never Constructed	1994	Never Constructed	Permitted but never constructed
019	Dickenson County	Sanitary	N/A	09/13/1971	10/12/1982	Permit Revoked No monitoring required 2' soil cover-closure cap
261	Dickenson County	Sanitary	68	11/14/1978 Amended 1/23/1979	10-30/1996	Post Closure Care (groundwater, gas) synthetic closure cap
250	Lebanon Landfill	Sanitary	1.3	06/23/1978	07/10/1978	Permit Revoked 10/1982 Fly ash disposal site No monitoring required
018	Russell County Carbo Site	Sanitary	10-12	09/13/1971	10/12/1982	Permit Revoked No monitoring required 2' soil cover-closure cap

258	Russell County Copper Ridge	Sanitary	79.1	09/27/1978	12/30/1997	Post Closure Care (Groundwater, gas) GCL closure cap
499	Russell County (No permit record)	Sanitary	N/A	N/A	N/A	N/A
515	Russell County	Sanitary	30.16	11/10/1987 Amended 11/27/89	11/06/03	Post Closure Care (groundwater, gas) GCL closure cap

Appendix 4

DEQ Recycling Reporting Form

Commonwealth of Virginia
Locality Recycling Rate Report
Calendar Year 2016

DEQ Form 50-30 (Revised December 2016)

Email completed form to: virginia.butler@deq.virginia.gov

Solid Waste Planning Unit Information (Enter in Rows 4 - 14.)

Solid Waste Planning Unit	Cumberland Plateau Regional WM Authority
Preparer's Name	Toby F. Edwards
Preparer's Title	Director of Waste Services
Address Line 1	P.O. Box 548 Lebanon, VA 24266
Address Line 2	
Address Line 3	
Phone Number	276-889-1778
Email address	tobyedwards@bvu.net
Date	4/17/2017
Total Population for SWPU	67,347
Population Density for SWPU	
Mandated Recycling Rate (15% or 25% will auto calculate)	15%
Reporting Frequency	Every 4 years

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

Principal Recyclable Materials (PRM)

PRM Material	Tons recycled
Paper	2,119
Metal	7,341
Plastic	543
Glass	0
Commingled	0
Yard Waste	370
Waste Wood	0
Textiles	110
Waste Tires	879
Used Oil	665
Used Oil Filters	49
Used Antifreeze	36
Batteries	241
Electronics	11
Inoperative Motor Vehicles	183
Other (Specify)	

MSW Disposed	
Household Waste	33,799
Commercial Waste	2,944
Institutional Waste	169
Other	4,062
Total MSW	**40,974**

Other (Specify)	
Total PRM in Tons	**12,547**

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

Credits Recycling Residue

Facility/Operation	Material	Tons
Total		0

Credits Solid Waste Reused

Reuse Method	Material	Tons
Total		0

Credits Non-MSW recycled

Recycling Method	Material	Tons
		0
Total		0
CREDITS TOTAL		0

Credit for Source Reduction Program (SRP)
SRP does not apply enter "0"
SRP does apply enter "2"

2%

Recycling rates auto calculate.

Base Recycling Rate	**23.4%**	Base Rate
Adjusted Recycling Rate	**23.4%**	Rate with credits
Adjusted Recycling Rate + SRP	**25.4%**	Credits + SRP
Credit Max Allowed Base +5	**28.4%**	
Final Recycle Rate	**25.4%**	Final Recycle Rate

Sources for PRM Data *Example: Permit #112, County Landfill*	

Other Sources for collected data *Example: Walmart/Target*	
Comments: Data is collected by the authority's member counties recycling coordinators.	
Additional Contacts:	

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

Commonwealth of Virginia Locality Recycling Rate Report For Calendar Year 2014

Contact Information

Reporting Solid Waste Planning Unit: Cumberland Plateau RWMA

Person Completing This Form: Toby Edwards

Title: Director of Waste Services

Address:	P.O. Box 548	Lebanon	VA	24266
	Street/P.O. Box	**City**	**State**	**Zip**

Phone #: (276) 889-1778 **Fax #:** (276) 889-5732

Email Address: tobyedwards@bvu.net

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

Town of Grundy

Towns of Clinchco, Clintwood and Haysi

Towns of Cleveland, Honaker and Lebanon

Counties of Buchanan, Dickenson and Russell

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

Toby B. Edwards Director of Waste Services 4/1/15

Authorized Signature Title Date

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

Locality Recycling Rate Report — For Calendar Year 2014

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

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

20,672.19	/	20,672.19	+	48,417	X 100 =	30	%

Step 2: CREDITS calculation

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

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

20,672.19	+	0	/	20,672.19	+	0	+	48,417	X 100 =	30	%

Step 4: [X] **Source Reduction Credit does not apply; or**

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

0	%	+ 2%	=	30	%

Step 5: Final Recycling Rate* for Solid Waste Planning Unit = 30 **%**

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

Locality Recycling Rate Report
PART B: DATA

For Calendar Year 2014

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

PRM TYPE	RECYCLED AMOUNT (TONS)
Paper	1,703.76
Metal	15,720.92
Plastic	61.97
Glass	0
Commingled (also known as Single Stream)	0
Yard Waste (composted or mulched)	173
Waste wood (chipped or mulched)	5
Textiles	100
Tires	516.35
Used Oil	1,428.57
Used Oil Filters	9.8
Used Antifreeze	13.57
Batteries	525.22
Electronics	23.88
Inoperative Motor Vehicles (see guidance)	264
Other (specify: _____)	
Other (specify: _____)	
TOTAL PRMs	20,672.19 **(PRMs)**

(Enter Total on Page 2, Step 1)

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

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

MATERIAL DESCRIPTION	FACILITY/OPERATION	TONS OF MATERIAL
_____	from _____	_____
_____	from _____	_____
_____	from _____	_____
TOTAL RECYCLING RESIDUE		0

(Enter Total on Page 2, Step 2 a)

B. Solid Waste Re-Used

MATERIAL DESCRIPTION	REUSE METHOD	TONS OF MATERIAL
	TOTAL SOLID WASTE REUSED	0

(Enter Total on Page 2, Step 2 b)

C. Non-Municipal Solid Waste (MSW) Recycled

MATERIAL DESCRIPTION	RECYCLING METHOD	TONS OF MATERIAL
	TOTAL NON-MSW RECYCLED	0

(Enter Total on Page 2, Step 2 c)

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

SRP description: _____

_____

_____

SRP description: _____

_____

_____

SRP description: _____

_____

_____

(Certify on Page 2, Step 4)

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

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

Locality Recycling Rate Report **For Calendar Year 2014**

MSW TYPE	TOTAL AMOUNT DISPOSED (TONS)
Household	20,672.19
Commercial	
Institutional	
Other (DO NOT INCLUDE INDUSTRIAL WASTES)	
TOTAL MSW DISPOSED	20,672.19 **(Enter Total on Page 2, Step 1 and Step 3)**

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

Credits Worksheet

I. Reuse of any Solid Waste

√	Material description	Tons
___ PRM		
___ PRM		
___ PRM		
___ Industrial		
___ Construction		
___ Demolition		
___ Debris		
___ Other		
___ Other		
___ Other		
	TOTAL TONS	0

(enter data on Page 4, Solid Waste ReUsed)

II. Recycling of any Non-Municipal Solid Waste

√	Material description	Tons
___ Industrial		
___ Construction		
___ Demolition		
___ Debris		
___ Other		
___ Other		
___ Other		
	TOTAL TONS	0

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

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

# of vehicles removed/reimbursement received	264
Average tonnage per vehicle	X 1 Ton each
Total Tons	264

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

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

Locality Recycling Rate Report — For Calendar Year 2014

Part C: Recycling Rate Report Instructions

Amended Regulations for the Development of Solid Waste Management Plans (9 VAC 20-130-10 et seq.) require that Solid Waste Planning Units (SWPUs) in the Commonwealth develop complete, revised solid waste management plans. Section 9 VAC 20-130-120 B & C of the Regulations requires that a minimum recycling rate of the total municipal solid waste generated annually in each solid waste planning unit be maintained. It also requires that the plan describe how this rate shall be met or exceeded and requires that the calculation methodology be included in the plan. Section 9 VAC 20-130-165 D establishes that every solid waste management planning unit with populations over 100,000 shall submit to the department by April 30 of each year, the data and calculations required in 9 VAC 20-130-120 B & C for the preceding calendar year. SWPUs with populations of 100,000 or less are only required to report every 4 years (CY years 2016 and forward).

NOTE: ONLY RECYCLING RATE REPORTS FROM AN APPROVED SOLID WASTE PLANNING UNIT (SWPU) WILL BE ACCEPTED FOR PROCESSING. JURISDICTIONS WITHIN A SWPU MUST SUBMIT THEIR RECYCLING DATA TO THE SWPU FOR INCORPORATION INTO THE ANNUAL REPORT.

It is requested that all amounts included on the form be listed in **tons (2,000 pounds)**, rounded to the nearest whole ton. If actual weights are not known, volumes can be converted to weight estimates. To assist you with these estimates, a standardized volume-to-weight conversion table is attached.

Contact Information Section: Please provide information on the Reporting SWPU and information on the individual completing this form. Under Member Governments, please list the local governments identified in the applicable solid waste management plan.

Calculated Recycling Rate Section: Using the formulae provided, calculate your recycling rates for the reporting period from information identified in the Recycling Rate Calculations Section.

Signature Block Section: Please provide an authorized signature prior to submitting the completed form. Authorized signatories include Executive Officer, Administrator, or other legally designated representative of the SWPU reporting entity.

Recycling Rate Calculations Section: Please provide the requested information:

Part I: Principal Recyclable Material (PRM) - Report the amount in tons of each PRM collected for recycling in the named jurisdiction(s) during the reporting period. PRMs include paper, metal, plastic, container glass, commingled, yard waste, waste wood, textiles, tires, used oil, used oil filters, used antifreeze, batteries, electronics, and other materials approved by the Director taken from the Municipal Solid Waste (MSW) generation. A one ton credit may also be entered for each inoperable motor vehicle for which a locality receives reimbursement from the Virginia Department of Motor Vehicles under §46.2-1207 of the *Code of Virginia*. The total weight in **TONS** of all PRMs collected for recycling is represented as **PRMs** in the Recycling Rate Calculation.

Part II: Credits - Report the amount in **TONS** of each material for which recycling credit is authorized in §10.1-1411.C of the *Code of Virginia*: (i) one ton for each ton of recycling residue generated in Virginia and deposited in a landfill permitted under §10.1-1408.1 of the *Code of Virginia*; (ii) one ton for each ton of any solid waste material that is reused; and, (iii) one ton for each ton of any non-municipal solid waste that is recycled. The total weight in **TONS** of all material for which credits are authorized is represented as **CREDITS** in the Recycling Rate Calculation. A credit of two percentage points of the minimum recycling rate mandated for the Solid Waste Planning Unit (SWPU) may be taken for a source reduction program that is implemented and identified in its Solid Waste Management Plan. Total credits may not exceed five percentage points above the Base Recycling Rate achieved by the SWPU.

Part III: Total Municipal Solid Waste (MSW) Disposed: Report the total amount in **TONS** of MSW that was disposed of by the Solid Waste Planning Unit (SWPU) during the reporting period for each of the source categories (Household, Commercial, Institutional, and Other). For the purpose of this report, "disposed," means delivery to a permitted sanitary landfill or waste incinerator for disposal, and excludes industrial wastes. Industrial waste and by-products should not be included in the MSW or Recycling calculation. The total weight in tons of MSW disposed is represented as **MSW Disposed** in the Recycling Rate Calculation.

Locality Recycling Rate Report Volume to Weight Conversion Table

Material	Volume	Weight in Pounds
Metal		
Aluminum Cans, Whole	One cubic yard	50-74
Aluminum Cans, Flattened	One cubic yard	250
Aluminum Cans	One full grocery bag	1.5
Ferrous Cans, Whole	One cubic yard	150
Ferrous Cans, Flattened	One cubic yard	850
Automobile Bodies	One vehicle	2,000
Paper		
Newsprint, Loose	One cubic yard	360-800
Newsprint, Compacted	One cubic yard	720-1,000
Newsprint	12" stack	35
Corrugated Cardboard, Loose	One cubic yard	75-100
Corrugated Cardboard, Baled	One cubic yard	1,000-2,000
Plastic		
PETE, Whole, Loose	One cubic yard	30-40
PETE, Whole, Loose	Gaylord	40-53
PETE, Whole, Baled	30" x 62"	500
Film, Baled	30" x 42" x 48"	1,100
Film, Baled	Semi-Load	44,000
Film, Loose	Standard grocery bag	15
HDPE (Dairy Only), Whole, Loose	One cubic yard	24
HDPE (Dairy Only), Baled	32" x 60"	400-500
HDPE (Mixed), Baled	32" x 60"	900
Mixed PET & Dairy, Whole, Loose	One cubic yard	32
Mixed PET, Dairy & Other Rigid (Whole, Loose)	One cubic yard	38
Mixed Rigid, No Film	One cubic yard	49
Glass		
Glass, Whole Bottles	One cubic yard	600-1,000
Glass, Semi-Crushed	One cubic yard	1,000-1,800
Glass, Crushed (Mechanically)	One cubic yard	800-2,700
Glass, Whole Bottles	One full grocery bag	16
Glass, Uncrushed to Manually Broken	55 gallon drum	125-500
Arboreal		
Leaves, Uncompacted	One cubic yard	200-250
Leaves, Compacted	One cubic yard	300-450
Leaves, Vacuumed	One cubic yard	350
Wood Chips	One cubic yard	500
Grass Clippings	One cubic yard	400-1,500
Other		
Battery (Heavy Equipment)	One	60
Battery (Auto)	One	35.9
Used Motor Oil	One gallon	7.4
Used Oil Filters (Uncrushed)	55 gallon drum	66 Lbs./Used Oil + 110 Lbs./Ferrous Metal
Used Oil Filters (Crushed)	55 gallon drum	16.5 Lbs./Used Oil + 368 Lbs./Ferrous Metal
Tire - Passenger Car	One	20
Tire - Truck, Light	One	35
Tire - Semi	One	105
Antifreeze	One gallon	8.42
Food Waste, Solid & Liquid Fats	55 gallon drum	412
Electronics: CRT/CPU/LapTop/TV	Each (avg wt from NCER)	38/26/8/49 respectively
This Table For General Guidance Only.		

Appendix 5

Recycling Markets

Apr-04

Recyclable Materials Market Survey

COMPANY NAME & ADDRESS	ALUMINUM	GLASS	ONP	PLASTIC	MIXED PAPER	METALS	CORRUGATED	BATTERIES	OTHER
Herb and Metal 110 Purma R Road Elizabethton, TN 423-543-1991	$0.45/lb.	no	no	no	no	steel $3.75/100 lbs. tin $2.75/100 lbs.	no	no	
Wheets Recycling P.O. Box 225 Ewing, VA 276-445-5349	$0.40/lb.	no	no	no	no	copper #1 $0.85/lb. copper #2 $0.75/lb.	no	$0.50/ each	Will accept newspaper, cardboard, and baled plastic but does not pay for it.
Tri-City Waste Paper 1501 Riverport Road Kingsport, TN 37660 423-246-7801	no	no	$50/ton	no	$35/ton	no	$50/ton		clean white paper $65/ton chipboard $25/ton they are planning to expand their list of acceptables in the future
Profile Products LLC 60 Davt cockett Park Road Limestone, TN. 432-257--2051	no	no	see other	no	$45-55/ton	no	see other	no	accepts ground wood paper such as newspapaer, magazines, mixed paper
Greenville Iron Paper 315 Old Stage Rd. Greenville, TN 37745 423-639-1562	old sheet/cast $0.42/lb. cans $0.52/lb.	no	no	no	no	steel $350/100 lbs. tin $275/100 lbs. junk cars $375/ 100 lbs.	$2.00/100 lbs.	no	
Metal 110 Purma R Rd Johnson City, TN 37601	$0.45/lb. Scrape $0.50/lb. Cans	no	no	no	no	steel $375/100 lbs. tin $275/100 lbs. junk cars $375/ 100 lbs. cooper $0.90/lb. brass $0.335/lb stainless steel $0.35/lb. radiators $0.40/lb.	no	no	
Greenbrier Recycling Fairlea, WV 304-645-4232	$0.42/lb.								Will accept newspaper, magazines, office paper, cardboard, plastic #1 & #2, steel cans and aluminum foil - do not pay

Appendix 6

Sampling of Public Education Materials

Draper Aden Associates
Engineering • Surveying • Environmental Services

RECORD OF COMMUNICATION

Project Name:	Cumberland Plateau Regional SWMP	**Date: 4/13/04**	**Time: 10 am**
Job No.:	B 035050-01	☐ **Incoming**	☐ **Outgoing**
Talked with:	Eugene Mullins, Litter control office	**Recorded by:**	L Barber
Company:	Dickenson County	**Phone No.:**	276-835-8806
Topic:	Public Education – litter and recycling		
cc:			

Out of the litter office, they manage to visit all the public school classrooms once a year with a presentation about litter and recycling. They do produce some literature they hand out to the kids. They also have a booth at the county fair with things to give away to folks publicizing the programs.

They have an Adopt-a-Highway program and Adopt-a-Steam program that help with litter cleanup. In addition, they maintain a website http://www.dcct.naxs.com/ publicizing their Clean Up activities and illegal dumping information. There is a group called the Clean Team made up of civic group that do cleanup. The site also has information on the Adopt a highway program.

They do have the probation program with the courts that sentences people to community service cleaning up 1-2 stretches of Highway.

The office has been do this for two and a half years.

Next RCEC Meeting: Wednesday, March 3, 2004

Russell County Environmental Council

PURPOSE: The Russell County Environmental Council (RCEC) is a voluntary organization whose purpose is to help Russell County programs such as recycling, litter control, beautification, and water quality.

RCEC will address any other environmental issue that may effect the citizens of Russell County.

RCEC EVENTS FOR FY 2003-2004

Russell County Fair: Exhibitor August 29 - September 6, 2003

School Beautiful: Fall 2003 and Spring 2004

Fall Judging - Completed October 2003

Spring Judging - Scheduled for Late March or Early April 2004

Trash Cart-to-Art: Scheduled for April 2004

2004 Contest Stats- None

Clinch River Clean Up: Scheduled for April-May 2004

2003 Clean-Up Totals = 15 sites, 254 Volunteers, 1,536 bags of trash collected!

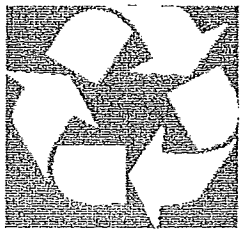
Meeting Information

When? Quarterly. 1st Wednesday of the month

Where? Bonanza Restaurant in Lebanon, VA

Time? 12 o'clock noon

Next RCEC Meeting: Wednesday, March 3, 2004



Want to get involved?

We are always in need of volunteers. If you live in Russell County and are interested in getting involved with any of our programs call (276) 889-0968.

Choose a button to your left to explore the Dickenson County's Clean Team's web-site

April is County Wide Cleanup Month

CALL THE LITTER CONTROL OFFICE AT: #835-8806 FOR MORE DETAILS

Draper Aden Associates
Engineering • Surveying • Environmental Services

RECORD OF COMMUNICATION

Project Name:	Cumberland Plateau Solid Waste Mang. Plan	**Date:** 4-5-04	**Time:** 2:30pm
Job No.:	B03205-01	☐ **Incoming**	x☐ **Outgoing**
Talked with:	Angie White	**Recorded by:**	L. Barber
Company:	Russell County – Litter office	**Phone No.:**	276-889-0968
Topic:	Public Education on litter/recycling		
cc:			

Angie works with the Environmental Council to do education for Buchanan County. She will send via email a list of what she is doing.

Received 4-6-04

Russell County Environmental Council
FY 2003-2004 Activities

The Russell County Environmental Council (RCEC) is a voluntary organization whose purpose is to assist w/ Russell County environmental programs such as, litter awareness/prevention education, recycling, beautification and water quality.
Council activities are primarily funded through a grant provided by the VA DEQ Litter Grant. The Clinch Valley SWCD staff coordinates Council activities.

Clinch River Clean-Up
Annual county- wide clean-up taking place April-May. Site coordinators lead a group of volunteers that clean a specific site in the county. The RCEC provides trash bags, gloves and trash "grabbers". Volunteers are also given a promotional event t-shirt when clean-up is complete.
2003 Totals = 1536 bags collected w/ 254 volunteers

Council Meetings
The Council meets every quarter to discuss ongoing projects, environmental issues, etc. A guest speaker is also invited to each meeting.
This year speakers have included:
John Watson, VDOT – Adopt-a-Highway Program
Angela White, Clinch Valley SWCD – Erosion and Sediment Control Program
David Reichert, DCR Division of Natural Heritage – Ongoing Projects

Russell County Fair Booth
Annually, co-sponsor with Clinch Valley Soil & Water Conservation District an informational booth at the Russell County Fair.

School Beautiful Program

School Beautification Award – A panel of judges representing RCEC is appointed each year to judge the schools in both the fall and spring of each school year. Points are awarded on the overall appearance and cleanliness in the following areas: campus grounds, entry-way, office suite, cafeteria, classrooms, halls, library and restrooms. Monetary awards and certificates are awarded to winners. (15 schools participate)

School Beautiful Projects/Activities Portfolio Award – Schools submit a portfolio/scrapbook that showcases the various projects/activities that directly relate to conservation education, environmental awareness and school beautification.
Monetary awards and certificates are awarded to winning schools. (15 schools participate)

Trash Cart-to-Art Contest
Annual exhibition of art created from "trash". Designed to increase public awareness and help install a recycling ethic into the daily routine of people within the community. (9 classes, 8 categories) (Pre-school thru Adult)
2003 – 69 entries

Other
The Council also funds educational/promotional items that are distributed or utilized when the Clinch Valley SWCD conducts school presentations, etc

Appendix 7

Questionnaire and Responses

Cumberland Plateau Regional Waste Management Authority
Solid Waste Planning
Questionnaire

The Cumberland Plateau RWMA was formed to help coordinate and finance the management of Solid Waste which included the construction and operation of transfer stations for Buchanan, Dickenson and Russell Counties. The bonds for the construction and start up will be paid off in 2008. The Authority also holds the contract with BFI for hauling and disposal of municipal solid waste, which expires in 2008. The following questions are meant to help our local governments and the Authority brainstorm future actions and relationships. Thank you for your help.

A. Please rank the following community services from 1 – 9 in order of perceived importance by your citizens.

____ Schools	____ Police	____ Economic Development
____ Water	____ Fire	____ Roads
____ Sewer	____ Solid Waste	____ Parks and Recreation

B. In your mind, what are the top three issues which impact economic growth in the region?

1. _____

2. _____

3. _____

C. Solid waste services can encompass a wide range of activities. Please check those activities that are currently provided in your locality. Based on your knowledge or belief, please denote Authority services with an 'A'; locality provided services with an 'L'; and services provided by others with an 'O'.

All Waste

____ **Collection**
- ___Door-to-door
- ___Green boxes
- ___Staffed collection sites

____ **Disposal**
- ___Existing landfill
- ___Transfer station
- ___Private landfill

Yard Waste
- ____ Collection
- ____ Disposal
- ____ Mulching

Sludge Handling
- ____ Land application
- ____ Disposal
- ____ Composting

Recycling
- ____ Newspaper
- ____ Cardboard
- ____ White paper
- ____ Glass
- ____ Beverage/food cans
- ____ Plastics
- ____ White goods
- ____ Other metal
- ____ Oil

Other
- ___Litter Prevention
- ___Computer Disposal
- ____Waste Reduction
- ____Household Hazardous Waste Collection

D. Please check those activities that your citizens or government would or may want offered in the future in addition to those already provided as identified in Item 4 above. Check all that apply.

All Waste

____ **Collection**
- ___Door-to-door
- ___Green boxes
- ___Staffed collection sites

____ **Disposal**
- ___Existing landfill
- ___Transfer station
- ___Private landfill

Yard Waste
- ____ Collection
- ____ Disposal
- ____ Mulching

Sludge Handling
- ____ Land application
- ____ Disposal
- ____ Composting

Recycling
- ____ Newspaper
- ____ Cardboard
- ____ White paper
- ____ Glass
- ____ Beverage/food cans
- ____ Plastics
- ____ White goods
- ____ Other metal
- ____ Oil

Other
- ____Litter Prevention
- ____Waste Reduction
- ____Computer Disposal
- ____Household Hazardous Waste Collection

E. If you could only make one change in the current Solid Waste system, what would it be?

_____

_____

_____

F. Currently, the Authority holds the bonds for the transfer stations and the contracts with BFI. The bond obligation is over in 2008 and the contract with BFI expires the same year. At that time, either the Authority could renew the hauling and disposal contract and continue to assist with various solid waste activities in your community, or the Authority could turn the coordination and contracts back to the local governments and cease to exist. Please indicate your preference:

____In 2008, have the Authority renew hauling and disposal contracts and continue as is or with an expanded role.

____In 2008, disband the Authority and allow each local government to handle its own solid waste services.

G. Other Solid Waste authorities in Virginia have indicated that they have been successful in expanding various solid waste programs because of the increased volumes and participation of a region. What programs could you see our Authority expanding into? Check all that apply.

Recycling

____ Cardboard
____ Newspaper
____ Glass
____ Plastic
____ Beverage/food cans
____ White goods/scrap metal
____ Used oil
____ Anti-freeze

Collection

____ Door-to-door
____ Staffed convenience centers
____ Commercial

Other

____ Yard waste/sludge composting
____ Yard waste mulch
____ _____
____ _____
____ _____

H. Solid waste disposal services are generally paid for by the localities from the General Fund. Commercial businesses and industries do not totally pay for their solid waste services as they do in other localities in Virginia, nor do the citizens. If some form of billing was implemented, the additional funds raised could be used to offset the funding from the General Funds and/or be used for modifications to the transfer stations, improvements to collection or enhanced recycling. Please check the various billing scenarios below that you believe your citizens might support, recognizing that many details would need to be worked out.

___Tipping fee assessed to all users of transfer station.
___Tipping fee assessed to only commercial businesses at transfer station
___Tipping fee assessed to only industries at transfer station
___Tipping fee assessed citizens bringing waste directly to the transfer station
___Monthly charge to all residents or households.
___Monthly charge to all industries and businesses
___Continue use of General Fund; and partial tipping fees.

I. Please offer any comments below relative to the existing or future solid waste services.

_____

_____

_____

Thank you for your help.

Person completing questionnaire (optional):

_____

Date:

_____

Please return to:

Cumberland Plateau Regional Waste Management Authority
P.O. Box 548
Lebanon, Virginia 24266

TABLE 1
CUMBERLAND PLATEAU REGIONAL WASTE MANAGEMENT AUTHORITY
SOLID WASTE PLANNING QUESTIONNAIRE
SUMMARY OF ANSWERS TO QUESTION A - RANK COMMUNITY SERVICES

SERVICE	RANKING POINTS	RANKING BY TOTAL
Schools	53	1
Water	63	2
Sewer	116	6
Police	102	5
Fire	127	7
Solid Waste	133	8
Economic Development	86	4
Roads	78	3
Parks and Recreation	177	9

NOTE:

1. Several questionnaires were eliminated from this summary as the question had not been correctly completed.

TABLE 2
CUMBERLAND PLATEAU REGIONAL WASTE MANAGEMENT AUTHORITY
SOLID WASTE PLANNING QUESTIONNAIRE
SUMMARY OF ANSWERS TO QUESTION B - Top 3 issues with Economic Development

ISSUE	RANKING			TOTAL	% OF TOTAL
	1	2	3		
Roads	9	1	5	15	23.8%
Water and Sewer	1	3	1	5	7.9%
Infrastructure	3	2	3	8	12.7%
Schools / Education	5	3	1	9	14.3%
Work Force	1	6	1	8	12.7%
Economic Development / Jobs		3	4	7	11.1%
Land / Geography		1	3	4	6.3%
Housing		2		2	3.2%
Finances			2	2	3.2%
Solid Waste			1	1	1.6%
Declining mining	1			1	1.6%
Progressive Attitude	1			1	1.6%
TOTAL				63	100.0%

TABLE 3
CUMBERLAND PLATEAU REGIONAL WASTE MANAGEMENT AUTHORITY
SOLID WASTE PLANNING QUESTIONNAIRE
SUMMARY OF ANSWERS TO QUESTION D - What services would your locality like in addition to the existing services

SERVICE	# of Responses	% of Total Questionnaires Received
COLLECTION		
Door to door	6	26.1%
Green boxes	3	13.0%
Staffed Convenience Centers	5	21.7%
YARD WASTE		
Collection	9	39.1%
Disposal	6	26.1%
Mulching	7	30.4%
SLUDGE HANDLING		
Land Application	3	13.0%
Disposal	2	8.7%
Compost	3	13.0%
RECYCLING		
Newspaper	8	34.8%
Cardboard	9	39.1%
White Paper	8	34.8%
Glass	10	43.5%
Beverage and food cans	10	43.5%
Plastics	11	47.8%
White Goods	10	43.5%
Other scrap metals	8	34.8%
Waste oil	8	34.8%
OTHER		
Litter Prevention	11	47.8%
Waste Reduction	9	39.1%
Computer recycling / disposal	9	39.1%
Household Hazardous Waste	8	34.8%

TABLE 4
CUMBERLAND PLATEAU REGIONAL WASTE MANAGEMENT AUTHORITY
SOLID WASTE PLANNING QUESTIONNAIRE

SUMMARY OF ANSWERS TO QUESTION F - Should the Authority continue after 2008

QUESTION	# of Responses	% of Total Questionnaires Received
In 2008, should the Authority renew hauling and disposal contracts continue as is or with an expanded role?	21	91.3%
In 2008, should the Authority dispand and allow each local government to handle its own solid waste services?	1	4.3%
No response	1	4.3%

TABLE 5
CUMBERLAND PLATEAU REGIONAL WASTE MANAGEMENT AUTHORITY
SOLID WASTE PLANNING QUESTIONNAIRE
SUMMARY OF ANSWERS TO QUESTION G - Expanded Authority Services

SERVICE	# of Responses	% of Total Questionnaires Received
RECYCLING		
Cardboard	16	69.6%
Newspaper	15	65.2%
Glass	15	65.2%
Plastics	17	73.9%
Beverage and food cans	14	60.9%
White goods	14	60.9%
Used oil	17	73.9%
Antifreeze	15	65.2%
COLLECTION		
Door to door	10	43.5%
Staffed convenience centers	12	52.2%
Commercial collection	5	21.7%
OTHER		
Yard waste - sludge composting	5	21.7%
Yard waste - mulching	6	26.1%

TABLE 6
CUMBERLAND PLATEAU REGIONAL WASTE MANAGEMENT AUTHORITY
SOLID WASTE PLANNING QUESTIONNAIRE
SUMMARY OF ANSWERS TO QUESTION H - How should the solid waste program be financed

QUESTION	# of Responses	% of Total Responses
Tipping fee assessed to all users of transfer station	6	15.0%
Tipping fee assessed to only commercial businesses at transfer station	5	12.5%
Tipping fee assessed to only industries at transfer station	3	7.5%
Tipping fee assessed to citizens bringing waste directly to the transfer station	3	7.5%
Monthly charge to all residents or households	5	12.5%
Monthly charge to all industries and businesses	7	17.5%
Continue use of General Fund; partial tipping fees	11	27.5%
TOTAL	40	100.0%

Appendix 8

Authority Meetings: Agendas and Minutes

February 18, 2016

Mr. Sanjay Thirunagari
Manager
Virginia Department of Environmental Quality
Division of Land Protection and Revitalization
P.O. Box 1105
Richmond, VA 23218

RE: Update for the Cumberland Plateau Regional Waste Management Authority (CPRWMA) Solid Waste Planning Unit 5-Year Solid Waste Management Plan Update.

Dear Mr. Thirunagari:

I am writing in regards to our scheduled 5-year update of the CPRWMA's Solid Waste Management Plan. In a letter dated October 7, 2015, you stated that our next 5 year update is due by *February 10, 2016*. The CPRWMA Board of Directors met on February 18, 2016 and approved this 5 year update.

I trust this letter and attachments will satisfy those requirements needed for our 5-year update. If you have any questions or need additional information please feel free to contact me at (276) 889-1778.

Sincerely,

Toby F. Edwards

Toby F. Edwards
Director of Waste Services
CPRWMA

Cc: Mr. Earl Rife, CPRWMA Chair
Cc: Mr. Frank Horton, CPRWMA Vice Chair

224 Clydesway Drive / P. O. Box 548 Lebanon, VA 24266
Phone 276-889-1778 FAX 276-889-5732
www.cprwma.com

Attachment

Reporting Requirements found in Section 9 VAC 20-130-120.C of the regulations.

A) Waste generation estimates are current in both quantities generated and composition. At the current rate of waste generation, Buchanan, Dickenson and Russell counties have seen reduction/tonnages in the calendar year of 2014-2015. As for the composition for all three localities, they are per the solid waste management plan.

B) The scheduled 20-year planning increments have been met per section 8, page 79-85 of the CPRWMA's solid waste management plan. The authority has met or exceeded the 20-year planning increments outlined in the regional solid waste plan with the hiring of a regional litter prevention and recycling coordinator. In addition, Russell County is currently updating its convenience centers to manned compactor sites which should be completed in the next two years.

C) The projected 20-year waste management capacity remains available or the projects designed to meet the required capacity are on schedule. The authority and its member counties regional solid waste management plan is meeting the 20 year capacity and are on schedule.

D) Census data has shown a continual population decrease in all three member counties since the development of the regional solid waste management plan. This reduction in population is a result of the economic situation of the three counties. Many citizens are simply moving to where they can find employment. In both Buchanan and Dickenson Counties, coal jobs have been reduced heavily since the creation of the SWMP and it is reflected in the reduction of mine waste processed at both facilities.

E) The estimates of the solid waste generation from residential, commercial institution, industrial, construction, demolition, debris and other sources, including the amounts reused, recycled, recovered as a resource, incinerated and land filled. The Authority is on track with the SWMP solid waste generation estimates for the counties of Dickenson and Russell per section 4.2.1 pg 44. Buchanan County's estimate indicated a much larger portion for Mine Waste and a smaller portion for Household Waste in 2015. Current waste stream data indicates that these two cateragories for Buchanan County are reversed-Household Waste is the largest generated source within this particular county.

F) Existing and planned solid waste collection, storage, treatment, transportation, disposal and other management facilities, their projected capacities, expected life and systems for their use are all on course with the plan. In 2010, the Authority completed a rehabilitation of all three of our facilities to extend their projected 20-year life span an additional 15+years. This was accomplished by upgrades to lighting systems, repair of tipping floors, new weighting scales, push wall extensions and new metal, new hoppers, ventilation systems, rubber cutting edges for loading equipment and new scale houses. Russell County is currently in the process of upgrading their collection system from unmanned convenience stations to manned compactor convenience centers for collection of both household waste and recyclables. This will be accomplished in the next two to three years.

G) All parties responsible for carrying out the 20-year projections are resolved to meet all obtainable milestones. As outlined in our plan, the Authority and its member counties have taken great strides in meeting citizen's needs for proper waste disposal and recycling. In 2004, the member counties agreed to hire a regional recycling and litter prevention coordinator to ensure their meeting the recycling and litter prevention goals. Recycling in our SWMP unit has seen an increase in recycling (8% in 2003 to 30.1% in 2014). This increase in recycling is a direct result of the solid waste management plan and the counties investing resources in programs. In 2010, the member counties further demonstrated their resolve in securing a bond to extend the life of all three facilities.

H) The future need of the 20-year plan is the development of a regional recycling facility within the Authority's area. Currently, the Authority is pursuing grants to study the feasibility of such a recycling facility.

I) Currently, the CPRWMA is in the process of reviewing our population numbers from the latest 2010 census, reviewing our tonnages from 2005 to 2015 and analyzing the future trends in solid waste tonnages. Once this data is completed it will be sent to VA DEQ for review.

Appendix 9

Resolutions

RESOLUTION

FOR THE ACCEPTENCE OF THE SOLID WASTE MANAGEMENT PLAN

BY

CUMBERLAND PLATEAU REGIONAL WASTE MANAGEMENT AUTHORITY

WHEREAS, Section 10.1-1411 of the Code of Virginia authorizes the Virginia Waste Management Board to promulgate regulations specifying requirements for local and regional solid waste management planning, and

WHEREAS, the Virginia Waste Management Board has promulgates such regulations entitled, "Regulations for the Development of Solid Waste Management Plans, Amendment 1 as 9 VAC 20-130-10 eq seq.' effective date August 1, 2001, through the Virginia Department of Environmental Quality, and

WHEREAS, these regulations require every county, city, and incorporated town within the Commonwealth to submit a solid waste management plan update by February 10, 2016, and

WHEREAS, the Counties of Buchanan, Dickenson, and Russell, members of the Authority have determined that it is in their best interest to submit the plan as a regional plan, and

WHEREAS, the Authority enlisted the services of their staff to complete such a plan, and

WHEREAS, the was submitted to the Authority Board for approval on February 18, 2016, and

WHEREAS, Authority recognizes the annual reporting requirements pursuant to 9 VAC 20-130-165.A (Waste Assessment Report), and 9 VAC 20-130-165. D (Recycling Report) and agrees to provide said reports, and

WHEREAS, the Authority recognizes its responsibility to amend the plan as required by the regulations under 9 VAC 20-130-175.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors for the Cumberland Plateau Regional Waste Management Authority has reviewed the plan and, meeting in regular session on February 18, 2016, hereby adopts it, and authorizes its submittal to the Virginia Department of Environmental Quality.

Toby F. Edwards, Director of Waste Services.