2014

WOOD COUNTY COMPREHENSIVE LITTER AND SOLID WASTE CONTROL PLAN

WOOD COUNTY SOLID WASTE AUTHORITY
PARKERSBURG, WEST VIRGINIA

Chairperson

Date Adopted

WEST VIRGINIA
SOLID WASTE MANAGEMENT BOARD

601 57th St. SE
Charleston, WV 25304
(304)926-0448

Earl Ray Tomblin, Governor
Mark D. Holstine, PE, Executive Director
www.state.wv.us/swmb

June 22, 2015

Wood County Solid Waste Authority
Mr. Paul Thornton, Chairman
#1 Government Square
Parkersburg, WV 26101

Dear Mr. Thornton:

The Wood County Comprehensive Litter and Solid Waste Control Plan update was approved at the June 17, 2015 meeting of the Solid Waste Management Board (SWMB).

In accordance with §54-3.3.4.b, Comprehensive Litter and Solid Waste Control Plans, your Authority must now submit four copies of your final plan, including one copy in an electronic format, to the SWMB within 60 days after approval. A copy of this letter should be included in all copies of the final plan.

In addition, each authority must transmit one copy of the plan to each appropriate regional planning and development council, county commission and to the office of each appropriate county clerk, who shall file the plan in the appropriate manner and make it available for public inspection.

If you have any questions, please feel free to contact me.

Sincerely,

Carol Ann Throckmorton

Carol Ann Throckmorton
Environmental Resource Specialist III

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PREFACE

PREFACE

This Plan has been prepared to be in compliance with the minimum standards established by the Solid Waste Management Board for a Solid Waste and Litter Control Plan, as officially declared in Title 54, Legislative Rule, Solid Waste Management Board, Series 3, Comprehensive Litter and Solid Waste Control Plans. This update provides factual data requirements and updates solid waste management and recycling efforts that have taken place in Wood County since the Plan which was developed in 2009. This Plan is aimed at gearing the County toward more effective solid waste management and recycling efforts during the future years.

The original Plan – adopted in 2009 – is for a twenty (20) year period: 2009 – 2029. This update is the first of the updates which will occur at least every five years. This update occurred in 2015, and updates will continue on at least a five year basis until 2030. This Wood County Comprehensive Litter and Solid Waste Control Plan is developed to augment the Wood County Siting Plan as prepared by the Wood County Solid Waste Authority. The Siting Plan was also originally prepared in 2009 and was updated in 2014.

EXECUTIVE SUMMARY

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Although West Virginia and the local Solid Waste Authorities have stepped up their solid waste management activities in recent years, there is still much to be done to meet the objectives of recent solid waste management legislation and to effectively manage solid waste. The purpose of this Wood County Comprehensive Litter and Solid Waste Control Plan is to identify what actions Wood County still needs to undertake.

Wood County is proposing an integrated solid waste management system, which includes source reduction, reuse and recycling. This is essential to reduce waste and preserve landfill capacity. Continued reliance on landfills as the sole disposal method will not solve the solid waste management problems.

If Wood County's Solid Waste Authority makes progress toward the goals contained in this Plan, it will be successful in managing its solid waste in a manner that protects public health, the environment and reduces the waste stream destined for disposal.

INTRODUCTION

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Statement of Purpose

The scope and purpose of Title 54 of West Virginia's Legislative Rule for the Solid Waste Management Board – Series 3 is to establish minimum standards and planning requirements for all county and regional solid waste authorities to follow in developing, updating, and amending their comprehensive litter and solid waste control plans as required by West Virginia Code § 22C-4-1 et seq.

These minimum standards and requirements are designed to:

- Protect the public health, safety, and environment throughout the State of West Virginia;
- Provide for an integrated waste management hierarchy;
- Provide for the most effective and efficient use of available resources; and
- Ensure the establishment of the most proper and effective solid waste collection, transportation, processing, recycling, and disposal services for all residents of the State.

Wood County has reviewed these minimum standards and has developed its own Comprehensive Litter and Solid Waste Control Plan. This Plan is an update to the County's existing Comprehensive Litter and Solid Waste Control Plan which was developed and adopted in 2009. The Plan, adopted in 2009, is for a twenty (20) year period. This update occurred in 2015, and updates will continue on at least a five year basis until 2030. These updates will be submitted to the West Virginia Solid Waste Management Board and the Wood County Solid Waste Authority.

Scope

The scope of this update to Wood County's Solid Waste Management and Litter Control Plan is to:

- Establish County solid waste management and recycling policies;
- Develop comprehensive goals relative to solid waste management and recycling through anticipation of future needs and addressing solid waste issues in the County; and
- Develop effective current and long-range solid waste management and recycling plans and the appropriate administrative procedures.

GOALS AND OBJECTIVES

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GOAL 1: To implement the County's Solid Waste Management and Litter Control Plan so as to ensure compliance with appropriate rules and regulations.

Obj. 1: The Director of the WCSWA will inspect any violation of Wood County's Comprehensive Litter and Solid Waste Control Plan and State regulations and correct to ensure compliance with both.

Obj. 2: To review and update this Plan and the Wood County Siting Plan in 2020, 2025, and 2030.

Obj. 3: To increase the number of Wood County residents who have mandatory solid waste disposal to 97% by 2020 and to 99% by 2025.

GOAL 2: To work with local haulers, law enforcement, mail carriers, WVDEP, etc. to identify open dumps in Wood County.

Obj. 1: To clean up an additional 150 dumps in Wood County during each five year period (2020, 2025, 2030)

GOAL 3: To make recycling a top priority of Wood County residents so as to decrease the amount of solid waste tonnage deposited at the solid waste landfill.

Obj. 1: To decrease the percent of solid waste tonnage by 5% during each five year period (2020, 2025, 2030).

Obj. 2: To increase the percent of Wood County households which recycle to 32% in 2020, 38% in 2025, and 44% in 2030.

GOAL 4: To provide up-to-date accurate information on recycling and waste management issues to the general public.

Obj. 1: To provide specific information to the general public on landfill space and waste management issues; environmental issues; economic issues; collection, contamination and market issues; and benefits of recycling. This information shall be provided on a yearly basis and should reach at least 5,000 people.

GOAL 5: To provide detailed recycling and waste management information to specific target groups.

Obj. 1: To assist public and private schools in Wood County with comprehensive recycling program information, instructional strategies, resource materials and potential recycling projects. Each school in Wood County will be reached at least once during each school year through either presentations, distribution of materials, programs, etc.

Obj. 2: To work with organizations (Boy Scouts, Lion's Club, etc.), the WCSWA, waste generators, waste haulers, and other special groups that may be important to successful recycling in Wood County. It is anticipated that during each year at least six special recycling projects will be done with area groups.

GOAL 6: To provide a wide range of promotional and educational materials. for activities and for informational purposes.

Obj. 1: To provide a monthly media campaign twice each year on the benefits of recycling.

Obj. 2: To provide at least four public presentations on recycling each year to professional and social organizations.

Obj. 3: To plan and implement at least two special programs per year. Programs will include things like "Paint Swap Day", "Collection of Hazardous Materials", "E-Cycling", etc.

Obj. 4: Design and use a recycling display booth which will be displayed at a minimum of four events per year.

GOAL 7: To implement programs which rely on alternative approaches to solve the issues.

Obj. 1: To recruit and utilize at least 40 volunteers per year on Wood County clean-up/recycling projects.

Obj. 2: To work with Wood County's Day Report Center and Probation Departments in order to utilize their clients to provide at least 500 hours of community service per year.

Obj. 3: To seek funding from a variety of sources by submitting at least five grant applications per year.

TIMETABLE FOR IMPLEMENTATION OF PLAN

TIMETABLE FOR IMPLEMENTATION OF PLAN

ACTIVITY	2020	2025	2030
Implement Wood County Solid Waste Management Litter Control Plan	ON	GOI	NG
Inspect any Plan and State regulations' violations and correct to ensure compliance	ON	GOI	NG
Review and Update Plan and Siting Plan	X	X	X
Increase number of residents who have mandatory solid waste disposal	X	X	X
Work with agencies to identify open dumps	ON	GOI	NG
Clean up an additional 150 dumps during each five year period	X	X	X
Make recycling a top priority so as to reduce solid waste tonnage	ON	GOI	NG
Decrease solid waste tonnage by 5% during each five year period	X	X	X
Increase percent of households which recycle	X	X	X
Provide up-to-date recycling and waste management issues to general public	X	X	X
Provide specific information to general public	ON	GOI	NG
Provide recycling and waste management information to target groups	ON	GOI	NG
Assist Wood County schools with recycling activities and education	ON	GOI	NG
Work on special recycling projects with local groups	ON	GOI	NG
Provide a wide range of promotional and educational materials on recycling	ON	GOI	NG
Provide media campaigns – (Twice/year)	ON	GOI	NG
Provide five presentations per year	ON	GOI	NG
Provide two special programs per year	ON	GOI	NG
Provide recycling display booth at four events per year	ON	GOI	NG
Implement programs which rely on alternative approaches	ON	GOI	NG
Utilize 40 volunteers on projects per year	ON	GOI	NG

Obtain 500 hours of community service per year	ON	GOI	NG
Submit five grant applications for funding per year to agencies such as West Virginia Solid Waste Management Board Grant, REAP Recycling Assistance Grant, Litter Control Prevention Grant, Parkersburg Area Community Foundation, and Wal-Mart Foundation or similar grant agencies.	ON	GOI	NG

ASSESSMENT OF EXISTING CONDITIONS

ASSESSMENT OF EXISTING CONDITIONS

In order to be able to determine Wood County's future needs with regards to solid waste management, it is important to understand Wood County as it is today and key trends and issues that will have an effect on future growth and development.

Status of Existing Solid Waste Management Facilities and Activities

Wood County is served by nine private companies, which are certified by the West Virginia Public Service Commission to collect trash, rubbish, and garbage. The City of Parkersburg is the only municipality in the County which operates its own collection system and is the only government entity which offers a recycling program. During the most recent fiscal year, Parkersburg recycled more than 640 tons of waste. Approximately 20 percent of the City's residents recycle. Included in Appendix A is a listing of the private collection companies along with a map of the residential hauler territories.

The Northwestern Disposal Landfill at Dry Run Road is a privately owned facility which provides disposal services for residential, commercial, and industrial wastes from Wood County and several neighboring counties. It is the only authorized landfill in the County.

Northwestern primarily serves the counties of Wood, Ritchie, Pleasants, and Jackson in West Virginia and Washington County Ohio with smaller waste amounts generated from Doddridge, Tyler and other counties in West Virginia and Ohio. See map of West Virginia Solid Waste Landfills in Appendix B and the capacity usage of West Virginia's public and private landfills in Appendix C.

According to information from the West Virginia FY2013 Solid Waste Management Plan, Northwestern is a Class A Landfill and has a permit limit of 30,000 tons per month. During 2011 their monthly intake was 18,289 tons which is 61 percent of permitted capacity. This equated to a yearly total of 219,468 tons which was less than the 2007 annual amount of 234,576 tons. The percent of permitted capacity is higher than the overall State average of 53 percent of its permitted capacity but slightly lower than the overall average usage for all private facilities in West Virginia which was at 64 percent. Northwestern's usage rate of 61 percent of permitted capacity is a decrease from its 2007 level of 65 percent of its permitted capacity.

Of these 219,468 annual tons, 46,861 tons (or 21 percent) is out-of-state waste (Ohio) with the remaining 172,608 tons coming from within West Virginia. This tonnage averages out to 3,905 tons of out-of-state waste per month and 14,384 tons of in-state monthly waste. As shown on the chart in Appendix D the amount of solid waste imported to West Virginia has fluctuated over the years since 2003. The amount of solid waste imported to Northwestern has followed the trends for the State with a high in 2003 and a low tonnage in 2009. In 2011 the tonnage amount increased for many landfills, including Northwestern, and the State of West Virginia.

In early 2012 Northwestern began construction of its next cell which is approximately six acres. This new cell will create 600,000 cubic yards of airspace and is expected to last about two years.

West Virginia landfills that accept municipal solid waste, defined by WV Code Rule Section 33 CSR1 as residential and commercial solid waste and sludge from a

waste treatment or a water supply treatment plan, may also accept agricultural waste, commercial waste, debris, demolition waste, industrial waste, non-municipal ash, putrescible waste, scrap metal, sludge, bulky goods, and properly treated infectious waste if they have a permit modification or written permission from the Secretary of the WV Department of Environmental Protection. Waste that is not acceptable unless approved by the Secretary includes free liquids, nonexcluded hazardous waste as defined under 40 CFR §261.3, unstabilized sledges, unprepared pesticide containers, unprepared drums and untreated infectious waste.

Appendix E contains a table which lists what non-municipal waste is accepted at West Virginia landfills. Northwestern Landfill accepts industrial waste and/or sludge, electronic waste, appliances, refrigerated appliances, and Marcellus Shale Waste. It does not accept asbestos, C/D waste, and yard waste/brush.

Wood County does not have any non-operational landfills, operational transfer stations, or operational tire monofills. However, it does have a registered activity composting facility with Northwestern Landfill.

West Virginia Code Section 22-15-7 provides free solid waste disposal for persons "not in the business of hauling or disposing of solid waste" on one day per month. People are allowed to dispose of "up to one pick-up truckload or its equivalent" in all solid waste facilities within their wasteshed one day per month. All commercial and public solid waste facilities are required to have such a "Free Day". Northwestern held these "Free Days", and they collected the following:

- 408 Tons Collected on all Free Days
- 219,470 Total Tons Collected

- 0.19% Free Days Percent of Total Tons

The Wood County Solid Waste Authority (WCSWA), in conjunction with several agencies such as the City of Parkersburg, DuPont Washington Works, Rehabilitation Environmental Action Plan (REAP), and Waste Management sponsor annual spring cleanups in order to allow Wood County residents to dispose of unwanted items. Some of the items collected include tires with or without rims, paint, batteries, cell phones, computers, computer monitors, televisions, major appliances, metals, propane tanks, and fluorescent lightbulbs. During its most recent clean-up in Spring 2014 the following items were collected:

- Steel: 32,220 tons
- Aluminum 410 tons
- Batteries 1,545 tons
- Electronics 70,666 tons
- Paint Four – 20 Yard Rolloffs
- Tires 9,200 tires

With the exception of the City of Parkersburg, recycling in Wood County is conducted by private haulers. However, over the past five years the WCSWA has become extremely active with recycling projects and with working with other agencies conducting these activities. Some of these include:

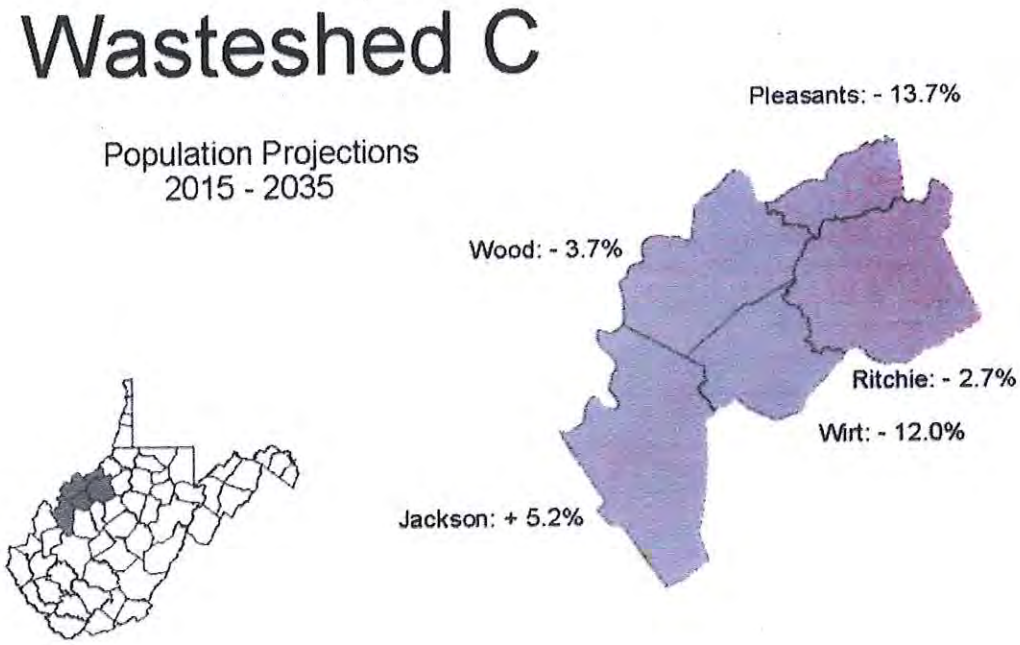
- Purchase of a Recycling Trailer for Parkersburg Catholic High School in order for the School to collect recycling materials and properly dispose of them.
- Purchase of Recycling Bins for various schools including Parkersburg Catholic High School, Van Devender Middle School, Jackson Middle School, and Hamilton Middle School. In addition, recycling bins were also

purchased for the Parkesburg Day Nursery.

- Purchase of Recycling Containers that are portable and are used by sponsors of various fairs and festivals such as Parkersburg Homecoming, West Virginia Interstate Fair, Multi-Cultural Festival, Honey Festival, etc.
- Purchase of Recycling Containers for the various parks throughout the County. These include: Fort Boreman Park, Veterans Park, Mountwood Park, Southwood Park, Parkersburg City Park, Spencer Park, Jackson Park, Point Park, Tomlinson Park, and Bicentennial Park.
- Purchase of Recycling Containers for all Wood County Government Buildings along with the adoption of the County's first recycling program.
- Purchase of Composting Machines and Bins which were installed at all Wood County Government Buildings.
- Development of a "We Recycle" public information and education campaign which included brochures and public service announcements.
- Educational displays at various venues including fairs and festivals and information distributed to schools, 4-H groups, youth groups, etc.
- Participation in the Arts Center Recycle Program Day for youth who developed items using recycled materials.
- Work with various groups such as Little Leagues, school groups, etc. who are interested in recycling water bottles, pop cans, etc.
- Purchase of recycled promotional items such as pencils, rulers, etc.
- Purchase of benches and picnic tables made from recycled materials. These items were placed at various parks throughout the County.
- Public presentations on the benefits of recycling.

Evaluation and Assessment of Solid Waste Collection and Disposal Services

The West Solid Waste Management Board divides the State into seven wastesheds. Wood County is contained in Wasteshed C which is located on the northwestern section of West Virginia. Included within this Wasteshed are the five counties of Jackson, Pleasants, Ritchie, Wirt, and Wood.



The only approved solid waste facility in this Wasteshed is Northwestern Landfill which is located in Wood County. According to the 2010 US Census the population of this Wasteshed is 139,938. However, the overall population is expected to decline through 2035. While Jackson County is expected to grow with a growth rate of 5.2 percent, the other counties are expected to see a decline: Pleasants County – 13.7 percent; Wirt County – 12 percent; Wood County – 3.7 percent; and Ritchie County – 2.7 percent. It is located along the Ohio River which accounts for the 13.5 percent industrial waste and 6.7 percent industrial sledge in the waste stream. Approximately 21 percent of all waste processed by Wasteshed C commercial solid waste facilities was from other states.

FY 2011Wastestream Composition for Wasteshed C

Municipal Solid Waste (MSW)		Non-Municipal Solid Waste (NMSW)	
Residential Waste	32.3%	Industrial Waste	13.5%
Commercial Waste	21.9%	Construction/Demolition	9.8%
Sewage Sludge*	2.1%	Industrial Sludge	6.7%
		Petroleum Contaminated Soil	13.3%
		Other Waste**	1.0%
		Miscellaneous Waste	0.1%
		Fee Exempt Waste	0.3%
TOTAL MSW	**56.3%**	**Total NMSW**	**43.7%**

♦Other special waste consists of various materials that must have special approval to be disposed of in a municipal solid waste facility.
**According to 33CSR1, Solid Waste Management Rule, "Municipal Solid Waste means any household or commercial solid waste as defined in this rule and any sludge from a waste treatment plant or a water treatment plant."
West Virginia Solid Waste Management Plan 2013

Demographic, Geological and Transportation Information

Population Projections

With regards to population, Wood County has remained fairly consistent since 1990. The County's population in 1990 was 86,915. By 2000 the population increased slightly (1.2 percent) to 87,986. In 2010 the County's population decreased by 1.2 percent to 86,956. The 2013 estimated population shows a slight decrease of 0.4 percent to 86,569 people.

A little over half (53 percent) of the County's total population resides in one of the County's four cities: Parkersburg, Vienna, Wiliamstown, and North Hills. Over the years, the populations for these cities have experienced the same growth as the County: slight increases or slight decreases. The changes have not been

significant.

The Regional Research Institute of West Virginia University provided population projections for Wood County in five-year increments – from 2015 to 2035. During this time period, it is projected that Wood County will decrease in population by approximately 3.5% from 87,258 persons in 2015 to 84,038 persons in 2035.

Wood County Population Projections

2015	2020	2025	2030	2035
87,258	87,197	86,526	85,495	84,038

Waste Projections

Waste generation, which to a large extent is driven by population and business growth, is actually falling in Wood County. Some of this could be attributed to more effective and aggressive recycling strategies in the County which have reduced the amount of materials being landfilled.

The following chart provides information on the projected monthly municipal waste tonnage for this Wasteshed over the next twenty years.

	2015	2020	2025	2030	2035
Jackson	2,028	2,075	2,106	2,124	2,134
Pleasants	517	506	491	469	446
Ritchie	705	718	716	704	686
Wirt	383	379	370	354	337
Wood	5,879	5,875	5,830	5,760	5,662
Total	**9,512**	**9,553**	**9,513**	**9,411**	**9,265**

West Virginia Solid Waste Management Plan 2013

Growth Areas

Growth areas within the County are those areas that are appropriate for future development and contain enough land to accommodate future needs through either new development or revitalization. In Wood County there are seven areas that are currently experiencing or are targeted for future growth. These areas include:

- Pettyville
- Mineral Wells
- West Virginia University-Parkersburg Growth Area
- Davisville
- Lubeck
- Washington Bottom
- Waverly

The single largest land use category in Wood County, based upon the County Assessor's Office land use data base, is agriculture/woodland. This category accounts for almost 72 percent of the total land area in Wood County and includes areas actually farmed as well as forested areas. Vacant lands, as identified by the Assessor's Office, account for nearly 20 percent of the County's total land area and are the areas where future development will most likely occur. Appendix F shows a map which indicates the anticipated growth areas within Wood County. This map was developed as part of Wood County's Comprehensive Plan.

A major economic development will occur in Wood County over the next several years as in November 2013 it was announced that an "ethane" cracker plant would be built in Wood County at the site of the former SABIC plant in Washington, West

Virginia which encompasses 166 acres. While this plant will have a major impact on employment and economic development in the County, it will also impact the Wood County Solid Waste Authority and Northwestern Landfill. Both of these entities will continue to follow the development and their involvement with this economic development project.

The land use in Wood County is broken out as follows:

Land Use	Acreage	Percent of Total
Residential	42,992	18%
Commercial	4,993	2%
Industrial	2,959	1%
Agriculture/Woodland	170,902	71%
Recreation	1,486	Less than 1%
Community Facilities	5,304	2%
Water	2,486	1%
Transportation	4,715	2%
Undeveloped	66	Less than 1%
Vacant Commercial	1,509	Less than 1%
Vacant Industrial	413	Less than 1%
Vacant Exempt Land	1,549	Less than 1%
Total	**238,874**	**100%**

Natural Resources

Hills

The natural environmental characteristics of a community have influenced local development patterns. Wood County lies within the Appalachian Plateau Physiographic Province, which is generally characterized by steep hill-slopes and narrow ravines. The highest elevations are found to the east, the lowest in the County are found along the County's streams and the Ohio and Little Kanawha Rivers.

Slopes with grades of 15 percent or greater are considered steep by most planning standards and are prone to higher erosion rates than lesser grades. As the attached topography map (Appendix G) indicates, the GIS (Geographic Information Systems) show approximately 60% - or 144,305 acres – of Wood County is covered by slopes of 15 percent or greater. Of these slopes, approximately 56,000 acres are covered by slopes of 25 percent or greater.

Rock Formation

The primary rock formation in Wood County is made up of sandstone and is known as the Dunkard Group. Alluvial and glacial deposits fill the river valleys, and a small wedge of shale is located in the northeastern corner of the County. The Dunkard Group is the youngest and is made up of three separate formations that were laid down approximately 25 million years ago and in addition to sandstone also contains beds of siltstone, red and gray shale, thin limestone, and coal. The alluvial deposits contain sand, silt, gravel, and clay that were laid down during the Ice Age. A map of Wood County's geology is included in Appendix G.

Soils

With regards to soils, there are three major soil associations in Wood County. Soil associations are multiple soil types that are found repeatedly across a given land area. The associations are helpful in attaining a general ideal of soil quality and are listed below.

- **Huntington-Ashton-Wheeling Association** – deep well-drained, mainly nearly level and gently sloping, silty soils on bottom lands and terraces along the Ohio River.
- **Markland-McGary-Cotaco-Hackers** – deep, well-drained, mainly nearly level to strongly sloping, silty soils; on terraces and bottom lands along the Little Kanawha River.
- **Monongahela-Upshur-Muskinghum-Zoar** – deep and moderately deep, moderately well-drained and well-drained, gently sloping to very steep, silty, and clayey soils on dissected high terraces and uplands.

Each soil is unique in its origin, structure, texture, and composition. Its capacity to support a given land use is determined by these features. Typically, as urban and suburban communities have grown, development has often taken advantage of level topography and infrastructure over soil productivity. Appendix I shows the designated soils map for Wood County.

Transportation Conditions

Roadways

Wood County's existing road network development has been primarily dictated by the area's topography as the combination of steep slopes and streams corridors provides limited opportunities for roadways. The County's two major highways

are Interstate 77 which provides north-south access and US Route 50 which provides east-west access. US Route 50 is also known as Appalachian Corridor D. Major improvements were recently done to this corridor, including a new bridge over the Ohio River into Belpre, Ohio.

West Virginia State Routes 2 and 68 run north and south in the western portion of the County, although WV Route 2 follows I-77 south of Route 50. WV 14 follows the river south from Williamstown into Parkersburg where its shifts to the southeast.

Other significant roadways include: WV 31 which connects I-77 and US 50 in the northeastern part of the County, WV 47 which roughly parallels WV 14 from Parkersburg east to the County line, and WV 892 which provides access to the Washington area located southwest of the City of Parkersburg.

There are five bridges which link Ohio and West Virginia together across the Ohio River. The Belpre Bridge, Route 50 Bridge, and the Memorial Toll Bridge connect Parkersburg to Belpre, Ohio. The Williamstown Bridge and the I-77 Bridge connect Williamstown to Marietta, Ohio.

In 2003 the Wood, Washington, Wirt Interstate Planning Commission (WWW) completed their Comprehensive Long Range Multimodal Transportation for the Parkersburg-Marietta Metropolitan Area. The Plan considered transportation needs for the region through 2025. As part of this process, an analysis of deficiencies was undertaken to aid in determining the needs of the community. While future traffic growth is expected to increase by approximately 30 percent, congestion is not expected to increase significantly due to the anticipated completion of several

projects in the area. However, several locations in Wood County have been identified as having significant peak hour congestion. These include the following:

- Memorial Bridge over the Ohio River
- Williamstown Bridge over the Ohio River
- WV 14 – Murdoch and Grand Central Avenue – in Parkersburg and Vienna
- WV 68 – Emerson Avenue – in Parkersburg
- Rosemar Road in Parkersburg
- WV 14 – Pike Street – in Parkersburg
- WV 47 east of Parkersburg
- WV 68 south of Corridor D near Parkersburg

Rivers

The Ohio River, which forms the western border of Wood County, is one of the nation's most extensive and busiest commercial and recreational waterways. The Little Kanawha River is a tributary of the Ohio and is not as heavily traveled. The Little Kanawha bisects the County from east to west and meets the Ohio River in downtown Parkersburg.

The Ohio River, and its tributaries, provides a link to both national and international ports. Industrial barges, commercial vessels, and to a less degree private craft, all rely on these waterways to conduct business. Most of the commercial traffic through the area consists of coal and coke generated from coal mines in West Virginia, destined for electric generating stations in the vicinity of Pittsburgh to the north and anywhere from the Kanawha River area to the Mississippi in the opposite direction.

Rail Transportation

There are several industrial rail lines that run from Beverly in the northwest corner of Washington County, Ohio through Marietta to Parkersburg and other areas in southwest Wood County. CSX Transportation operates the principal functioning rail lines within Wood County and moves the majority of goods and materials both locally and regionally.

Identification of Out-of-County Waste

While Wood County is the main entity which deposits waste at the Northwestern Landfill, the Landfill does receive waste from an average of 20 other counties per month. The great majority of these counties are located in West Virginia. However, since Wood County neighbors Ohio, the Landfill does receive waste each month from one to eight Ohio counties. This out-of-state waste averages approximately 3,900 tons per month.

The following lists some of the main counties that use the Northwestern Landfill:

- Pleasants County, WV
- Ritchie County, WV
- Wirt County, WV
- Jackson County, WV
- Calhoun County, WV
- Doddridge County, WV
- Washington County, OH
- Noble County, OH
- Guersney County, OH
- Athens County, OH

- Meigs County, OH

Many of these Counties will use the Northwestern Landfill for all their waste needs – residential, commercial, industrial, construction demolition, etc. – while some of them will only use it for certain items such as sewage sludge, industrial sludge, petroleum contaminated soil, etc.

Representatives of Northwestern Landfill do not have a problem with receiving waste from counties outside of Wood. The landfill has an anticipated life of at least another 40 years.

SPECIAL WASTES

SPECIAL WASTES

While the vast majority of the waste which the WCSWA and Northwestern Landfill deal with is considered "normal/regular" waste, there are several categories of "special waste" and specific requirements which must be followed and which will be adhered to in Wood County. The following is a summary of these special wastes. This information was obtained from the West Virginia Solid Waste Management Plan – 2013 which contains more detailed information on each of these special wastes.

Hazardous Waste

Hazardous wastes have been regulated since 1976 by the Resource Conservation and Recovery Act (RCRA) which is divided into 10 subtitles. The most significant of these is Subtitle C, which establishes the national hazardous waste management program, and the basic structure for the RCRA program. The regulations that define and govern management of hazardous wastes are codified in Parts 260 through 279 of Title 40 of the Code of Federal Regulations (40 CFR), "Protection of the Environment."

The main objectives to RCRA's enactment were:

1. To make land disposal of waste safer.
2. To force the employment of new technologies for landfill disposal.
3. To reduce the amount of waste produced.
4. To encourage recycling and resource recovery.
5. To maintain state responsibility for solid waste.

In 40CFR261, subpart D, USEPA has listed specific hazardous wastes that meet one or both of the above criteria. If a waste is not listed as hazardous, the waste is still regulated by RCRA, if it exhibits one of four characteristics: ignitability, corrosivity, reactivity, or toxicity.

The prohibitive cost of hazardous waste transportation and disposal has been an incentive in source reduction efforts. In addition, RCRA hazardous waste reduction program has resulted in industrial source reduction through process modifications that produce less waste.

WV Hazardous Waste Rule, 33CSR20

W. Va. Code § 22-18 is the Hazardous Waste Management Act. The WV Department of Environmental Protection (DEP) was designated as the lead agency for West Virginia hazardous waste management, and is also the authorized enforcement agency in the regulation of hazardous waste (W.Va. Code § 22-18-4). "Hazardous Waste Management System Rule", 33CSR20, established and adopted a program of regulation for the generation, treatment, storage, and disposal of hazardous waste to the extent necessary for the protection of the public health and safety of the environment.

Household Hazardous Waste (HHW)

The US EPA criteria for hazardous waste applies to paints, thermometers, flammables, used motor oil, carcinogenic chemicals, cleaning supplies, and other home use chemicals. However, hazardous wastes that are generated in a household are generally accepted in nonhazardous municipal solid waste landfills because Congress did not intend to cover household items in the rigid waste control mechanism of RCRA.3 Under RCRA this is known as the *household exclusion*,

40CFR261.4(b).

Household Chemicals

Aerosol sprays, ammonia, batteries, bleach, cosmetics, detergents, disinfectants, solvents, cleaners and medicines are all household hazardous waste (HHW). Even minute amounts of many household chemicals can seriously harm or kill children and pets. HHW in the solid waste stream can pose health risks to sanitation workers, and hazards to the environment. Improper disposal can contaminate the air we breathe, the food we eat and the water we drink.

The average U.S. household generates more than 20 pounds of HHW per year. The average home can accumulate as much as 100 pounds of household hazardous waste in the basement or garage and in storage closets. Proper disposal of HHW is an important management objective for state and local governments. Management must take place at the local level and can be extremely effective when utilizing the following tools:

1. Public education programs.
2. Telephone hotlines.
3. Exchange programs.
4. Collection programs.

Recycling HHW and completely using existing stocks of household products should be encouraged. Choosing less toxic alternatives is the best solution to using household chemicals. The Solid Waste Management Board has a webpage which lists contact information for businesses and collection sites that manage various forms of special waste available to the public and business community: www.state.wv.us/swmb/admn/specialwaste.

Used Motor Oil

While hazardous waste characteristics may apply to used oil, EPA decided not to list used oil that is destined for recycling as a hazardous waste. Instead they established management standards for its collection and recycling. Improperly disposed oil not only poses a serious threat to the environment, but it also constitutes an unnecessary waste of a renewable resource.

Used oil that is properly recycled can be:

1. Re-refined into high quality motor oil.
2. Used in the production of industrial lubricants, transform and quench oils.
3. Used in rust prevention efforts and
4. Processed and burned as fuel.

In addition, less energy is required to produce a gallon of re-refined base stock than a base stock from crude oil.

Municipal Sewage Sludge Disposal

The disposal of municipal sewage sludge (MSS) generated within WV is regulated by the DEP. Disposal is regulated in two ways; through the issuance of National Pollutant Discharge Elimination System (NPDES) permits, and by defining wastes that can be disposed of in solid waste facilities under Section 4.13.h. of the DEP's Title 33 Series 1 rules. The issuance of NPDES permits is the responsibility of the Division of Water and Waste Management (DWWM) of the DEP and is the primary method of regulating MSS disposal.

When a wastewater treatment facility applies for a NPDES permit, a certain method of MSS disposal is chosen. Individual treatment facilities are free to choose from a total of four permissible disposal options. The four options

include landfilling, land application, marketing of the sludge, or a catch-all "other" option. This "other" option is a broad category encompassing disposal methods not falling under the other three categories. Regardless of the method chosen, disposal must be approved by the DWWM Director prior to receiving an NPDES permit.

In 1993, Senate Bill 288 provided the necessary authority for DEP to develop and implement a comprehensive program for the regulation and management of sewage sludge. The DEP was authorized to file emergency rules dealing with municipal sewage sludge management. The rules manage all sewage sludge produced at a wastewater treatment plant and shipped to a commercial solid waste facility.

The rules require:

1. Test on the sludge for heavy metals, pathogens, toxin and vectors.
2. Reports on the source and amount of sludge actually generated or imported.
3. Access to the processing facility for DEP inspection and monitoring.
4. Posting of bonds for environmental remediation.
5. The development of reports on municipal sewer sludge volumes and activities.

The DEP is authorized to require permits for all facilities and activities which generate, process or dispose of sewage sludge by whatever means, including, but not limited to, land application, composting, mixed waste composting, incineration or any other method of handling sewage sludge within the state. Water treatment facilities fall under DEP's regulatory control similar to wastewater treatment facilities. Septic tank pumping's and package plants are permitted by DEP as part

of their comprehensive sludge management program. Landfilling of municipal sludge has been a disposal method for many years.

Agricultural Wastes

Agricultural waste has been disposed of utilizing mainly land application. However, poultry producers are now being challenged to effectively utilize litter (waste). The industry is seeking ways to better capture the potential value of the litter as a fertilizer source, as a stock material for compost production, or as a feed for cattle. Other methods of disposal may have to be developed to avoid potential ground and surface water contamination.

The West Virginia Legislature passed House Bill 4380 in 2000 to promote the beneficial use of poultry litter by (1) allowing a tax credit for its use as an agricultural fertilizer, and (2) requiring that the use of composted or deep stacked poultry litter products be given priority by all state agencies in their land maintenance and landscaping activities. Agricultural waste problems can be caused by "farm dumps" and the disposal of chemicals, such as pesticides, herbicides, fertilizers and insecticides, used on the farm.

According to DEP Industrial Solid Waste Rule, under 33CSR1, Section 2.59.a. "Animal Carcasses, Body Parts, Bedding and Related Waste" means contaminated animal carcasses, body parts, and the bedding of animals that are known to have been exposed to infectious agents during research, the production of biologicals, or the testing of pharmaceuticals, or for any other reason. The primary animal remains disposed of in landfills are livestock and poultry. The emergence of the aquiculture industry will be accompanied by an increase in the amount of fish carcasses and waste that must be disposed or composted.

Pollution Control Residuals

In order to comply with USEPA guidelines, one of the wastes the plan shall consider is pollution control residuals. The operation of thermal systems in power plants, foundries, etc., produces several impacts on the environment including gaseous and particulate emissions, solid residues and liquid effluents. The proper design of control systems for these emissions is a critical part of the design of a thermal processing system. End products of the thermal process include hot combustion gases composed primarily of nitrogen, carbon dioxide, water vapor (flue gas) and noncombustible residue (ash). Energy can be recovered by heat exchange from the hot combustion gases. The handling of air pollution control residuals is regulated by the DEP Division of Air Quality (DAQ), while the disposal of the residuals is regulated by the DEP Division of Water and Waste Management. The DAQ requires control equipment to minimize emissions to meet the Federal Clean Air Act.9

The major producers of air pollution control residuals are electric power generation plants, coal producers, foundries, chemical plants and cement kilns. Any facility that uses coal as a fuel produces an ash. The ash is either classified as fly ash or bottom ash. Fly ash is the lighter of the two and exits the combustion chamber in the flue gas stream. Fly ash is generally collected by electrostatic precipitators or bag-houses. The bottom ash is heavier than fly ash and falls to the bottom of the combustion-chamber, where it is collected and removed.

According to DAQ officials, all state coal producers and cement kilns have their own landfills or refuse piles. Some chemical plants have their own landfills. The cost of on-site ash disposal is roughly equivalent to that of a municipal solid waste

landfill. Some residuals can be reused to keep disposal costs down. The dust from cement or asphalt production is used again in-house. Refuse from coal mining is returned to mine areas as a backfill. The sludge from scrubbers at chemical and/or manufacturing facilities are used on-site or shipped to hazardous waste sites by the chemical company or a contracted handler/hauler. Most hazardous wastes from pollution control residuals are sent to out-of-state facilities primarily in Ohio, South Carolina, and Alabama. The small amount of ash generated from medical incinerators and veterinarians is considered a hazardous waste and also transported out-of-state.

Mining Wastes

West Virginia is the second leading producer of coal in the U.S. Two types of mining exist within the state: underground and surface mines. Although the ways of extracting the coal differ greatly, the waste or "refuse" generated is the same. In both cases, only the seam of coal is removed. However, this seam contains unusable refuse along with the coal. The refuse is transferred to a preparation plant, where the usable coal is screened out. The rest of the refuse is disposed of on site in a coal refuse pile, also known as a gob pile.

The DEP's Division of Mining and Reclamation (DMR) promulgates all of the rules on refuse piles such as diversions, underdrains, and compaction requirements. The refuse is compacted on-site in order to maximize space and to compress water from the pile. Drains are installed for water that might infiltrate the pile and this water is treated if necessary. For refuse with high water content and no means to

extract it, large impoundments are needed to filter the refuse down through the pond. After a variable length of time, the impoundment is drained and the compacted refuse remains. The DMR has stringent regulations for impoundments as well as dry refuse piles.

The mining operation sends the usable coal to the power plants. Ash is generated by the power plant when coal is burned. The power plant is responsible for separating the coal from the ash and for disposing of the unused portion. The power plant stockpiles it on-site with alternating layers of three feet of ash and six inches of dirt. In addition to the wastes generated through the mining processes, waste is produced through the mining offices and discarded machinery. Office waste is picked up and transported to a sanitary landfill and the discarded machinery may accumulate on-site during the operation, but is not permitted to remain afterward.

The goals of the DMR as stated in the rules on mine refuse include the following:

1. Minimize adverse effects of leachate and surface-water runoff on surface and ground water quality and quantity.
2. Ensure mass stability and prevent mass movement during and after all phases of construction.
3. Ensure that the final disposal facility is suitable for reclamation and revegetation compatible with the natural surroundings and the approved postmining land use.
4. Not create a public hazard.
5. Prevent combustion.

Industrial Waste

The management and disposal of industrial solid waste is authorized pursuant to W.Va. Code §22-15. According to DEP Solid Waste Rules, 33CSR1 Section 2.57, an industrial solid waste means any solid waste generated by manufacturing, or industrial processes that is not a hazardous waste regulated under subtitle "C" of RCRA. Such wastes may include, but are not limited to, waste resulting from factories, processing plants, refineries, fertilizer/agricultural chemicals; food and related products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals, manufacturing/foundries; organic chemicals; slaughter houses, mills, tanneries, electric power generating plants, mines, or mineral processing operations; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; textile manufacturing; transportation equipment; and water treatment.

This term does not include nonhazardous mining waste or oil and gas waste. Some exceptions would be lunchroom or cafeteria wastes, office wastes, etc. Only those wastes generated as a byproduct of an industrial process meet the intention of the definition. Waste resulting from physical, chemical or thermal processes in an industrial setting are examples of industrial waste. Industrial waste is either disposed of at on-site landfills or transported to other solid waste facilities. The major producers of industrial wastes are mining operations (coal refuse) and coal fired electricity generators (fly ash and bottom ash). The handling of industrial waste varies depending on the type of waste. The majority of industrial wastes are disposed of in landfills.

According to DEP Rule 33CSR1 Section 2.58, an industrial solid waste landfill means any solid waste disposal facility which is owned, operated, or leased by an industrial establishment for the land disposal of industrial solid waste created by that person or such person and other persons on a cost-sharing or non-profit basis. The term "industrial solid waste landfill" does not include land application units, surface impoundments, or injection wells. Industrial wastes are regulated by DEP-DWWM. Various types of industrial waste can, by special permit, be disposed of in municipal solid waste landfills.

White Goods (Household Appliances)

The term "household appliances" - often called "white goods" - usually includes large items such as refrigerators, freezers, clothes washers, dryers, dishwashers, ranges, water heaters, microwave ovens, dehumidifiers, trash compactors, and air conditioners. There are many problems in the collection and recycling of white goods. The major factor is transportation to a recycler or landfill.

Environmental legislation requires 80% to 90% of all PCB's, CFC or HCFC coolant be recovered with certified equipment by a certified technician. A provision in the EPA -Stratospheric Ozone Protection - Final Rule Summary (EPA-430-F-93-010) dated June, 1993, under the section "Mandatory Technician Certification," states: "Persons removing refrigerant from small appliances and motor vehicle air conditioners for purposes of disposal to these appliances do not have to be certified."

In another section of this summary, "Safe Disposal Requirements," it states "technician certification is not required for individuals removing refrigerant from

appliances in the waste stream." There is still a requirement that the equipment must be certified that it has been tested by an EPA approved testing organization. This is part of the 1990 re-authorization of the Clean Air Act which is designed to protect the atmosphere. SWAs should contract with authorized organizations to provide this service at a free or reduced cost.

Bulky Goods Collection

The term "bulky goods" refers to those items of residential solid waste which are too large and/or otherwise inappropriate to be placed into suitable waterproof containers. It includes such items as furniture, large appliances, electronics and other household-generated materials which cannot reasonably be collected during regularly scheduled weekly waste collections.

In accordance with 150CSR9, the Public Service Commission requires all common carriers of solid waste in West Virginia to establish a regularly scheduled monthly bulky goods collection service to be made available to all residential households in the carrier's territory, effective January 1, 1999. To recover additional costs associated with the implementation of bulky goods collection service, any such carrier may apply to the PSC for approval of surcharges to be applied to both regular residential customers and all others in the territory that request bulky goods service.

Tires

Waste tire disposal has become a significant problem in the state due, in part, to regulatory controls. In accordance with W.Va. Code § 20-11-8(a), now W.Va. Code § 22-15a, waste tires were banned from municipal solid waste landfills

effective June 1, 1996. In addition, state and federal air quality regulations prohibit the open burning of waste tires.

Together, these regulations contributed to an increase in the number of waste tire piles, or "open tire dumps", around the state. A 1998 report, completed by the SWMB and DEPDWWM, revealed there were approximately six million waste tires in seventeen of the largest piles which range in size from as few as 5,500 tires, to as many as 2 million. Waste tires are bulky, do not decompose and endanger the public health and well-being as they become breeding grounds for rats and mosquitoes. The tire piles also constitute significant fire and pollution hazards.

In 2000, the WV Legislature passed Senate Bill 427 in order to address the concerns over waste tire piles. The legislation prohibits salvage yards from accumulating more than 100 waste tires without a proper permit. It also created a new fund called the "A. James Manchin Fund" which is funded by a *temporary* tax of $5.00 on the issuance of motor vehicle titles. The Division of Highways was given the authority to administer the fund and oversee the remediation of the waste tire piles. Only tires collected as part of a DOH cleanup project or a DEP "Pollution Prevention and Open Dump" program, and for which no markets are available, may be deposited in solid waste facilities.

In 2002, the WV Legislature passed Senate Bill 609 making it a felony to accumulate or dispose of 1,000 or more tires illegally. A person convicted of this crime is subject to one to five years in jail and fines of up to $50,000 per day. The convicted person will also be required to properly clean up the site or reimburse the state for cleanup cost.

Waste tires can legally be disposed of in waste tire monofills. Waste tire monofills are approved solid waste facilities in which waste tires are not mixed with any other waste for the purpose of eventual retrieval for marketing. Recycling is another method of disposal. However, the use of recycled rubber is contingent upon the establishment of a collection and marketing system which will assure that waste tires are collected, transported, and processed for use by industry.

In August 2003, the Public Service Commission (PSC) approved changes to 150CSR9, of which several sections addressed the problem of residential tire disposal. The definition of "Bulky Goods" has been rewritten to include "waste tires off the rim, having a radius of no more than 16.5 inches, from automobiles, pickup trucks, motorcycles, all-terrain vehicles and from farm tractors." The changes also require carriers to pick up a maximum of eight tires per year from each residential customer.

During the 2005 legislative session, WV Code § 22-15A-9 established that the Commissioner of the Division of Highways shall work with and may use moneys in the Fund to contract with the Secretary of the DEP to accomplish the remediation of waste tire piles. The Fund consists of the proceeds from the sale of waste tires, fees collected by the Division of Motor Vehicles, and any other funding source available for waste tire remediation. In addition, W. Va. Code § 22-15A-10 gave the Secretary the authority to establish a tire disposal program within the DEP to provide for a cost effective and efficient method to accept passenger car and light truck waste tires at locations designated by the DEP.

Lead Acid Batteries

Landfill disposal of lead acid batteries has been banned since June 1, 1994. Most lead acid batteries are collected at local automotive service or repair garages. Some of these are collected through local household hazardous waste collection programs operated by local governments. Overall, the collection and recycling efforts for lead acid based batteries tends to be successful because collection and recycling programs operated by automotive garages and repair centers serve as a centralized collection point with very little inconvenience to the consumer.

Yard Waste

Yard waste is defined as grass clippings, weeds, leaves, brush, garden waste, shrub or tree prunings, and other living or dead plant tissues. US EPA estimates that approximately 13% of the total U.S. waste stream is composed of yard waste. Since these organic materials are relatively clean and biodegradable, disposal in landfills is unnecessary and wastes space. For these reasons, yard waste has been banned from landfills in West Virginia since January 1, 1997. Composting of yard waste is an attractive disposal option for many communities who wish to recycle plant nutrients, save landfill space, and comply with WV laws prohibiting landfill disposal.

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Universal Wastes

In 1995, USEPA promulgated the "Universal Waste Rule" as an amendment to the Resource Conservation and Recovery Act (RCRA) governing hazardous waste. While universal wastes are hazardous wastes, the Universal Waste Rule was designed to reduce the amount of RCRA hazardous waste disposed of in

municipal waste landfills, encourage recycling and proper management of some common hazardous wastes, and reduce the regulatory burden on businesses currently managing these materials as hazardous waste. The rule extends the amount of time that businesses can accumulate these materials on-site, allows for common carriers to transport them, and no longer requires businesses to obtain a hazardous waste manifest to accompany the wastes during off-site shipment.

"Universal wastes" include the following general categories:

- Batteries, such as nickel-cadmium and small sealed lead-acid batteries, which are found in many household and business items, including electronic equipment, mobile telephones, portable computers and emergency backup lighting.
- Agricultural pesticides that have been recalled or banned from use, are obsolete, have become damaged or are no longer needed due to changes in cropping patterns or other factors. They are often stored for long periods of time in sheds or barns.
- Lamps, (effective January 6, 2000), that typically contain mercury and sometimes lead, such as fluorescent, high intensity discharge, neon, mercury vapor, high-pressure sodium and metal halide lamps, if they are characteristically hazardous.
- Thermostats, which can contain as much as 3 grams of liquid mercury and are located in almost any building, including commercial, industrial, agricultural, community and household buildings. On August 5, 2005, thermostats were added to a new category of universal waste called spent mercury containing equipment (MCE). Other such MCE's are thermometers, switches, barometers and manometers. Basically MCE's were to include all mercury containing devices.

□ The EPA issued a ruling in July of 2006 (effective date, January 29, 2007), which excludes CRTs and glass removed from CRTs from the RCRA definition of solid waste if certain conditions are met.

ASSESSMENT OF LITTER AND SOLID WASTE PROBLEMS

ASSESSMENT OF LITTER AND SOLID WASTE PROBLEMS

Open Dumps

While there is not an exact number, there are a considerable number of open dumps in Wood County and range anywhere from 200 - 300. An open dump as defined in 53CSR4-2-2 "means any solid waste disposal which does not have a permit under W.Va. Code §22-15-1 et seq., or is in violation of state law or where solid waste is disposed in a manner that does not protect the environment". Private dumps are illegal, and every household and business in Wood County must have proof that their solid waste is being properly disposed. Owners of land on which unauthorized dumps have been or are being made are liable for such unauthorized dumping. They are required to cooperate with State and/or Local officials in the clean-up of any unauthorized dumping.

The clean-up of these open dumps have been undertaken by both the WCSWA and through the West Virginia's Department of Environmental Protection's Pollution Prevention and Open Dump (PPOD) Program. This Program was established to reclaim, assist, and encourage the clean-up of open dumps in West Virginia.

Included in Appendix J is the most recent list of the open dumps in Wood County that have been cleaned-up through this Program. A total of 167 projects, which consisted of open dumps, special projects, tire piles, and Make It Shine projects have had 4,370.41 tons of trash removed. This included 303.25 tons of steel, 328 appliances, and 111,754 tires that were removed at a cost of $641,202.55. A total of 628 volunteers were involved with these various projects. In addition, 18 open

dumps were cleaned by clients of the Wood County Day Report Center in conjunction with the WCSWA. Appendix K provides a map of West Virginia which marks the Open Dump Cleanup Projects in West Virginia.

WCSWA has been working with many private owners to clean-up their property and to remove the open dump. In many instances, the owner has cleaned it up as a result of an agreement between the owner and the WCSWA. The WCSWA also works with local law enforcement officials regarding abandoned vehicles as "No person shall, within this State, abandon a motor vehicle upon the right of way of any public highway, upon any other public property, or upon any private property which he does not own, lease, rent, or otherwise control unless it be as a licensed salvage yard or at the business establishment of a demolisher". There are also similar provisions for old vehicle tires and household appliances.

Facilities Generating More than Five Tons of Solid Waste Per Month

A report prepared by the West Virginia Solid Waste Management Board lists 69 establishments in Wood County that may produce over five tons of waste per month. Please refer to Appendix L to review the list of Wood County businesses which fall into this category.

Solid waste as defined in 54CSR4-2.27 "means any garbage, paper, litter, refuse, cans, bottles, waste processed for the express purpose of incineration, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility; other discarded material, including offensive or unsightly matter, solid, liquid, semisolid, or dissolved material in sewage, or solid or dissolved material in irrigation return flows or industrial discharges which are point sources and have byproduct material as defined by the Atomic Energy Act of 1954, as amended,

including any nuclear or byproduct material considered by federal standards to be below regulatory concern, or a hazardous waste either identified or listed under W. Va. Code §22-18-1 et seq., or refuse, slurry, overburden, or other waste or material resulting from coal-fired electric power or steam generation, the exploration, development, production, storage, and recovery of coal, oil and gas, and other mineral resources placed or disposed of at a facility which is regulated under W. Va. Code §22-2-1 et seq., §22-3-1 et. Seq., §22-4-1 et seq., §22-6-1 et seq., §22-7-1 et seq., §22-8-1 et seq., §22-9-1 et set., §22-10-1 et seq., or §22A-1-1 et seq., so long as placement or disposal is in conformance with a permit issued pursuant to said chapters.

Mandatory Disposal

In West Virginia solid waste is defined as "includes but is not limited to newspapers, cans, bottles, garbage, trash, discarded household furniture, appliances, tires, carcasses of dead animals, cigarette butts, shingles, construction and demolition waste, and other waste materials".

West Virginia State Law 22C-4-10 requires a person to do one of the following with their solid waste:

- Subscribe to and use a solid waste collection service and pay the fees established; or
- Provide proof that the person properly disposes of solid waste at least once within every thirty-day period at approved solid waste facilities or in any other lawful manner.

Also, it is illegal to burn solid waste (WV 22-5-3), to bury solid waste (WV 22-15-10), to dump solid waste in or near a stream or body of water (W. Va. §22-15A-4),

to dump solid waste into a roadside dump (W. Va. §22-15-10), or to create an open dump on your property (W. Va. §22-15-10).

While mandatory disposal is required in Wood County, the City of Parkersburg is the only government entity in the County which provides a solid waste collection service. The remaining areas of the County are served by private collectors which include the following:

1. **Boso Equipment**
   99 Oakland Gardens Road
   Washington, WV 26181
   304/863-8326

2. **Harold's Refuse (Harold A. Taylor)**
   900 Broadway Avenue
   Parkersburg, WV 26101
   304/428-7357

3. **Haul-A-Way Trash, LLC**
   110 Meadowview Lane
   Elizabeth, WV 26143
   304/489-9211

4. **Quality Sanitation (Michael E. Taylor)**
   46 Simon Lane
   Washington, WV 26181
   304/863-6355

5. **R&L Trash Service (Landen E. Little)**
   Route 47
   MacFarlan, WV 26148
   304/477-3041

6. **Taylor's Disposal, Inc.**
   18 Crossroads
   Dutch Ridge Road

Parkersburg, WV 26101
304/485-3283

7. **Taylor's Trash (Alan Lee Taylor)**
   711 Olive Street
   Parkersburg, WV 26101
   304/428-6209

8. **Waste Management of West Virginia, Inc.**
   (Parkersburg Location)
   Route 9, Box 377
   Parkersburg, WV 26142
   304/865-3937

9. **Wood County Waste (Harold A. Taylor, Jr.)**
   Route 4, Box 64B
   Parkersburg, WV 26103
   304/428-8700 or 304/428-8780

In Wood County, it is estimated that in excess of 95 percent of all households/ businesses are in compliance with the law and have some type of solid waste collection service.

Recycling Issues

In Wood County approximately 28% of the households recycle. Only the Cities of Parkersburg and Vienna are mandated to have curbside recycling services. However, many of the other private haulers do provide this service. It is important to have citizens realize the importance and benefits of recycling as solid waste that is able to be recycled diverts it from the County's waste stream.

Litter Problems

Unfortunately, Wood County is like most areas of West Virginia in that there is a litter control problem. The 2009 West Virginia Legislature passed a bill – Senate

Bill 440 – which provides the expansion of enforcement powers for litter control officers in the State and should assist with the litter control problem. Under this new law, County Litter Control Officers would have the authority to issue citations for open dumps, unlawful disposal of litter, and failure to provide proof of proper disposal of solid waste. Prior to the passage of this Bill, the Litter Control Officer could only issue citations for littering.

Violations of the State's littering/open dump laws can be subject to, depending upon the six of the dump, penalties ranging from $50 - $25,000 and could be subject to a one year jail term depending on the specific offense on which the conviction is based. These additional citations and fees make it more of a major deterrent for someone to not subscribe to trash service.

In Wood County, the Director of the Wood County Solid Waste Authority also serves as the County's Litter Control Officer.

Volunteers

Volunteers are a valuable and necessary asset to assist with solid waste collection in Wood County, especially recycling projects. With a limited Solid Waste Authority staff, many of the clean-up and recycling projects that have occurred in Wood County would not have happened if it was not for volunteers.

Wood County utilizes volunteers to assist with the Adopt-A-Highway, Ohio River Sweep, WV Make It Shine, Operation Wildflower, etc. as well as local Clean-Up Days. In addition, the WCSWA maintain a list of volunteer groups and individuals who may be available to assist with projects as they arise as well as to assist in planning of major activities. These individuals may also be aware of or have other

clean-up/recycling projects and ideas that will be beneficial to the County. The WCSWA has been able to purchase vests, gloves, and equipment and supplies that are needed for the various events so the volunteers are properly equipped which results in fewer injuries and a more efficient and effective clean-up activity.

The WCSWA also requests that groups who are proposing clean-up events to contact their office in order to coordinate these efforts to assure maximum effectiveness. Also, in many of these events the WCSWA is able to provide assistance – either manpower or supplies – which assists the volunteers in doing these activities.

ALTERNATIVE APPROACHES TO SOLVING PROBLEMS

ALTERNATIVE APPROACHES TO SOLVING PROBLEMS

Funding Strategy

Wood County's Solid Waste Authority receives the vast majority of its financial operating support through assessment fees the State of West Virginia has imposed on the disposal of solid waste. Per the provisions of West Virginia Code Sec. 22C-4-30 fifty percent of a $1.00 per ton fee deposited into the Solid Waste Planning Fund is distributed monthly to the local solid waste authorities. West Virginia Code §22-15A-19(h)(1) provides for a Recycling Assessment Fee of $.25 per ton to the Solid Waste Planning Fund. Of this amount fifty percent is distributed to the local solid waste authorities. This brings the total collected by the local solid waste authorities to $.63 on every ton of waste distributed by the Solid Waste Management Board.

In addition, the WCSWA is able to impose an assessment fee on the facilities that operate within their County – Northwestern Landfill. This fee is $.50/ton on all solid waste accepted by the facility. These funds are used to assist with the administrative costs of the WCSWA as well as with project expenses such as refuse clean-up, litter control programs, or any other solid waste program that the WCSWA believes would be advantageous for the County.

For FY 2013, the Wood County Solid Waste Authority received $170,128 in Landfill Assessment Fees. (Source: WV State Auditor's Office)

Since this revenue is directly related to the amount of solid waste deposited, it is to WCSWA's advantage to encourage as much solid waste collection as possible. As

a result, WCSWA will take an aggressive approach to mandatory collection and recycling. Under the new law, County Litter Control Officers will have the authority to issue citations for open dumps, unlawful disposal of litter, and failure to provide proof of proper disposal of solid waste. While it is estimated approximately 95 percent of all households are in compliance with the law and have some type of solid waste collection service, the WCSWA will continue to be aggressive in its attempt to increase this percentage. Also, Wood County will work on ways to increase its recycling participation. The City of Parkersburg states that approximately 20 percent of its customers recycle on a regular basis.

WCSWA's budget is typically of most agencies budgets in that it includes revenues and expenses for items such as personnel, administrative, and program expenses. Program items could include such items as clean-up projects, recycling programs, educational materials, household hazardous waste projects, community enhancement projects, equipment and labor, dues, awards, fees, clean-up days, etc.

The WCSWA is aware that the amount of its budget will fluctuate with the economic conditions of the time. For instance, during tough, economic times the amount of solid waste collected declines somewhat as people do not have as much income to purchase items which generate waste in terms of boxes, bags, packing materials, etc. Also, some households may be tight on income and discontinue their trash pick-up. This will result in less trash being deposited at the landfill and more litter and open dumps throughout Wood County.

As a result of this fluctuation, the WCSWA will begin to take a more aggressive approach to acquiring grants to assist with future activities. Some of the grants which will be reviewed for possible submission include:

- Solid Waste Management Board Grant
- Department of Environmental Protection – REAP Program
- Department of Environmental Protection – Litter Control Grant
- Department of Environmental Protection – Covered Electronic Devices Grant

In addition, the WCSWA will review, and, if appropriate, pursue other funding opportunities such as:

- CSX Corporation Contributions Program
- DuPont Foundation
- EQT Foundation
- Georgia Pacific Foundation
- International Paper Foundation
- McDonough Foundation
- National Association of Counties
- Ross Foundation
- Parkersburg Area Community Foundation
- Sisters of St. Joseph Charitable Fund
- The Coca-Cola Foundation
- Wal-Mart Foundation

Funding from alternative funding sources will enable the WCSWA to take on additional projects as well as to dedicate the funds it receives from assessment fees to assist with administration and personnel costs.

Hierarchy of Solid Waste Disposal

The WCSWA will work on reducing its solid waste management problems by implementing the integrated waste management hierarchy. By working with a variety of approaches, Wood County can much easier target its waste problem.

1. **Source Reduction** – This involves minimizing waste production and generation through product design, reduction of toxic constituents of solid waste, and similar activities.
2. **Recycling, Reuse, and Materials Recovery** – This involves separating and recovering valuable materials from the waste stream, composting food and yard waste, and marketing of recyclables.
3. **Landfilling** – To the maximum extent possible, this option should be reserved for nonrecyclables and other materials that cannot practically be managed in any other way. This is the lowest priority in the hierarchy and involves the waste management option of last resort.

Source Reduction - While source reduction is at the top of the hierarchy, it is probably the least one that is done on a County level. Source reduction is defined by the US EPA as "the design, manufacture, acquisition, and reuse of materials so as to minimize the quantity and/or toxicity of waste produced. Source reduction prevents waste either by redesigning products or by otherwise changing societal patterns of consumption, use, and waste generation. Source reduction involves making a conscious decision to act in such a manner to reduce the amount or harmfulness of waste before the waste is generated.

Source reduction activities can be broken down into two broad categories: actions taken by the manufacturer and actions taken by the consumer. Potential consumer action includes product reuse, decreasing consumption and purchasing of products

in bulk to reduce packaging. Manufacturers, who are also consumers, can take these actions as well by reducing material volume, reducing toxicity, and increasing product life-span."

While many consumers have changed their purchasing decisions based upon environmental concerns, these types of changes in consumer purchasing behavior occur on a gradual basis. Therefore, the WCSWA will have as one of its projects the continual public information program aimed at the consumer to achieve source reduction. Some of the information which will be provided to citizens includes the following:

Suggestions for Waste Reduction and Reuse

1. Buy durable products instead of those that are disposable or cheaply made.
2. Repair used items before replacing them.
3. Borrow or rent things you seldom use.
4. Buy items you can reuse.
5. Buy items you can recycle locally.
6. Avoid excess packaging when choosing product brands.
7. Make preferences known to store managers, companies, and state and local legislators.
8. Use less fertilizer or slow release fertilizers on lawn.
9. Use alternative landscaping techniques to create less yard waste.

Except for public education and information, it is difficult to provide programs and activities with regards to source reduction. These programs should be directed at all age groups with a special emphasis placed upon the youth. If youth learn about

waste reduction and reuse techniques at a young age, they are more likely to carry these forward as they get older. Also, it is important to show the public the importance of purchasing items that have been recycled and how by doing things such as this, they are diverting tonnage from the waste stream.

Recycling, Reuse, and Materials Recovery – While recycling efforts and ideas have been around for quite awhile it is still probably the most visible and talked about waste management concept. Over the past five years the WCSWA has taken a much more active approach to recycling efforts of the County and realized that in order to encourage others to recycle it must lead by example and actively participate in the recycling program. As a result of this, Wood County implemented a recycling program which involves all the various County buildings and parks. Recycling containers have been placed in every office at the County buildings for people to use. In addition, compost machines have been purchased and placed throughout the County facilities. It is the eventual goal of the County to become as close to "waste-free" as possible by either recycling or composting its trash and waste.

Recycling containers have also been placed at all the County's Parks as well as the parks located in the Cities of Parkersburg, Vienna, and Williamstown. Containers have also been placed at public facilities such as the West Virginia Welcome Center.

In addition, the County has become an active participant with several groups that are undertaking recycling projects. The WCSWA has participated with several agencies in the County interested in developing a recycling program for their entity. Some of these include: Hamilton Middle School, Parkersburg Catholic

High School, Parkersburg Day Nursery, and VanDevender Middle School. The WCSWA is always receptive to helping any agency that wishes to being its own recycling program. In addition, the WCSWA also participates with groups such as 4-H, Little League, etc. with their recycling efforts.

In order to make the general public aware of the benefits of recycling, the WCSWA developed a "We Recycle" media campaign. Flyers, public service announcements, and give-away items made from recycled products are part of this campaign.

The WCSWA's involvement in recycling will be more of an educational aspect and assisting with projects and programs. It is not anticipated that the County will develop its own recycling collection center or recycling pick-up as the City of Parkersburg operates. Instead, it will leave this up to private haulers and will concentrate on educating individuals as to the benefits of recycling and assisting, as appropriate, with recycling projects. The County also hosts special Recycling Days such as E-Cycling.

The following is a list of the recycle facilities in Wood County and the items they collect.

CENTER	TYPES OF ITEMS
7-11	Plastic Bottles, Aluminum Cans
City of Parkersburg	Newsprint, Plastic 1 & 2, Aluminum Cans, Tin Cans, Bi-Metal Cans, Glass Containers, Cardboard, and Tires
City of Vienna	Plastic 1 & 2, Aluminum and Bi-Metal Cans, Glass, Cardboard

Advance Auto Parts	Oil, Transmission Fluid, Car Batteries
Auto Zone	Oil and Car Batteries
B & B Resources	Anti-Freeze
Batteries Direct	All Types of Batteries
Harold's Refuse	Ni-Cad Batteries
Home Depot	Ni-Cad Batteries
Kroger's	Plastic Bags
Lowe's	Ni-Cad Batteries and Plastic Bags
O'Reilly Auto Parts	Oil and Car Batteries-
Parkersburg Recycling Center	Plastic Bottles, Paper, and Aluminum Cans
Quality Sanitation Service	Ni-Cad Batteries
Radio Shack	Ni-Cad Batteries
RJ Recycling	Non-Precious Metals
Taylor's Trash Removal	Oil and Transmission Fluid
Tractor Supply	Oil and Transmission Fluid
Wal-Mart	Oil and Tires

If a person resides in either the City of Parkersburg or the City of Vienna, curbside recycling is provided by both. The City of Vienna collects aluminum and bimetal cans, plastic bottles #1 and # 2, glass, and cardboard. The City of Parkersburg collects more recyclable items which include aluminum, bimetal, and tin cans; newsprint, mixed paper, plastic bottles # 1 and # 2, glass bottles, appliances, and tires.

Landfilling –Landfilling is a key element in the overall waste management picture in Wood County. In the County it is estimated that in excess of 95 percent of Wood County's households and businesses:

- Subscribe to and use a solid waste collection service
- Have proof that the waste is disposed of at a permitted landfill.

Without proper landfill capacity, many of the other activities would not be able to occur.

In early 2012 Northwestern began construction of its next cell which is approximately six acres. This new cell will create 600,000 cubic yards of airspace and is expected to last about two years. The remaining life of the entire landfill area is estimated to be 30 years which is well beyond this planning period.

There is no anticipation that Wood County will need an additional or new landfill for many years to come.

Open Dumps

It is estimated that Wood County has anywhere between 200 and 300 open dumps. This number exists even after 185 open dumps have been cleaned up through the West Virginia's Department of Environmental Protection's Pollution Prevention and Open Dump (PPOD) Program and the Wood County Day Report Center.

The first step to cleaning up these dumps is to locate as many of these dumps as possible. This list can be developed through information from the WCSWA, the WVDEP, law enforcement officers, private haulers, mail carriers, citizens, and others.

After these sites are identified and reviewed by the WCSWA, a priority list is developed along with a file on each open dump which will contain information regarding location, approximate size, approximate amount and type of solid waste, etc. The County's SWA Director will determine who owns the property. If the dump is on private property, the County's Litter Control Officer shall work with the owner in an attempt to have the property cleaned up. The Litter Control Officer now has the authority to issue citations for open dumps with a fee ranging from $50 - $25,000.

If the open dump is on public right-of-way, the County's Litter Control Officer will determine if the dump clean-up is something that can be done as a volunteer project by a group of local citizens, the Wood County Day Report Center clients, or if the dump is so great it needs to be referred to the West Virginia's Department of Environmental Protection's Pollution Prevention and Open Dump (PPOD) Program.

If the dump is not too large and the waste not that significant, the Litter Control Officer will look for volunteer groups that will want to tackle the area and clean it up. The WCSWA also has an agreement with the local Day Report Center to utilize their clients to assist in the cleaning up of these dumps. These individuals are required to perform community service and the cleaning up of these dumps on a monthly basis serves as community service hours. After the area is cleaned up, the County's Litter Control Officer contacts the appropriate law enforcement agency and asks them to monitor the area to see if there is any additional dumping that is occurring. If so, they will try to determine who is doing the dumping.

Whenever it is determined who is contributing to the open dumping, the Wood County Litter Control Officer and the Wood County Commission will pursue the appropriate legal action against these individuals.

Use of Alternative Sentencing Programs for Litter Pick-Up

Wood County has several options available with regards to alternative sentencing programs where individuals need to complete community service hours, and these individuals can assist with litter pick-up. In Wood County there are two alternative sentencing programs which require participants to perform a certain number of community service hours. These two programs are the Wood County Day Report

Center and the West Central Regional Drug Court. Both Programs provide counseling and diversion programs along with the requirement of community service. The Day Report Center and Drug Court work closely together and have several of the same clients. The Day Report Center has a Community Service Supervisor who oversees individuals performing community service on a one-on-one basis as well as group projects. This individual also oversees clients who are on Drug Court and must perform community service.

The WCSWA will be able to identify sites which need cleaned up and work with the Community Service Supervisor to find individuals who will be able to do this work. If it is a large area, the Supervisor will be able to supervise them to ensure that the work is being properly done. The WCSWA Director may also help with the supervision if the project is extremely large or may work with another group of clients from the Day Report Center/Drug Court so that two or more sites will be cleaned up at the same time.

In addition to these clients, both youth and adults on probation are required to perform community service hours. These individuals are also used as available and needed.

WCSWA provides the necessary equipment and outerwear for these individuals to wear when they are picking up trash. Safety vests and gloves along with trash bags, rakes, shovels, and wheelbarrows are provided to not only these individuals but to any volunteer who assists with litter clean-up.

Coordination with Other Entities

The Wood County Solid Waste Authority is more than willing to work with other agencies to assist in the litter clean-up and recycling and reuse efforts for Wood County and will be more than happy to have their assistance. Some of these government agencies include:

- Wood County Commission Maintenance Department
- City of Parkersburg Building and Grounds Department
- City of Parkersburg Sanitation Department
- City of Parkersburg Recycling Center
- City of Parkersburg Building Enforcement Department
- City of Vienna Public Works Department
- City of Vienna Building Enforcement Department
- City of Williamstown Public Works Department
- West Virginia Department of Natural Resources
- West Virginia Department of Environmental Protection
- West Virginia Department of Highways
- West Virginia Public Service Commission
- West Virginia Tire Disposal
- US Environmental Protection Agency

By working and coordinating with other agencies, the WCSWA will be able to clean-up more areas of Wood County and will not have to bear the expense and time of cleaning it up on their own. This coordination can be used to clean-up large areas as well as to sponsor events such as County Clean-Up Days, Hazardous Waste Materials Day, E-Cycling Day, Neighborhood Clean-Up, etc. Prior to conducting a large event, the WCSWA will contact the appropriate agencies to

determine their availability and desire to assist with the project.

The WCSWA has also been willing to submit grant applications which will benefit not only the County but the various municipalities. Recycling containers and benches have been purchased and placed at the parks and other public areas in these cities. In addition, the WCSWA will assist the Cities of Parkersburg, Vienna, and Williamstown with any clean-up projects that they may undertake.

In addition to clean-up activities, many of these agencies will be able to assist with activities relating to recycling and reuse measures.

Program to Enlist Voluntary Assistance

Part of the job of the WCSWA Director is to develop a program to enlist voluntary assistance with the clean-ups and with projects such as Adopt-A-Highway, Adopt-A-Dump, and West Virginia Make It Shine. Part of this recruitment has included media articles explaining upcoming projects and the need for volunteers. Other recruitment efforts have come from presentations to community groups such as the Lion's Club, Kiwanis, Junior League of Parkersburg, Zonta, etc. as well as the local colleges and schools. The WCSWA maintains a master list of volunteers and contacts them as projects develop.

County Clean-Up Programs

The WCSWA will work on a variety of clean-up programs. Some of these programs will be unique to Wood County while others will be State initiatives the County will become involved with. Wood County through assistance from the SWA and local volunteers will participate in clean-up programs such as:

- Adopt-A –Highway

- WV Make It Shine
- Pollution Prevention and Open Dumps
- County Clean-Up Days
- Hazardous Waste Collections
- Ohio River Sweep
- Covered Electronic Devices
- Wood County School Recycling Programs
- Paint Swap
- Recycling at community events

PLAN CONCLUSIONS AND RECOMMENDATIONS

PLAN CONCLUSIONS AND RECOMMENDATIONS

Siting of a Landfill

In May 2014 the Wood County Solid Waste Authority approved a five-year update to its original Plan which was developed in 2009. Updates will be done at least every five years. In this Plan the only authorized Class A Landfill in Wood County is Northwestern Landfill which is located at 512 E. Dry Run Road (off Route 50) in Wood County. There are no authorized Class B, C, or D Landfills in the County.

The areas within Wood County which are prohibited for either a Class A, B, C, or D Landfill are such because of one or more of the criteria established in Title 54 Legislative Rules, Series 4 and since the readily available information clearly establishes that the facilities will:

- Cause a significant adverse impact upon wetlands
- Cause a significant adverse impact upon any surface water
- Cause a significant adverse impact upon groundwater quality
- Cause a violation of surface water quality standards found in Legislative Rule 47CR3
- Be within a perennial stream
- Be within a100-year floodplain
- Be within 300 feet of any surface water (facility drainage or sedimentation control structures are exempt from this distance calculation)
- Be within 1,000 feet of the right-of-way of any state trunk highway, interstate, or federal aid primary highway
- Be within 1,200 feet of any public or private water supply well in existence at the time the zone is established

- Be within1,200 feet of public parks and recreation areas
- Be within 500 feet of a dwelling
- Be within 200 feet of a geologically unstable area
- Be within 300 feet of any wetlands (facility drainage or sedimentation control structures are exempt from this distance calculation)
- Be within 6 miles of an airport.

All other areas in Wood County are tentatively prohibited until it can be determined whether an area is suitable or unsuitable on a site specific basis. If an individual and/or business wish to propose a landfill in Wood County, they must meet with the Director of the Wood County Solid Waste Authority who will go over these requirements. If a person/business believes their site will not cause any of the above listed consequences, they will need to prepare a document which addresses all these issues and present it to the WCSWA.

Recommendation and Conclusions

During the next twenty years, the Wood County Solid Waste Authority hopes to work on the following projects:

- An increase in the number of households who have mandatory disposal.
- A decrease in the number of open dumps.
- An increase in the percent of households who recycle.
- An increase in public education and information on solid waste and recycling issues to the general public and schools.
- An increase in involvement of volunteers and volunteer organizations to assist with clean-up projects.
- Ensure compliance with the WV Code and Legislative Rules.

- An increase in community service hours.
- A search for alternative financing from other funding sources.
- An update of this Plan and the County's Siting Plan at least once every five years.
- A decrease in the percent of solid waste tonnage deposited at the solid waste landfill.
- An increase in the number of community projects and the number of projects which are done in conjunction with local groups.
- An increase in media campaigns and public presentations.

MANDATORY GARBAGE DISPOSAL PROGRAM

MANDATORY GARBAGE DISPOSAL PROGRAM

The vast majority of Wood County households/businesses (in excess of 95 percent) are in compliance with West Virginia State Law §22C-4-10 which requires a person to do one of the following with their solid waste:

- Subscribe to and use a solid waste collection service and pay the fees established; or
- Provide proof that the person properly disposes of solid waste at least once within every thirty-day period at approved solid waste facilities or in any other lawful manner.

The WCSWA has good working relationships with the County haulers, mail carriers, and law enforcement agencies. These groups will notify the WCSWA Director of any person/business that is in violation of this Law by either doubling up or are not on service. These agencies are frequently driving through the County and become aware of violations such as a lot of trash piling up on someone's property or an open dump. When this occurs, the WCSWA Director meets with the individual involved to have the property cleaned up and to have that person subscribe to a solid waste collection service or provide proof of disposal of solid waste at a landfill at least once within every thirty-day period.

Enforcement

If the person does not comply with the order by the WCSWA, there is one primary mechanism for enforcing the program. This mechanism, which can be used by both the State Department of Environmental Protection and local law enforcement agencies, consists of a civil penalty of $150. The West Virginia Code states: "A civil penalty of one hundred fifty dollars may be assessed to the person not

receiving solid waste collection services in addition to the unpaid fees for every year that a fee is not paid". As a result of a change to the West Virginia Code in 2007, a person in this situation is also guilty of a misdemeanor and subject to a fine of not less than fifty dollars nor more than one thousand dollars or sentenced to perform not less than ten or more than forty hours of community service or both. A person that provides proof that they are properly disposing of solid waste at an approved solid waste facility or in any other lawful manner is not subject to the civil penalty or misdemeanor charges.

It is not necessary to go to court to collect the civil penalty. It may simply be assessed to any person not receiving collection services or providing proof that he properly disposes of the solid waste at an approved solid waste facility or in any other lawful manner.

The civil penalty does not apply when some type of collection service is made available and a person subscribes to such service but refuses to pay for it. If a person does not receive collection services and fails or refuses to properly dispose of his waste, the civil penalty is available for enforcement.

The WCSWA does not have the authority to enter private property. Therefore, if it is necessary to enter a person's private property to verify compliance with the mandatory garbage disposal program, the WCSWA must utilize the services of either the WVDEP or local law enforcement agencies.

The WCSWA's role with respect to mandatory disposal is an administrative and coordinating role.

Bulky Goods

In West Virginia every common carrier of solid waste is required to have a bulky goods program in place. The term "bulky goods" is defined as items or materials which cannot be reasonably and conveniently collected during regularly scheduled weekly pick-ups including any of the following discarded items:

- Refrigerators
- Washing Machines
- Clothes Dryers
- Dishwashers
- Ovens
- Stoves
- Microwave Ovens
- Other Appliances
- Televisions
- Home Computers
- Air Conditioners
- Bicycles
- Furniture
- Up to eight Waste Tires off the rim per year, having a radius of no more than 16.5 inches, from automobiles, pick-up trucks, motorcycles, all-terrain vehicles, and tractors
- Any other item not included in this list that is at least three feet in length, width, or height or at least fifty pounds in weight.

Bulky goods do not include:

- Automobile Components, Parts, or Frames that weight at least 200 pounds each
- Automobile Parts such as motors and transmissions that have a high density
- Hazardous Waste
- Items that can easily be divided and placed into bags, boxes, or other containers less than three feet high, long, or wide that, with contents, weigh less than fifty pounds each
- Construction and demolition debris.

Wood County

The Wood County Commission and the Wood County Solid Waste Authority have determined they will follow and adhere to the requirements and enforcement penalties as stated in West Virginia State Law §22C-4-10. Wood County officials make it widely known that mandatory garbage disposal, in compliance with the West Virginia State Law, is required of every household and business in the County. The County approach appears to be working as in excess of 95 percent of households/businesses are in compliance with the State Law.

RECYCLING PLAN

RECYCLING PLAN

Prior Goals

There were several goals contained in the latest version of Wood County's Recycling Plan which was written in 2009. The following is a summary of these goals and the status of them.

GOAL 1: To make recycling a top priority of Wood County residents so as to decrease the amount of solid waste tonnage deposited at the solid waste landfill.

Obj. 1: To decrease the percent of solid waste tonnage by 5% during each five year period (2014, 2019, 2024, 2029).

Obj. 2: To increase the percent of Wood County households which recycle from 24% to 30% in 2014, 35% in 2019, 40% in 2024, and 45% in 2029.

Status: During 2011 the monthly intake was 18,289 tons which is 61 percent of permitted capacity. This equated to a yearly total of 219,468 tons which was less than the 2007 annual amount of 234,576 tons. Northwestern's usage rate of 61 percent of permitted capacity is a decrease from its 2007 level of 65 percent of its permitted capacity.

GOAL 2: To provide up-to-date accurate information on recycling and waste management issues to the general public.

Obj. 1: To provide specific information to the general public on landfill space and waste management issues; environmental issues; economic issues; collection, contamination and market issues; and benefits of recycling. This information shall be provided on a yearly basis and should reach at least 2,500 people.

Status: The WCSWA has started their own website (woodcountyrecycles.com) which provides customers information on where they can dispose of certain items. A marketing campaign was also started entitled "Recycling … it's in your hands now" which included informational brochures printed and distributed throughout the County. A six month radio campaign "Now You Know" was developed which informed the public as to how to discard of difficult items such as tires, paint, and electronics.

GOAL 3: To provide detailed recycling and waste management information to specific target groups.

Obj. 1. To assist public and private schools in Wood County with comprehensive recycling program information, instructional strategies, resource materials and potential recycling projects. Each school in Wood County will be reached at least once during each school year through either presentations, distribution of materials, programs, etc.

Obj. 2 To work with organizations (Boy Scouts, Lion's Club, etc.), the WCSWA, waste generators, waste haulers, and other special groups that may be important to successful recycling in Wood County. It is anticipated that during each year at least six special recycling projects will be done with area groups.

Status: The WCSWA has worked with the City of Parkersburg's Recycling Education Director to expand educational programs throughout the Wood County School System and to civic organizations. In addition, the WCSWA has also supplied recycling containers to several schools and community agencies who are interested in beginning their own recycling program.

GOAL 4 To provide a wide range of promotional and educational materials for activities and for informational purposes.

Obj. 1 To provide a monthly media campaign twice each year on the benefits of recycling.

Obj. 2 To provide at least four public presentations on recycling each year to professional and social organizations.

Obj. 3 To plan and implement at least two special programs per year. Programs will include things like "Paint Swap Day", "Collection of Hazardous Materials", "E-Cycling", etc.

Obj. 4 Design and use a recycling display booth which will be displayed at a minimum of four events per year.

Status: In addition to the items listed under Goal 3, the WCSWA has had a display booth at several community events such as the West Virginia Interstate Fair and Parkersburg Homecoming. At these events educational materials are distributed as well as give-away items made from recycled materials – pencils, rulers, etc. The WCSWA also has an Annual Clean-Up Day as well as selected days to collect hazardous materials, covered electronic devices, etc.

GOAL 5: To implement programs which rely on alternative approaches to solve the issues.

Obj. 1: To recruit and utilize at least 20 volunteers per year on Wood County clean-up/recycling projects.

Obj. 2: To work with Wood County's Day Report Center and Probation Departments in order to utilize their clients to provide at least 500 hours of community service per year.

Obj. 3: To seek funding from a variety of sources by submitting at least five grant applications per year.

Status: The WCSWA has submitted grant applications to several public agencies as well as local corporations. While the numbers vary per year, the WCSWA has had a minimum of 20 volunteers per year who have assisted with the Ohio River Sweep and the County's Clean-Up Days. In addition, an agreement has been reached with the Wood County Day Report Center and the Wood County

Drug Court. Clients are provided at least one day per month to assist with the clean-up of open dumps and to assist with any other project which may need help.

Current Recycling Information

Jackson, Pleasants, Ritchie, Wirt and Wood counties make up Wasteshed C. According to the 2010 Census, 139,938 people live in these five counties with the projected monthly solid waste generation rate for 2010 being 9,428 tons a month. Within Wasteshed C there are two municipalities mandated to implement curbside recycling : Parkersburg and Vienna. Both municipalities are located in Wood County, with Parkersburg collecting newsprint, aluminum cans, bimetal and tin cans, plastic, newsprint, phone books, glass, white appliances, tires, yard waste and Christmas trees. Vienna collects aluminum and bimetal cans, plastic, glass, cardboard, and newsprint.

An overview of Wasteshed C shows the following recycling activities in each of the five Counties.

Jackson County has six SWA drop-off locations and no curbside locations. A total of 781.53 tons of recycled materials were collected with mixed paper being the largest item at 300.28 tons. A total of $93,280 was collected from these recycled items.

Pleasants County SWA supports a city operated drop-off and four curbside programs which serve approximately 1,100 households in St. Mary's. A total of 305.80 tons of recycled materials were collected which made $32,900. Cardboard was the single largest item collected at 204 tons.

Ritchie County The County has two drop-off locations which collected 726.25 tons of recycled items. These items generated $38,070.90. The largest amount was collected in the metals non-ferrous category which accounted for 470 tons.

Wirt County This County has two drop-off locations. A total of 175.30 tons of recycled items were collected with mixed papers being the largest item at 118.40 tons.

Wood County The SWA does not administer an ongoing recycling program. However, the County has two municipal curbside programs, one in Parkersburg and the other in Vienna. Wood has 16 private sector drop-off sites.

In Wasteshed C a total of 1,989.38 tons were recycled in the five counties in 2011 which generated a total of $164,250.90 in recycling income. The recycling materials collected in 2011 are broken out as follows:

Recycling Materials Collected in Wasteshed C; 2011

ITEM	TONNAGE	INCOME
Aluminum Cans	11.07	$14.469.88
Bi-Metal Cans	6.55	$518.00
Cardboard	532.40	$64,658.45
Glass	154.99	$1,228.99
Electronics	26.69	$0.00
Metals, Ferrous	12.00	$2,339.92
Metals, NonFerrous	470.00	$4,475.00
Mixed Metal	10.00	$5,000.00
Paper, Newsprint	38.33	$3,890.83
Paper, Office	26.84	$6,686.00
Paper, Mixed	471.71	$46,452.03
Plastics, Mixed	43.10	$10,531.80
Textiles	10.00	$4,000.00
Tires	25.70	$0.00
Yard Waste	150.00	$0.00
TOTAL	**1,989.38**	**$164,250.90**

*Aluminum Cans and Plastics priced per lb., all other materials priced per ton.

The amount of items recycled in Wasteshed C is slightly more than 30 percent of the monthly recycling potential. The following charts show the monthly recycling tonnage potential per category and the monthly recycling revenue potential.

Monthly Recycling Tonnage Potential.

Material	% Waste Stream	100% Recycled	50% Recycled	25% Recycled	10% Recycled
Paper	28.5%	2,687	1,343	672	269
Yard Waste	13.4%	1,263	632	316	128
Plastics	12.4%	1,169	585	292	117
Ferrous Metals	9.0%	849	424	212	85
Glass	4.6%	434	217	108	43

*Percentages taken from 2010 EPA Waste Characterization Study.

Monthly Recycling Revenue Potential.

Material	Average WS Price Per Ton	100% Recycled	50% Recycled	25% Recycled	10% Recycled
Paper	$143.97	$386,847	$193,424	$96,712	$38,685
Yard Waste	$0.00	$0.00	$0.00	$0.00	$0.00
Plastics	$0.14	$327,320	$163,660	$81,830	$32,732
Ferrous Metals	$122.39	$103,909	$51,955	$25,977	$10,391
Glass	$9.67	$4,197	$2,098	$1,049	$420

*Average WS Price Per Ton is the average price per ton of all materials of each identified type sold in the wasteshed by the vendors listed and does not include instances where materials were collected an no revenue was earned. It is felt that this represents the fair market value of materials under current conditions and does not reflect potential value in the case of future improved markets or improved processing technology or processes. The Average Price Per Ton of metals includes ferrous metals only.

Currently in Wood County, the Cities of Parkersburg and Vienna are mandated by State law to provide curbside, source separated recycling programs. The City of Parkersburg has municipal collection of both municipal waste and curbside pick-up of recyclables. The City of Vienna has a contract with Waste Management for the pick-up of municipal waste and curbside collection of recyclables. The City of Williamstown has a contract with Waste Management for the pick-up of municipal waste only. County residents contract directly with solid waste haulers.

The City of Parkersburg also has a materials recovery facility in the City where they collect, sort, and market recyclable materials and also. There is also a recyclables drop-off center at this location.

In addition to the curbside recycling programs in Parkersburg and Vienna, there are a number of recycling operations throughout the County that provide opportunities for the disposal of recyclable materials. These are all privately operated recycling centers that collect a variety of materials.

During the most recent fiscal year, the City of Parkersburg recycled approximately 1,280 tons of materials. The City estimates that only about 20% of all residents recycle while Wood County estimates that 26% of the waste collected is recycled.

The City of Parkersburg has instituted a double stream recycling system. With single stream recycling all recyclables are placed into the truck, dumped into the hopper, and then sorted by hand. With double stream recycling, sanitation workers sort recyclables at the collection point and filter them at the recycling center. The double sorting method yields cleaner products and makes the recyclables cleaner, easier, and more profitable to sell.

Overall, in 2011 Wasteshed C, which includes Wood County, removed a total of 1,989 tons from the waste stream which was an increase from the 2007 figure of 1,645 tons.

Material Markets

Markets for recyclable materials have traditionally been somewhat volatile. In fall 2008, markets experienced a significant and sustained decline. Some paper markets fell by 80% or more, while some paper markets dried up all together. Similar declines were observed in plastics. Metals also experienced significant declines. These price fluctuations were due to a worldwide economic recession. Prices have mostly returned to their pre-recession levels, and in some cases, even higher. It should be noted that markets tend to be cyclical. Following are market summaries for the most commonly recycled material. This information is obtained from the 2013 West Virginia Solid Waste Management Plan.

Glass: In 2011, West Virginia's Solid Waste Authorities (SWAs) and the 14 municipalities with populations of over 10,000 collected nearly 3,000 tons of glass for recycling. The market value of glass has been low relative to other recyclables for a long time. Only container glass is considered recyclable, with clear glass, sometimes called flint, bringing the highest price, and brown (amber), or green glass much less. Low market value and significant transportation cost have forced many recyclers to discontinue glass recycling. As of October 2011, 14 of the above mentioned programs were collecting glass. Most of these are located in northern West Virginia in close proximity to markets in Ohio and Pennsylvania. While there are no markets for recyclable container glass in West Virginia, limited markets exist in Pennsylvania, Kentucky, and Ohio. Glass prices have been flat for

a long time. A significant increase in prices occurred in August 2011, but probably not enough to drive an increase in glass collection.

Metals: Solid Waste Authorities (SWAs) and the 14 municipalities with populations over 10,000 recycled at least 2,125 tons of metals in 2011. Materials include aluminum and steel cans, scrap metal, non-ferrous metals and white goods. The most valuable materials are various non-ferrous metals such as aluminum and copper. The types of metal that end up at community recycling centers make up about 8.8% of the municipal waste stream. Most metals go to scrap yards. Most community recycling centers collect aluminum and steel cans and various types of non-ferrous metals. Some operate as buy-back centers while some accept the material on a donation basis. Metals are most often sold to local scrap yards that are equipped to handle large volumes of metals. Metal prices have been flat since the market disruption in late 2008 and are expected to stay that way until sales of autos and durable goods improve.

Papers: Paper includes newspapers, cardboard, office paper, magazines, and mixed paper. In 2011, Solid Waste Authorities (SWAs) and the 14 municipalities reported recycling 16,430 tons of paper and 10,097 tons of cardboard. Paper makes up over ¼ of the waste stream and can be collected in bulk from commercial sources. West Virginia has three paper mills. Fibrek, formerly SKF Pulp in Fairmont, WV is a large fiber recovery facility which processes around 1,200 tons of recyclable paper per day. They reported processing 327,557 tons of recycled paper stock for calendar year 2010. Ox Paperboard, former Halltown Paperboard, located in Halltown, WV recently completed a $1.8 million upgrade and expects to produce an estimated 75,000 tons of paper annually from

recycled books, newspapers, and other types of recycled paper. West Virginia recyclers also have access to Banner Fiberboard in Wellsburg, WV. In general, the markets for paper are strong. Other markets in the Eastern U.S., utilized by West Virginia recyclers include Chambersburg Waste Paper, Southeast Paper Company, Valley Converting, Georgia Pacific, Midland Davis, Royal Paper Stock, Bowater, Caraustar Industries, Associated Paper Stock, and Sonoco.

Plastics: West Virginia's SWAs and mandated municipalities collected 1,316 tons of plastics in 2011. Most collections were mixed plastics, #1 PET and #2 HDPE with a few collecting plastic film. Commercial Plastics Recycling, and Flying W Plastics, both located in Glenville, WV, use recycled feedstock in their processes. Other markets utilized by WV recyclers include Blue Ridge Plastics, Caraustar, Clearport, Envision, Southern Scrap, and Mondo Polymers.

Appendix M provides a summary of the prices of glass, ferrous metal, fiber, and aluminum/plastic from January 2009 to January 2012.

Recycling and Marketing Restricted or Difficult to Manage Materials

Electronic Waste: According to the US EPA, the US discards 30 million computers each year. They estimate that only 15-20% of e-waste is recycled, and 70% of heavy metals in landfills come from discarded electronics. Electronic waste may contain one or more of the following: lead, mercury, cadmium, beryllium, bromated flame retardants, or other hazardous substances. Local landfills, although built to US EPA standards, may not be able to contain hazardous substances over long periods of time.

Recycling electronic waste has been a challenge to West Virginia on both the state and local levels. In 2002, US EPA Region III including, West Virginia, Maryland,

Pennsylvania, Delaware, Virginia, and Washington DC initiated a pilot project focusing on end-of-life electronics recycling. The e-Cycling program was designed to utilize a system of shared responsibility to address an important and growing environmental and social issue. First, an electronics recycling contractor was chosen with the capability to serve the entire region. State agencies coordinated e-cycling in their areas of responsibility, working with the localities to organized single day collection events. The Solid Waste Management Board, working with local solid waste authorities, set up a series of 7 local collection events. By the end of the year, the program had collected 137 tons of e-waste in West Virginia. The program continued through 2003 and 2004 collecting 142 and 160 tons respectively. In 2004, the first electronics recycling business capable of handling significant tonnages on a statewide scope emerged – West Virginia P C Renewal, located near Morgantown, WV.

To further facilitate electronic recycling in West Virginia, the 2008 Legislature passed Senate Bill 746. The bill requires all manufactures of computers, monitors, televisions, and video display devices with screens 4" or larger, to register with the WV Department of Environmental Protection. Manufactures who market covered electronic devices in West Virginia are required to pay a registration fee, to set up a take-back program, (either through a mail-in program, a collection events program or a collection center), and to pay a yearly fee. All fees, fines and penalties were deposited in the "Covered Electronic Devices Takeback Fund," administered by the Secretary of the WV DEP, and are to be used for recycling grants for counties and municipalities.

In the 2009 - 2010 legislative sessions, Senate Bill 398 was passed banning electronics from West Virginia landfills, effective January 1, 2011. The Solid Waste Management Board was directed to design a comprehensive program for the proper handling of electronic devices. The plan was completed and submitted to the legislature on January 1, 2011.

As of November 2011, the state has collected over 8.7 million lbs. of electronics for recycling.

Household Hazardous Waste: Household Hazardous Waste (HHW) has one or more of the following characteristics; toxicity, corrosiveness, ignitability and/or reactiveness. HHW can be, but is not limited to, the following: pesticides, battery acid, bleach, gasoline, paint thinner, glue, nail polish remover, fertilizer, pool cleaning chemicals, lighter fluid, oil based paint, and many other things. These chemicals are not allowed in West Virginia's landfills.

The primary tool for managing HHW is for one or more public sector entities, usually the Solid Waste Authorities, to hold a one day collection event. To do this, a qualified contractor must be found to package and process collected materials. These events are costly. The Solid Waste Management Board grant program will fund these programs for the local solid waste authorities.

Over the last decade, cost for these single day events have averaged $27,700, from $15,000 to $35,500 per event. Typical intakes at HHW events include paints, resins, caulks, antifreeze, flammable liquids, dry cell batteries, lead acid batteries, aerosols, oil, asbestos, RCRA exempt acids, pesticides, fluorescent lights, mercury and other, sometimes unidentifiable materials. The events take in large

volumes of material. Some entities have continuous collection of limited types of material. Many programs offer Freon extraction as part of a white goods (appliance) collection program. Other public sector recycling programs collect compact florescent lights (CFLs), various types of batteries, oil, and other materials. Some recycling centers charge a small fee for these services. Household hazardous waste is a problem yet to be adequately addressed in West Virginia.

Recycling Problems Specific to West Virginia

These problems listed for West Virginia are also applicable to Wood County.

Population Density: All waste management, including recycling, is volume dependent. Recycling centers must collect enough material for income to meet or exceed operational costs. Low population density areas have increased collection cost for all types of waste. This problem has accelerated significantly in recent years due to increases in operating cost, much of which are fuel related. West Virginia has a population density of 77 persons per square mile (2010 US Census.) Surrounding states have population densities that are significantly higher; Kentucky, 110; Maryland, 595; Pennsylvania, 284; Ohio, 282, and Virginia, 203. In order for recyclers in West Virginia to make a profit or break-even, they must operate in a highly efficient manner. Costs have to be controlled, and materials should be collected and marketed in bulk. This puts rural recycling programs at a disadvantage compared to their urban counterparts.

Population density has an impact on the collection of recyclable materials. The most productive recycling programs tend to be curbside programs where a

municipality or waste hauler picks up recyclables on a regular schedule. Low population density or rural areas usually don't receive this type of service because of low volumes, labor, and fuel costs. Rural areas tend to offer drop-off services which present other problems, access and contamination.

Marketing and Management Problems for Small Recycling Centers: Small recycling centers, both public and private, sometimes have trouble paying for everyday expenses like utilities, payroll, and fuel, because of irregular cash flow and/or limited resources. They often have to market their materials to a middle man, local processing centers, scrap yards, or material brokers rather than end-user that pay more. Smaller facilities may have to hold materials until they have amassed truckload quantities. Light weight material like plastic, can be held up to a year or more.

Equipment can also be a problem for small recyclers. Smaller pieces of equipment, balers for instance, tend to have a long cycle time, and increasing labor cost. They also offer limited compaction and may not be able to produce a mill-ready bail. Larger machines can be cost prohibitive. Many smaller recyclers, both private and municipal, sell their inventory loose and/or commingled to any buyer available.

Recyclable materials are by definition commodities. As such, they tend to have a low per unit value, and at some point in the marketing channel are graded. Materials must be collected in volume to make recycling even marginally profitable. Providing a clean product is essential to maximum market value. Due to price fluctuation, larger recycling processers often hold materials while waiting for prices to rise. Smaller operations often don't have that option.

Another problem that small, and sometimes larger, recycling facilities have is the use of inmate labor. W.Va. Code §22C-4-22 directs the SWA's to utilize incarcerated individuals in their programs. Inmate labor from the regional jails and local day reporting centers is often unavailable on a daily basis, leaving facilities short on labor for periods of time; a situation that causes donated materials to pile up at the center or at other places such as remote drop-off sites.

Lack of Immediate Markets for Materials: Another problem inherent to recycling in West Virginia is the lack of local markets for materials. This has a negative impact on both small and large recycling centers. The West Virginia Recycling Directory, a listing of recycling collectors, processors and end-users, managed by the West Virginia Department of Commerce, shows only 6 end-user markets in the state. These listings included one for metals, two for plastics and three for paper.

Regional markets are usually only practical for larger processing centers. Typically, once a market is found, an arrangement is made between buyer and seller, sometimes by contract and sometimes by verbal agreement. The buyer picks up the material from the seller deducting hauling expenses from the price paid for the material. Markets are sometimes found in the five surrounding states, and other times, materials must be shipped as far as three to six hundred, or more miles.

There are many types of markets. Some choose to use material brokers, some use local or regional processing centers, some use the services of recycling cooperatives, and some market directly to mills.

Some smaller recycling centers, unfortunately, find themselves giving materials to transporters free of charge to cover hauling cost. Others pay significant fees to haulers to transport materials to market. This is in part due to the current high prices for fuel.

Public vs. Private Recycling Centers: Public sector recyclers set up programs that best serve their communities. These programs often accept materials because there is community demand. Unfortunately, sometimes these materials have little or no market value, are expensive to collect and store, difficult to market, or otherwise have limited profitability. Private sector firms, in order to stay in business, must make a profit on all, or most, of the materials they collect. These firms will sometimes come into an area and focus on collecting materials that have a high market value, can be collected at a low cost, or can be collected in bulk easily. This leaves low value, low volume, or hard to market materials in the waste stream and destined for possible landfill disposal, or public sector recycling programs that often end up taking what the private sector firms leave behind.

A recent trend in recycling is for large recyclers to implement single-stream recycling programs. These programs collect commingled materials, and ship to regional processing centers equipped with high-tech material sorting technology. This reduces collection cost, however, many feel that sorting technology is not advanced enough at this time to produce clean, high grade materials. One of the unanswered questions about single-stream recycling is; what effects will dumping large volumes of low grade material on the recyclable markets have on recyclable materials long term? On the other hand, there are several examples of public/private cooperation in the state.

On the other hand, there are several examples of public/private cooperation in the state. Several public recycling programs collect material and market them to locally owned private processing centers at fair market value. Other public programs work in tandem with private recyclers providing education and awareness, while the private sector recycler provides recycling services to the community. Other public programs solicit state grant funds to purchase recycling equipment which is then leased to private firms.

Lack of Incentives in the System: There are several ways to provide recycling incentives. Many states provide tax incentives. West Virginia will provide a disposal tax waiver to commercial recyclers who dispose of 30% or less of total waste processed for recycling. Other states provide tax waivers on equipment purchases, property tax exemptions, income tax exemptions, employment tax exemptions, and investment tax credits, etc.

Not all incentives are tax related, nor are they all about rewards. Some states provide incentives that punish. Pennsylvania has civil and other penalties for not meeting local recycling goals. Virginia provides possible civil and permitting penalties for those that do not meet recycling goals. Maryland allows state and local authorities to prohibit the issuance of building permits for all new construction for failure to reach mandated recycling rates.

RECYCLING GOALS AND OBJECTIVES

GOAL 1: To make recycling a top priority of Wood County residents so as to decrease the amount of solid waste tonnage deposited at the solid waste landfill.

Obj. 1: To decrease the percent of solid waste tonnage by 5% during each five year period (2020, 2025, 2030).

Obj. 2: To increase the percent of Wood County households which recycle to 32% in 2020, 38% in 2025, and 44% in 2030.

GOAL 2: To provide up-to-date accurate information on recycling and waste management issues to the general public.

Obj. 1: To provide specific information to the general public on landfill space and waste management issues; environmental issues; economic issues; collection, contamination and market issues; and benefits of recycling. This information shall be provided on a yearly basis and should reach at least 5,000 people.

GOAL 3: To provide detailed recycling and waste management information to specific target groups.

Obj. 1. To assist public and private schools in Wood County with comprehensive recycling program information, instructional strategies, resource materials and potential recycling projects. Each school in Wood County will be reached at least once during each school year through either presentations, distribution of materials, programs, etc.

Obj. 2 To work with organizations (Boy Scouts, Lion's Club, etc.), the WCSWA, waste generators, waste haulers, and other special groups that may be important to successful recycling in Wood County. It is anticipated that during each year at least six special recycling projects will be done with area groups.

GOAL 4 To provide a wide range of promotional and educational materials. for activities and for informational purposes.

Obj. 1 To provide a monthly media campaign twice each year on the benefits of recycling.

Obj. 2 To provide at least four public presentations on recycling each year to professional and social organizations.

Obj. 3 To plan and implement at least two special programs per year. Programs will include things like "Paint Swap Day", "Collection of Hazardous Materials", "E-Cycling", etc.

Obj. 4 Design and use a recycling display booth which will be displayed at a minimum of four events per year.

GOAL 5: To implement programs which rely on alternative approaches to solve the issues.

Obj. 1: To recruit and utilize at least 40 volunteers per year on Wood County clean-up/recycling projects.

Obj. 2: To work with Wood County's Day Report Center and Probation Departments in order to utilize their clients to provide at least 500 hours of community service per year.

Obj. 3: To seek funding from a variety of sources by submitting at least five grant applications per year.

APPENDIX A

SOLID WASTE CARRIERS IN WOOD COUNTY

APPENDIX A

SOLID WASTE CARRIERS IN WOOD COUNTY

Alan Lee Taylor
Taylor's Trash
711 Olive Street
Parkersburg, WV 26101
304/428-6209

Boso Equipment, Inc.
99 Oakland Gardens Road
Washington, WV 26181
304/863-8326

Harold A. Taylor
Harold's Refuse
900 Broadway Avenue
Parkersburg, WV 26101
304/428-7357

Harold A. Taylor, Jr.
Wood County Waste
Route 4, Box 64B
Parkersburg, WV 26103
304/428-8700

Haul-A-Way Trash LLC
110 Meadowview Lane
Elizabeth, WV 26143
304/489-9211

Landen E. Little
R&L Trash Service
Route 47
MacFarlan, WV 26148
304/477-3041

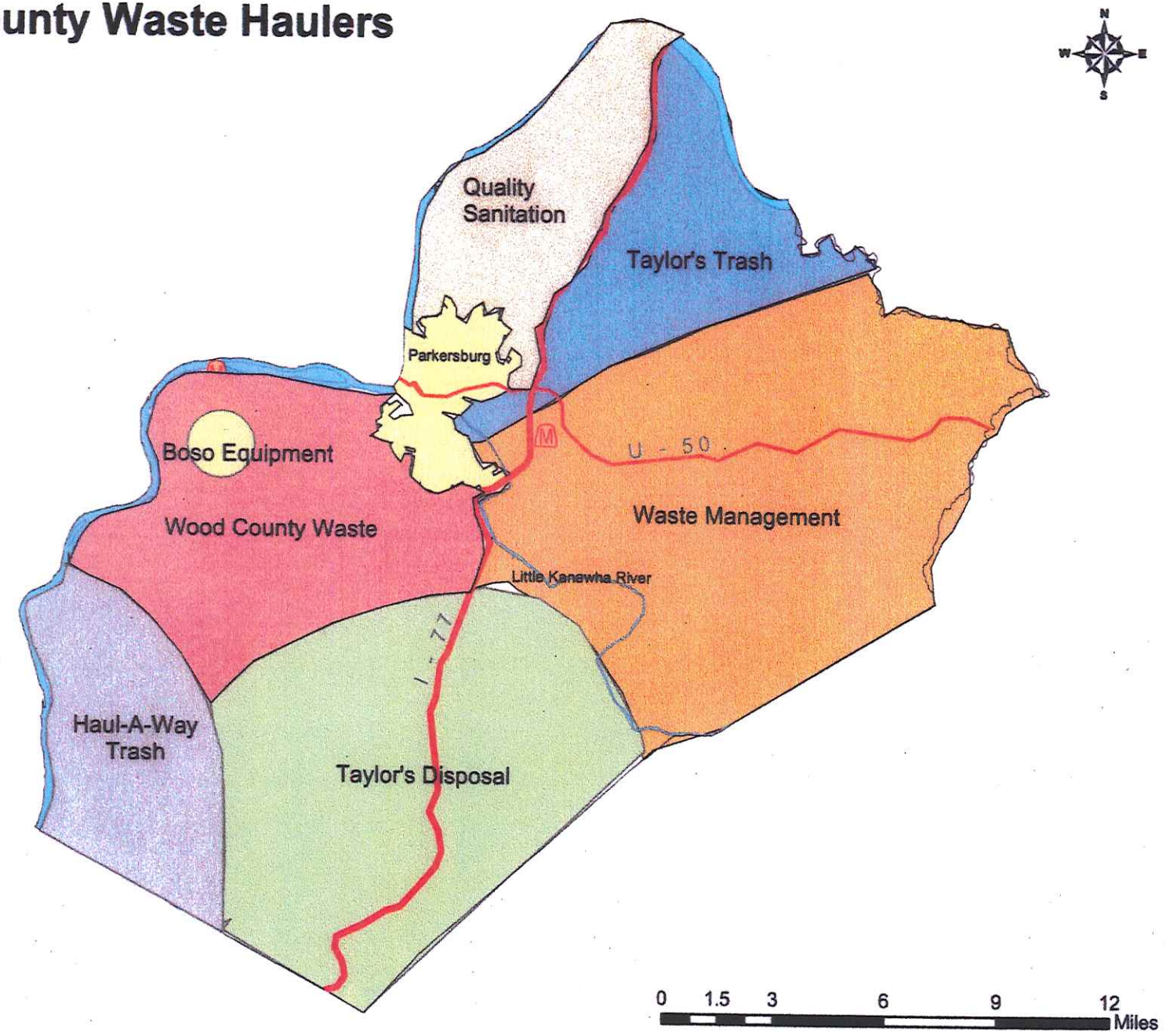
Michael E. Taylor
Quality Sanitation
48 Simon Lane
Washington, WV 26181
304/863-6355

Taylor's Disposal, Inc.
18 Crossroads
Dutch Ridge Road
Parkersburg, WV 26101
304/485-3283

Waste Management of West Virginia, Inc.
Route 9, Box 377
Parkersburg, WV 26142
304/865-3937

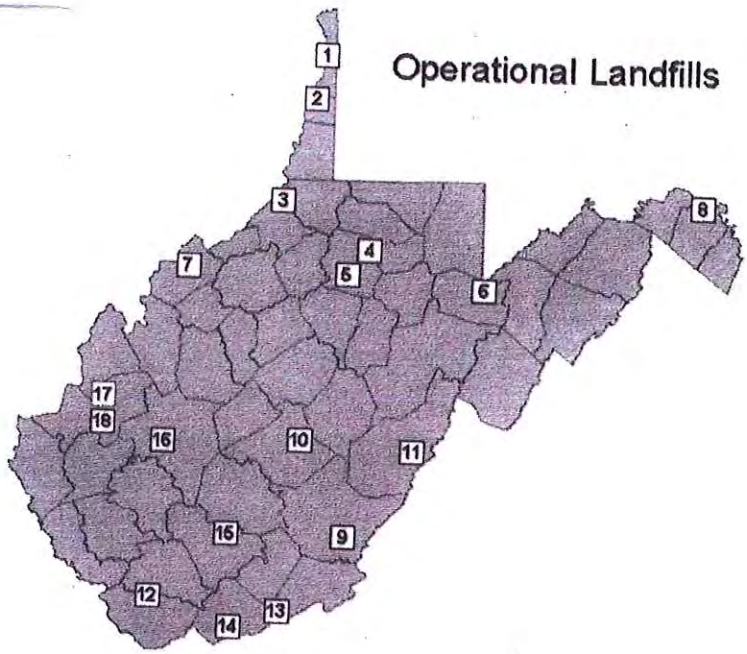
Wood County Waste
Route 4, Box 64B
Parkersburg, WV 26101
304/428-8780

Wood County Waste Haulers



APPENDIX B

WEST VIRGINIA SOLID WASTE LANDFILL MAP



1 – Brooke/Valero Landfill
2 – Short Creek Landfill
3 – Wetzel County Landfill
4 – Meadowfill Landfill
5 – S&S Grading Landfill
6 – Tucker County Landfill
7 – Northwestern Landfill
8 – LCS Landfill
9 – Greenbrier County Landfill
10 – Nicholas County Landfill
11 – Pocahontas County Landfill
12 – Cooper Ridge
13 – HAM Sanitary Landfill
14 – Mercer County Landfill
15 – Raleigh County Landfill
16 – City of Charleston
17 – Disposal Services Landfill
18 – Sycamore Landfill

APPENDIX C

LANDFILL TONNAGE CHART

***Information from the 2015 West Virginia Solid Waste Management Plan**

PUBLIC FACILITIES

WS	Class	Facility Name	*Type of Facility	**Tipping Fee	Monthly Tonnages			
					Permitted Tonnage	Out-Of-State Waste	Average Tonnage	% of Permitted
B	B	Tucker County	MSW	$47.50	9,999	18	6,352	64%
F	B	Greenbrier County	MSW	$46.75	5,500	0	3,966	72%
	B	Nicholas County	MSW	$69.25	9,999	0	2,131	21%
	B	Pocahontas County	MSW, CD*	$57.75	1,400	0	643	46%
G	A	Copper Ridge†	MSW	$42.50	50,000	0	1,556	3%
	B	Mercer County	MSW	$46.75	9,999	102	3,253	33%
	A	Raleigh County	MSW, CD*	$41.75	16,638	0	10,113	61%
H	A	Charleston†	MSW	$40.00	24,157	0	18,253	76%
Average/Totals				**$49.03**	**127,692**	**120**	**5,783**	**36%**

PRIVATE FACILITIES

WS	Class	Facility Name	*Type of Facility	**Tipping Fee	Monthly Tonnages			
					Permitted Tonnage	Out-Of-State Waste	Average Tonnage	% of Permitted
A	A	Brooke/Valero	MSW	$35.25	20,000	1,822	3,102	16%
	A	Short Creek	MSW	$28.05	30,000	6,422	29,125	97%
	B	Wetzel	MSW	$28.75	9,999	521	6,838	68%
B	A	Meadowfill	MSW	$45.35	30,000	539	29,131	97%
	B	S & S	MSW	$46.75	9,999	174	7,378	74%
C	A	Northwestern	MSW	$42.05	30,000	3,905	18,289	61%
E	B	LCS	MSW	$50.30	9,999	1,227	9,657	97%
G	B	HAM	MSW	$43.75	9,999	820	2,183	22%
H	A	Disposal Services	MSW	$48.25	20,000	0	8,362	42%
	A	Sycamore	MSW	$38.75	20,000	0	6,838	34%
Average/Totals				**$40.72**	**189,996**	**15,430**	**120,903**	**64%**

APPENDIX D

SOLID WASTE IMPORTED TO OUT-OF-STATE LANDFILLS AND SOLID WASTE IMPORTED TO WEST VIRGINIA

***Information from the 2015 West Virginia Solid Waste Management Plan**

Total Solid Waste Exported (tons)					
	2003	2005	2007	2009	2011
Kentucky	154,684	97,134	113,127	125,917	80,085
Maryland	5,651	8,844	10,672	13,810	13,810
Ohio	87,592	116,459	126,624	129,998	171,925
Pennsylvania	89,323	158,539	156,856	55,832	85,871
Virginia	45,724	35,533	33,060	27,188	27,188
Totals	382,974	416,509	440,339	352,745	378,879

Table 4-5
Solid Waste Imported to West Virginia: 2011

Total Solid Waste Imported (tons)					
	2003	2005	2007	2009	2011
Brooke/Valero	23,737	29,783	30,754	37,395	21,865
LCS	10,692	36	8,603	16,072	14,727
Meadowfill	19,961	15,003	261	923	6,470
Short Creek	92,861	59,194	61,998	38,602	77,067
Northwestern	69,427	48,363	59,168	38,237	46,861
Wetzel County	18,956	6,659	8,935	6,628	6,253
All Others	1,630	7,554	5,327	4,835	11,655
Totals	237,264	166,592	175,046	142,692	184,898

APPENDIX E

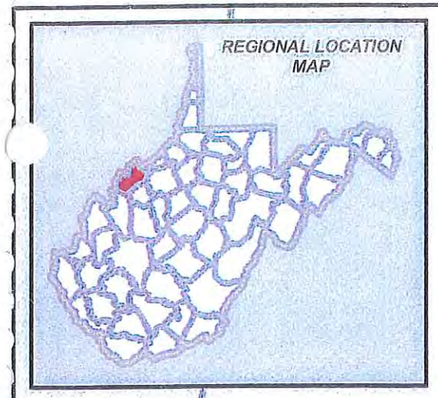
NON-MUNICIPAL WASTE ACCEPTED AT WEST VIRGINIA LANDFILLS

Facility	Industrial Waste and/or Sludge	Electronic Waste*	Appliances	Refrigerated Appliances	Marcellus Shale Waste	Asbestos	C/D Waste	Yard Waste - Brush
Brooke/Valero	<>	<>	<>	<>	<>		<>	<>
Charleston	<>	<>					<>	<>
Copper Ridge		<>	<>				<>	<>
Disposal Services	<>	<>					<>	<>
Greenbrier		<>		<>	<>		<>	<>
Ham		<>	<>	<>	<>	<>	<>	<>
LCS	<>	<>	<>					
Meadowfill	<>	<>	<>	<>	<>	<>	<>	
Mercer County	<>	<>	<>	<>			<>	<>
Nicholas County		<>	<>				<>	
Northwestern	<>	<>	<>	<>	<>			
Pocahontas County		<>	<>	<>			<>	
Raleigh County		<>	<>	<>			<>	<>
S & S Grading	<>	<>	<>	<>	<>		<>	
Short Creek	<>	<>			<>		<>	
Sycamore	<>	<>	<>				<>	<>
Tucker County	<>	<>	<>	<>	<>		<>	
Wetzel County	<>	<>	<>	<>	<>		<>	<>

*Electronic waste can be collected at the state's landfills for recycling purposes only. Electronic waste cannot be deposited in the state's landfills as per W.Va. Code §22-15A-22(d.) Effective January 1, 2011. Yard waste and brush can only be deposited in the state's landfills by permit modification or by special permission from the Secretary of the Department of Environmental Protection.

APPENDIX F

MAP OF FUTURE GROWTH IN WOOD COUNTY



Future Land Use Strategy Map

Wood County Comprehensive Plan
Wood County, West Virginia

Legend

Future Land Use

- Town Centers
- Growth Areas
- Industrial Investment Centers
- Natural Resource Protection Areas
- Residential
- Commercial
- Industrial
- Community Facilities
- Recreation
- Rural Areas

0 7,500 15,000 30,000 Feet

Scale: 1" = 15,000'

APPENDIX G

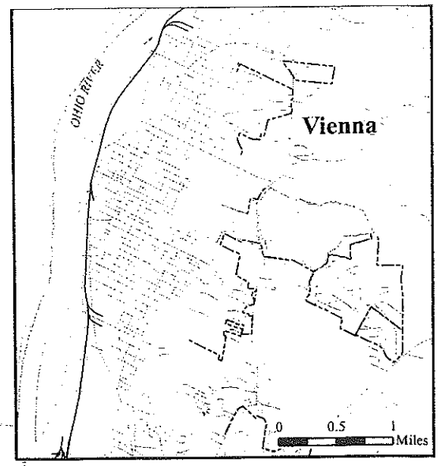
MAP OF STEEP SLOPES IN WOOD COUNTY

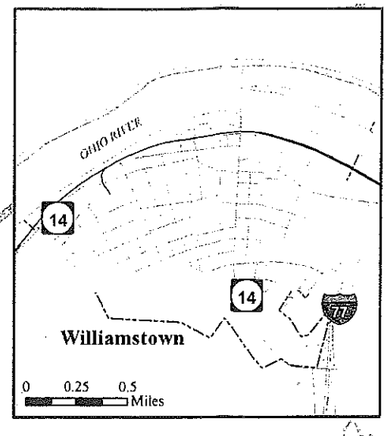
Designated Soils Map

Wood County Comprehensive Pla

Wood County, West Virginia

Wood County
West Virginia





Washington County, Ohio

Williamstown

Wood County Airport

Vienna

North Hills

77

Pleasants County

OHIO RIVER

50

Parkersburg

50

Athens County, Ohio

Little Kanawha River

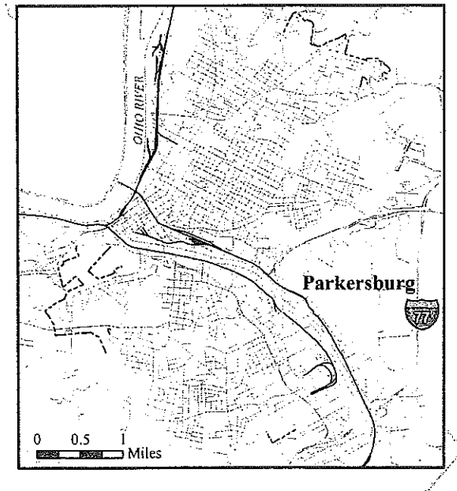
Ritchie County

Meigs County, Ohio

Wirt County

Jackson County

0 0.5 1 2 3 4 5 Miles



Map Legend

- State Boundary
- County Boundary
- City Limits
- Park
- Lake or River
- Hydric Soil Regions

Data Sources: Boundaries, city limits, airport, parks, hydrography, and railroad data was adapted from USGS digital line graphs. Road data was obtained from the Wood County Assessment Office. Hydric soil information obtained from STATSGO.

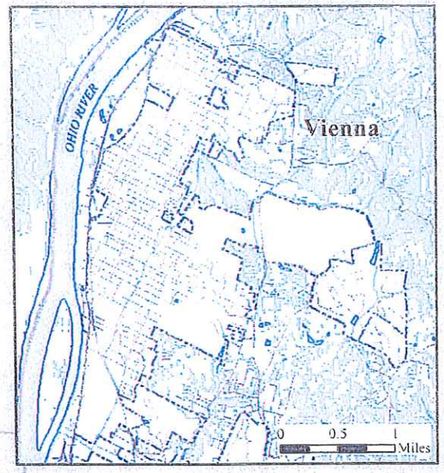
Map Date: September 2006

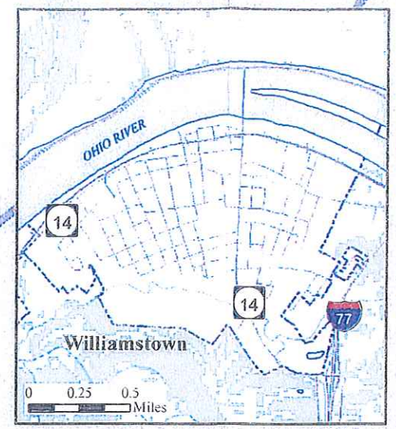
Steep Slope Map

Wood County Comprehensive Plan

Wood County, West Virginia

Wood County
West Virginia





Washington County, Ohio

Williamstown

Vienna

North Hills

77

Pleasants County

OHIO RIVER

Parkersburg

50

Athens County, Ohio

Little Kanawha River

Ritchie County

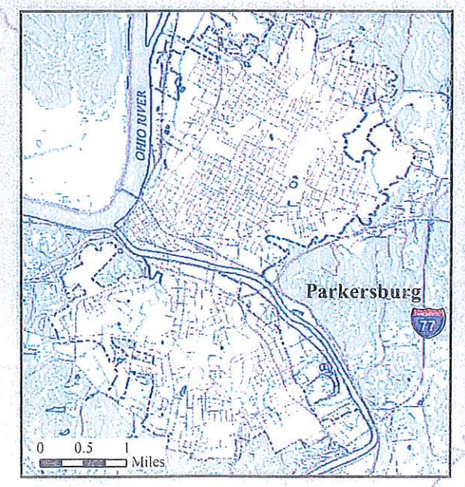
Meigs County, Ohio

77

Wirt County

Jackson County

0 0.5 1 2 3 4 5 Miles



Map Legend

- Slope (15% or Greater)
- Lake or River
- State Boundary
- County Boundary
- City Limits
- Stream
- Roads
- Railroad

Data Sources: Boundaries, city limits, airport, hydrography, and railroad data was adapted from USGS digital line graphs. Slope data was adapted from USGS digital elevation models. Road data was obtained from the Wood County Assessment Office.

Map Date: June 2006

APPENDIX H

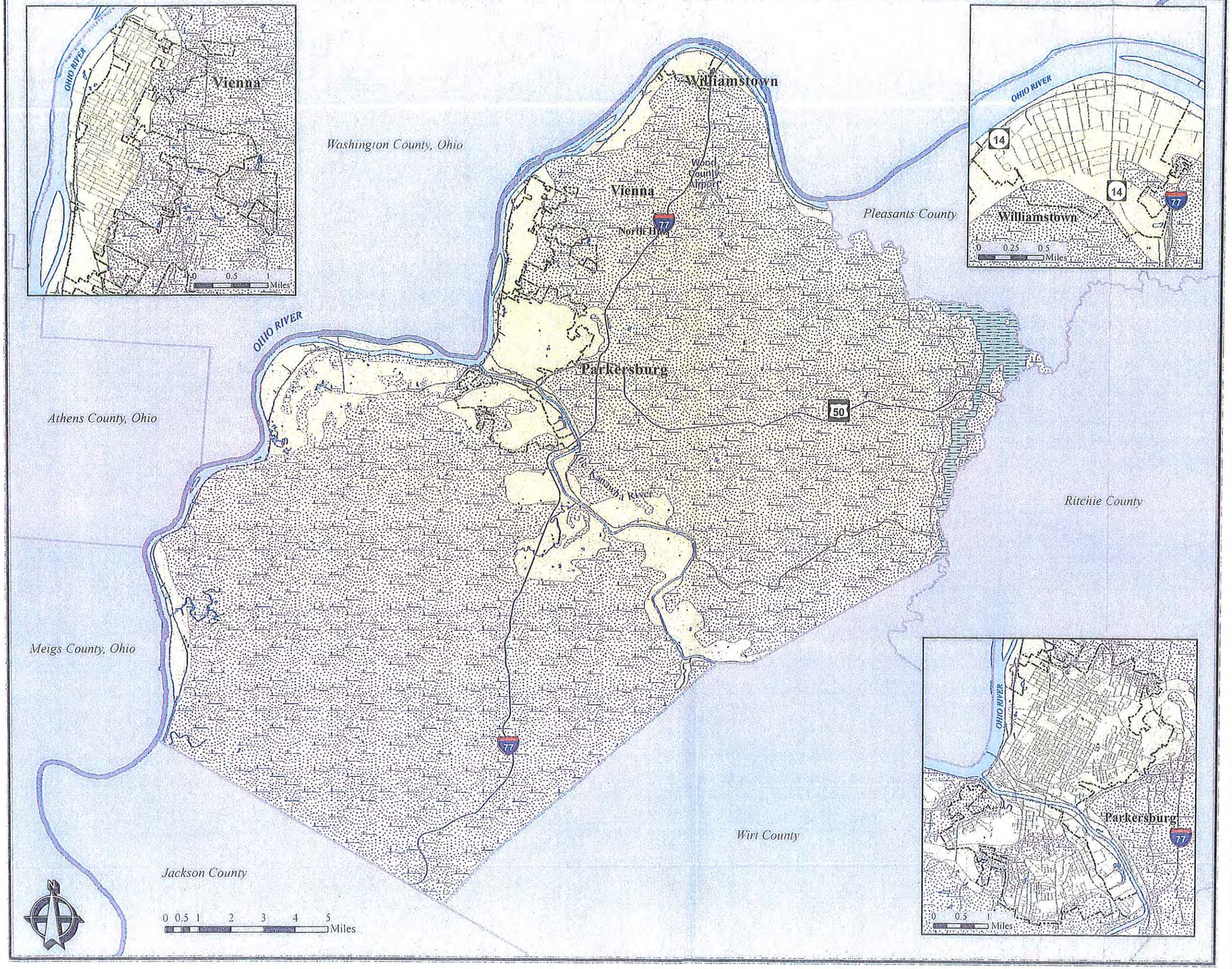
GEOLOGY MAP OF WOOD COUNTY

Geology Map

Wood County Comprehensive Plan

Wood County, West Virginia

Wood County
West Virginia



Map Legend

Geology

- Alluvium
- Sandstone
- Shale
- Lake or River
- State Boundary
- County Boundary
- City Limits
- Roads
- Railroad

Data Sources: Boundaries, city limits, airport, hydrography, and railroad data adapted from USGS digital line graphs. Surface geological data was obtained from the West Virginia Geological and Economic Survey. Road data was obtained from the Wood County Assessment Office.

Map Date: June 2006

APPENDIX I

DESIGNATED SOILS MAP IN WOOD COUNTY

APPENDIX J

LIST OF WOOD COUNTY CLEANED-UP OPEN DUMPS

Wood County

Open Dump Projects--Not Completed

Project Name	Type	Completed	Dumps	Acres Reclaimed	Cost	Tons Removed	Tons Steel	Appliances	Tires	Volunteers	Miles Stream	Agencies Involved

Open Dump Projects--Completed

Project Name	Type	Completed	Dumps	Acres Reclaimed	Cost	Tons Removed	Tons Steel	Appliances	Tires	Volunteers	Miles Stream	Agencies Involved
Accounting 1993	OPEN DUMP	1993/06/30	8	11.95	$16255.59	722.73	107	4	6			
Accounting 1994	OPEN DUMP	1994/06/30	8	1.75	$20414.16	348.75	6.55		6			
Accounting 1995	OPEN DUMP	1995/06/30	4	.75	$7171.32	186.77	22.6		185			
Accounting 1996	OPEN DUMP	1996/06/30	19	5	$40110.82	609.73						
Accounting 1997	OPEN DUMP	1997/06/30			$0							
5 MILE RUN	OPEN DUMP	1998/05/31	1	.5		46.12	0	0	12	0		FANNIN TRUCKING
Accounting 1998	OPEN DUMP	1998/06/30			$2630							
ROUTE 47 & STILLWELL ROAD	OPEN DUMP	1998/10/21	1	2		140	0	0	14	0		ROMIE SPENCER
Accounting 1999	OPEN DUMP	1999/06/30			$5425.41							
WILLARD ROAD	OPEN DUMP	2000/05/16	1	.2		1.69	0	0	508	0	0	ROMIE SPENCER
Accounting 2000	OPEN DUMP	2000/06/30			$2250							
Accounting 2001	OPEN DUMP	2001/06/30			$0							
Crossroads Methodist Church nature area	MAKE IT SHINE	2002/04/06	1	1		0				21		Cub Scouts Pack 47
Middle Fork Lee Creek, Robin hood road, Route 68	MAKE IT SHINE	2002/04/06	1	1		0				40		Belleville 4-H Club
Brisco Run	MAKE IT SHINE	2002/04/13	1	1		0				20	2.76	Briscoe Run Watershed Assocuation/WVDEP/DOH
Accounting 2002	OPEN DUMP	2002/06/30			$0							
Willard Road	OPEN DUMP	2002/07/01	1	1	$980	1						Empire Builders/WVDEP
Nickelette Road	OPEN DUMP	2002/10/30	1	1	$1095	1.54			22			Romey Spencer/ Wood County SWA/WVDEP
Narrow Gauge Road	OPEN DUMP	2002/11/07	4	7	$16016.18	281.03		50	300			Graham Excavating/ WVDEP
Pleasant Hill road	OPEN DUMP	2002/11/07	1	.1	$1234	1.34		3	50			Graham Excavating/ WVDEP
Sam's Creek	OPEN DUMP	2003/01/12	1	1	$1192	1.5	.5		84		.3	Allegheny Conservation Alliance
CR 31	OPEN DUMP	2003/03/07	1	1	$1133	3.3		2	25			Graham Excavating/ WVDEP
Roberts Lane Site 1	OPEN DUMP	2003/03/26	1	1	$980	2.1		2	27			Graham Excavating/ WVDEP
Roberts Lane Site 2	OPEN DUMP	2003/03/27	1	1	$1100	3		3	20			Graham Excavating/ WVDEP

Wood, Public stream access little Kanawaha River	MAKE IT SHINE	2003/04/03	1	1	$8.75	.25							Little Kanawha byway 4
Nature Trail United Methodest Church Waverley	MAKE IT SHINE	2003/04/05	1	1	$3.5	.1							Cub scout Pack 47
MAKE IT SHINE	OPEN DUMP	2003/04/05	1	1		.1	0	0	0	0	0		CUB SCOUTS
Stream Cleanup, Mountwood Park and 2 miles of Rail trail	MAKE IT SHINE	2003/04/05	1	1	$17.5	.5							Woodchucks 4-H Club
Accounting 2003	OPEN DUMP	2003/06/30			$0								
RT 21 Mineral Wells	OPEN DUMP	2004/01/17	1	1	$1004	.75		2	12				Tim Graham
Oak Grove	OPEN DUMP	2004/01/18	1	1	$1004	2.5			42				Tim Graham
West Oak Grove Road	OPEN DUMP	2004/02/07	1	1	$975	1.9	.5		21				
Wood County Cleanup 2004	SPECIAL	2004/04/17	1	3	$600	37.2	21.2	100	800				WVDEP\WVDNR\Wood County SWA
Middle Fork of Lee Creek	MAKE IT SHINE	2004/04/24	1	1	$40	.04				40			WVDEP/WVDNR/ Belleville 4h club
Slate	OPEN DUMP	2004/05/26	1	2	$8245.61	18.92			624				WVDEP, ROmey Spencer
Accounting 2004	OPEN DUMP	2004/06/30											
Waverly 2005	OPEN DUMP	2004/12/29	1	1	$1120	1.98			20				WVDEP/Graham Excavating
Lemon Tire Pile 2009	Tire Pile	2005/02/06	1	1	$3723.5	7.36	0	0	736	0	0		REAP PPOD/Graham Excavating/Wood County SWA
Oak Grove 2005	OPEN DUMP	2005/03/08	1	1	$1011	.9			25				WVDEP/Graham Excavating
Farrow Hill 2005	MAKE IT SHINE	2005/03/09	1	1	$1055	.89			32				WVDEP/Graham Excavating
Winding Road 2005	OPEN DUMP	2005/03/10	1	1	$1090	1.12			51				WVDEP/Graham Excavating
Radcliff Road 2005	OPEN DUMP	2005/03/10	1	1	$1028	.8			28				WVDEP/Graham Excavating
Wood County Cleanup 2005	SPECIAL	2005/04/09	1	1	$1500	145	20	100	1500				WVDEP/WCSWA? Graham Excavating
Woor County Metal Cleanup 2005	SPECIAL	2005/04/12	1	1	$990	120	30						WVDEP/WCSWA/ Graham Excavating
Stephens Fork Road 2005	OPEN DUMP	2005/04/17	1	1	$980	2.4			6				WVDEP/ Graham Excavating
Waverly 2006	Tire Pile	2006/01/09	1	1	$1054.5	.8			65				WVDEP, Graham Excuvating
River Road	OPEN DUMP	2006/01/13	1	1	$910	.8			35				WVDEP/Graham Excuvating
Boogle Ridge 2006	OPEN DUMP	2006/01/16	1	1	$990	.98			34				WVDEP/Graham Excuvating
Phoenix Street 2006	OPEN DUMP	2006/01/29	1	1	$968	1.2			25				WVDEP/Graham Excuvating
	Tire Pile	2006/02/22	1	2	$4495	5.1			460				WVDEP/Romie Spencer

	Winding Road 2006												
	Tire Collection Wood County 2006	Tire Pile	2006/07/15	1	1	$63946.8	72.48			7640			WVDEP/WV Tire
	Sumit Road 2006	Tire Pile	2006/09/04	1	1	$1160	1.5			86			WVDEP/Graham Excavating
	Tire Collection Wood County 2007	Tire Pile	2007/04/30	1	1	$17000	80	0	0	8000	10	0	REAP PPOD/Wood County SWA/Waste Management
	Pumpkin Knob 2007	OPEN DUMP	2007/07/28	1	1	$1123.9	1.34			45	0		REAP PPOD/Graham Excavating
	Radcliffe Run 2007	OPEN DUMP	2007/09/25	1	1	$2000	.8	0	0	30	0	0	REAP PPOD/Graham Excavating
	Buckner Bend Road #2 2007	OPEN DUMP	2007/10/15	1	1	$2810.09	9.67	4.5	0	135	0		REAP PPOD/P & L Enterprises
	Coldwater Creek 2007	OPEN DUMP	2007/10/21	1	1	$1100	.78	0	0	5	0		REAP PPOD/Graham Excavating
	Parkersburg Salvation Army 2007	Tire Pile	2007/10/24	1	1	$590	.6	0	0	60	0	0	REAP PPOD/Graham Excavating
	Summitt Road 2007	Tire Pile	2007/11/25	1	1	$3309	5.86	0	0	534	0	0	REAP PPOD/Graham Excavating
	Loomis Ridge 2008	Tire Pile	2008/03/09	1	2	$1414.25	1.5	0	0	100	0	0	REAP PPOD/Graham Excavating
	Ashby Ridge 2008	Tire Pile	2008/04/09	1	1	$2602.5	2	0	0	110	0	0	REAP PPOD/Graham Excavating
	Mountwood Lake MISCU 2008	MAKE IT SHINE	2008/04/12	1	10	$157	1.56	0	0	29	50	0	REAP PPOD/WVMIS/Mountwood Lake Volunteers
	Murray Lane 2008	Tire Pile	2008/04/12	1	1	$3067	3.24	0	0	324	0	0	REAP PPOD/Graham Excavating
	Tire Collection Wood County 2008	Tire Pile	2008/04/12	1	1	$16668	94.96	13		8196	0		REAP PPOD/Graham Excavating/WV Tire
	Pond Creek Panthers 4H MISCU 2008	MAKE IT SHINE	2008/04/13	5	5	$300	14	2	0	0	25	0	REAP PPOD/WVMIS/Pond Creek Panthers/Graham Excavating
	Tire Collection Wood County Rockport 2008	Tire Pile	2008/05/10	1	1	$3149	4.28	0	0	428	20	0	REAP PPOD/WV Tire/Graham Excavating
	Waverly Rt. 2 Tires 2008	Tire Pile	2008/05/29	1	1	$1046.5	.42	0	0	42	0	0	REAP PPOD/Graham Excavating
	Walker 2008	Tire Pile	2008/05/29	1	1	$2218.25	.83	0	0	55	0	0	REAP PPOD/Graham Excavating
	Hartleroad Tire Pile 2008	Tire Pile	2008/07/10	1	1	$3032	2.5	0	0	196	0		REAP PPOD/Graham Excavating
	Buckner Bend Road #1 2008	Tire Pile	2008/07/14	1	1	$18500.65	16.98		0	1796	0		REAP PPOD/Romie Spencer, Inc.
	Rt. 47 Storage 2008	OPEN DUMP	2008/07/28	1	1	$2483.95	1.9	0	0	42	0	0	REAP PPOD/Graham Excavating
	Walker Ridge #1 2008	Tire Pile	2008/08/28	1	2	$2890.25	2.51	0	0	251	0	0	REAP PPOD/Graham Excavating
	Walker Ridge #2 2008	Tire Pile	2008/08/29	1	2	$2537.25	1.75	0	0	175	0	0	REAP PPOD/Graham Excavating

Falls Run 2008	Tire Pile	2008/08/31	2	2	$2305	.6	0	0	60	0	0	REAP PPOD/Graham Excavating
Route 47 2008	Tire Pile	2008/09/14	1	1	$1590	.8	0	0	80	0	0	REAP PPOD/Graham Excavating
Enoch Tire Pile 2008	Tire Pile	2008/10/15	1	3	$22006	68.66	0	0	6866	0	0	REAP PPOD/Graham Excavating
Stillwell Tire Pile 2008	Tire Pile	2008/10/19	1	1	$1308.5	.62	0	0	62	0	0	REAP PPOD/Graham Excavating
Eastwood Drive 2008	Tire Pile	2008/12/10	1	1	$2199.25	.51	0	0	47	0	0	REAP PPOD/Graham Excavating
Lockhart Tire Pile 2008	Tire Pile	2008/12/14	1	4	$3432.5	5.9	0	0	590	0	0	REAP PPOD/Graham Excavating
Staunton Avenue Tire Pile 2009	Tire Pile	2009/01/06	1	2	$6884	25.56	0	0	2556	0	.1	REAP PPOD/Graham Excavating
Belle Street Tire Pile 2009	Tire Pile	2009/01/09	1	2	$6971.25	25.95	0	0	2595	0	.1	REAP PPOD/Graham Excavating
Rector Road Tire Pile 2009	Tire Pile	2009/01/11	1	1	$2225.92	3.14	0	0	86	0	0	REAP PPOD/Graham Excavating
Winding Heights 2009	Tire Pile	2009/01/16	1	1	$1598	.56	0	0	56	0	0	REAP PPOD/Graham Excavating
Lost Pavement Tire Pile 2009	Tire Pile	2009/02/09	1	1	$4075	9.04	0	0	904	0	0	REAP PPOD/Graham Excavating/Wood County SWA
Butcher Run Tower Tire Pile 2009	Tire Pile	2009/02/12	1	1	$2718	1.76	0	0	176	0	0	REAP PPOD/Graham Excavating
Broadway Tire Pile 2009	Tire Pile	2009/03/10	1	2	$4293.5	5.62	0	0	562	0	0	REAP PPOD/Graham Excavating/Wood County SWA
Bailey Tire Pile 2009	Tire Pile	2009/03/19	1	2	$2902	5.7	2.7	0	300	0	0	REAP PPOD/Graham Excavating
Rockport School 2009	Tire Pile	2009/03/25	1	1	$6703.75	19.06	0	0	2373	0	0	REAP PPOD/Graham Excavating/Wood SWA
Frank Atkinson Road 2009	Tire Pile	2009/04/19	1	1	$1295.25	.55	0	0	55	0	0	REAP PPOD/Graham Excavating
Tire Collection Wood County 2009	Tire Pile	2009/04/25	1	1	$20591.25	119.95	16	0	10395	0	0	REAP PPOD/WV Tire/Graham Excavating
Mountwood Park MISCU 2009	MAKE IT SHINE	2009/04/25	1	5	$188.23	3.25	0	0	30	50	4	REAP PPOD/WV Make It Shine/Mountwood Park
Lost Pavement #2 2009	Tire Pile	2009/04/30	1	1	$1475.5	1.46	0	0	146	0	0	REAP PPOD/Graham Excavating
Wood County Recycling Center 2009	Tire Pile	2009/05/05	1	1	$2498.5	13.08	0	0	1308	5		REAP PPOD/WV Tire
Pheonix Street Tire Pile	Tire Pile	2009/07/21	1	1	$1348	.56	0	0	56	0	2	REAP PPOD/Graham Excavating/Wood County SWA
Duckworth Property 2009	OPEN DUMP	2009/08/09	2	2	$2642.9	6.43	1.2	3	32	0		REAP PPOD.Graham Excavating/DEP EE
Oak Grove 2009	Tire Pile	2009/08/16	2	2	$1715.25	1.23	0	0	123	0	0	REAP PPOD/Graham Excavating
Butcher Bend 2009	Tire Pile	2009/09/13	1	1	$2298.75	.85	0	0	85	0	0	REAP PPOD/Graham Excavating
Blaze Run 2009	Tire Pile	2009/11/10	1	1	$1954.75	.73	0	0	73	0	0	REAP PPOD/Graham Excavating

Falls Run 2009	Tire Pile	2009/11/11	1	1	$2813.75	2.25	0	0	225	0	0	REAP PPOD/Graham Excavating
Walker Road 2009	OPEN DUMP	2009/11/24	1	1	$2448.5	1.62	0	0	62	0	0	REAP PPOD/Graham Excavating
Mountwood Park Property 2010	Tire Pile	2010/01/24	1	1	$2254	.88	0	0	88	0	0	REAP PPOD/Graham Excavating
Stillwell Road 2010	Tire Pile	2010/02/07	1	1	$2348.5	1.02	0	0	102	0	0	REAP PPOD/Graham Excavating
Kanawha River Road 2010	Tire Pile	2010/02/07	1	1	$2366.25	95	0	0	95	0	0	REAP PPOD/Graham Excavating
Fort Boreman Park 2010	OPEN DUMP	2010/03/07	1	1	$2500	1.3	.7	13	42	0	0	REAP PPOD/Graham Excavating
Mountwood Park MISCU 2010	MAKE IT SHINE	2010/04/10	1	46	$1484.58	2.54	0	0	0	40	0	REAP PPOD/WVMIS/Mountwood Park/Graham Excavating
Tire Collection Wood County Rockport 2010	Tire Pile	2010/04/21	1	1	$3287.5	5.06	0	0	506	15	0	REAP PPOD/Graham Excavating/WV Tire
Tire Collection Wood County 2010	Tire Pile	2010/04/24	1	1	$18603.5	100.02	8	0	9202	5	0	REAP PPOD/Graham Excavating/WV Tire
Oak Grove Tire Pile 2010	Tire Pile	2010/05/25	1	1	$2642.25	1.27	0	0	127	0	0	REAP PPOD/Graham Excavating
Stillwell Tire Pile 2010	Tire Pile	2010/05/28	1	1	$2620.75	.97	0	0	91	0	0	REAP PPOD/Graham Excavating
McIntire Tire Pile 2010	Tire Pile	2010/06/01	1	2	$6025	14.43	0	0	1443	0	0	REAP PPOD/Graham Excavating
Willard Run Tire Pile 2010	Tire Pile	2010/07/22	1	1	$2419.5	2.86	0	0	118	5	0	REAP PPOD/Graham Excavating/Wood DRC
Butcher Bend 2010	OPEN DUMP	2010/08/10	1	1	$2058.75	1.23	0	0	45	0	0	REAP PPOD/Graham Excavating
Lee Creek 2010	STREAM	2010/10/06	1	1	$2166	1.87	0	0	0	0	.5	REAP PPOD/Graham Excavating
California Ridge Road 2010	OPEN DUMP	2010/10/17	1	1	$2502.25	1.17	0	0	87	0	0	REAP PPOD/Graham Excavating
Chester Road 2010	Tire Pile	2010/11/19	1	1	$2550.5	.86	0	0	86	0	0	REAP PPOD/Graham Excavating
Willard Road Tire Pile 2010	Tire Pile	2010/11/21	1	1	$2635.5	1.06	0	0	106	0	0	REAP PPOD/Graham Excavating
River Road 2011	Tire Pile	2011/02/16	1	1	$2284	.48	0	0	48	0	0	REAP PPOD/Graham Ecavating
Corbitt Hill Road 2011	OPEN DUMP	2011/03/30	1	1	$2335	1.6	0	0	60	0	0	REAP PPOD/Graham Excavating
Camden Avenue Park and Ride 2011	OPEN DUMP	2011/03/31	1	1	$1489.5	.64	0	0	14	0	0	REAP PPOD/Graham Excavating
Girl Scout Troop 5522 MIS 2011	MAKE IT SHINE	2011/04/02	1	1	$50	.35	0	0	0	25	0	REAP PPOD/Girl Scouts/WVMIS
Mountwood Park MIS 2011	MAKE IT SHINE	2011/04/02	1	1	$2392.75	3.09	0	3	93	114	1	REAP PPOD/WVMIS/Mountwood Park/Graham Excavating
Tire Collection Wood County 2011	Tire Pile	2011/04/23	1	1	$16547.25	84.27	4	0	8027	0	0	REAP PPOD/Wood SWA/WV Tire/Graham Excavating

Ranis Road Tire Pile 2011	Tire Pile	2011/04/30	1	1	$2499.5	1.1	0	0	110	0	0	REAP PPOD/Graham Excavating
Pond Creek MIS 2011	MAKE IT SHINE	2011/04/30	1	1	$3725	10.5	0	0	700	10	0	REAP PPOD/Graham Excavating/Pond Creek 4H
Ohio River Sweer Wood County 2011	STREAM	2011/06/19	1	1	$2638.25	3.23	0	0	63	25	2	REAP PPOD/WVMIS/Graham Excavating
5th Street Bridge 2011	OPEN DUMP	2011/07/21	1	1	$2920	14	0	0	0	0	0	DEP/Tim Graham Excavating
Nicolete Road 2011	OPEN DUMP	2011/07/24	1	1	$2500	.67	0	0	8	0	0	DEP/ Tim Graham Excavating
Meadeville Road 2011	OPEN DUMP	2011/07/29	1	1	$2399.17	1.49	0	0	0	0	0	REAP PPOD/Graham Excavating
Cox Tire Pile 2011	Tire Pile	2011/09/15	1	5	$7172.25	32.17	14	0	1817	0	0	REAP PPOD/Graham Excavating/Wood County SWA
Kites Run Trail Head 2012	OPEN DUMP	2012/01/09	1	1	$2517	2	0	0	4	0	0	REAP PPOD/Graham Excavating
Cain Hill Road 2012	Tire Pile	2012/01/10	1	1	$2460	.87	0	0	87	0	0	REAP PPOD/Graham Excavating
Kites Run Road 2012	OPEN DUMP	2012/01/10	1	1	$2400.25	1.1	.2	1	47	0	.2	REAP PPOD/Graham Ecavating
Rhodes Property 2012	OPEN DUMP	2012/02/18	1	1	$2492.5	5.46	5	32	46	0	0	REAP PPOD/Graham Excavating
Willard Road 2012	OPEN DUMP	2012/03/01	1	1	$918.5	1.22	0	1	22	0	.4	REAP PPOD/Graham
Allman Road 2012	OPEN DUMP	2012/03/07	1	1	$2192	.94	0	0	44	0	0	REAP PPOD/Graham
Pumpkin Knob 2012	Tire Pile	2012/03/08	1	1	$2938.5	5.82	0	4	182	0	0	REAP PPOD/Graham
Scotts Backwater 2012	Tire Pile	2012/03/09	1	1	$2618.75	1.65	.6	2	125	0	.2	REAP PPOD/Graham
Parkersburg Marble Plant 2012	SPECIAL	2012/03/23	1	2	$4474.19	134.36	0	0	5	0	0	REAP PPOD/DEP EE/City of Parkersburg/Wood County Commission
Smith Tire Pile 2012	Tire Pile	2012/03/28	1	5	$5151.5	6.16	0	0	1238	0	0	REAP PPOD/Graham Excavating
Mountwood Park MISCU 2012	MAKE IT SHINE	2012/04/14	1	1	$2301.69	2.3	0	0	53	1	0	REAP PPOD/MIS/Mountwood Park/Graham Excavating
Tire Collection Wood County 2012	Tire Pile	2012/04/26	1	1	$18780.25	98.03	5	0	9303	0	0	REAP PPOD/WV Tire/Graham Excavating
Nicollette Road Tire Pile 2012	Tire Pile	2012/05/01	1	1	$2406.75	.61	0	0	61	0	0	REAP PPOD/Graham Excavating
Love Hill Tire Pile 2012	Tire Pile	2012/05/18	3	3	$2340	.8	0	0	80	0	0	REAP PPOD/Wood SWA/Graham Excavating
Parkersburg Recycling Tires 2012	Tire Pile	2012/06/14	1	1	$702.25	3.6	0	0	360	0	0	REAP PPOD/City of Parkersburg/WV Tire
MacAtee Tire Pile 2012	SPECIAL	2012/06/15	1	1	$2500	15.4	0	0	40	2	0	REAP PPOD/Graham Ecavating
Sand Hill WMA 2012	Tire Pile	2012/11/13	2	2	$2617.25	4	.5	2	67	0	.3	REAP PPOD/Graham Excavating
Petroleum Road 2012	Tire Pile	2012/11/14	1	1	$2563.5	2.7	0	0	70	0	0	REAP PPOD/Graham Excavting
Fort Boreman Park 2012	OPEN DUMP	2012/11/16	1	1	$330	.85	0	0	0	0	0	REAP PPOD/Graham Excavating
		2012/11/19	1	4	$2518.5	1.22	0	0	22	0	0	

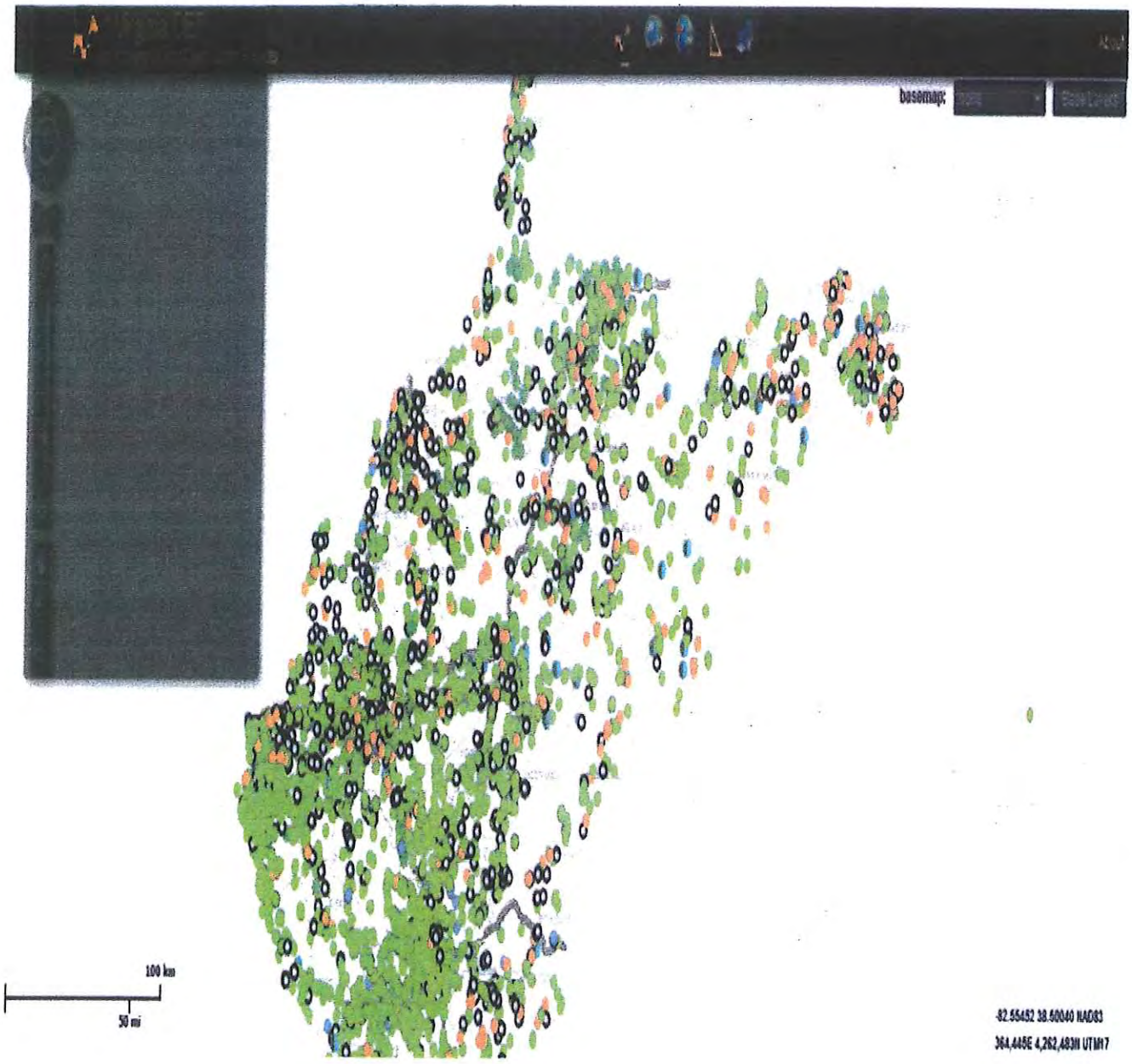
	James Park 2012	OPEN DUMP											REAP PPOD/Graham Excavating/Wood DRC
	Emerson Ave 2012	OPEN DUMP	2012/11/29	1	1	$1185	.5	.5		2	0		REAP PPOD/Graham Excavating
	Bull Run 2013	Tire Pile	2013/01/03	1	1	$2554.75	1.24			77	0	.2	REAP PPOD/Graham Excavating
	Gates Run Tire Pile 2013	Tire Pile	2013/01/15	1	.2	$2871	2.12	0	0	212	0	0	REAP PPOD/Graham Excavating
	Lockhart Tire Pile 2013	Tire Pile	2013/02/14	1	1	$2821.25	3.55	0	0	355	4	0	REAP PPOD/Graham Excavating
	Lockhart Tire Pile 2013	Tire Pile	2013/02/14	1	1	$2821.25	3.55	0	0	355	4	0	REAP PPOD/Graham Excavating
	Pleasant Hill 2013	OPEN DUMP	2013/03/15	3	3	$2400	2	0	0	17	0	0	REAP PPOD/Graham Excavating
	Mountwood Park MIS 2013	MAKE IT SHINE	2013/04/18	1	20	$1145	1.87	0	0	23	42	0	REAP PPOD/Graham Excavating/Mountwood Park
	Wood Rail Trail MIS 2013	MAKE IT SHINE	2013/04/18	1	1	$700	.75	0	0	15	15	0	REAP PPOD/Graham Excavating/MIS
	Tire Collection Wood County 2013	Tire Pile	2013/05/04	1	1	$13365.75	66.09	4	0	6209	0	0	REAP PPOD/Graham Excavating/WV Tire/Wood County SWA
	Willard Road 2013	Tire Pile	2013/05/19	3	3	$2062.5	.42	0	0	42	0	0	REAP PPOD/Graham Excavating
	Route 68 2013	OPEN DUMP	2013/07/14	1	1	$2080.5	2	0	0	14	0	0	REAP PPOD/Graham Excavating
	Petroleum Road Tire Pile 2013	Tire Pile	2013/08/19	1	1	$2896	2.72	0	0	272	0	0	REAP PPOD/Graham Excavating
	Parkersburg Boat Ramp 2013	OPEN DUMP	2013/08/28	1	.1	$2040.75	1.67	0	0	17	0	0	REAP PPOD/Graham Excavating
	Ruble Road Tire Pile 2013	Tire Pile	2013/09/10	4	4	$922	64	0	0	64	0	0	REAP PPOD/Graham Excavating
	Tower Road 2014	OPEN DUMP	2014/04/04	1	1	$2052.5	.8	0	0	30	0	0	REAP PPOD/Graham Excavating
	Missouri Run Tire Pile 2014	Tire Pile	2014/04/07	1	1	$2533	.76	0	0	76	0	0	REAP PPOD/Graham Excavating
	Mountwood Park MIS 2014	MAKE IT SHINE	2014/05/12	1	1	$1519.64	.71	0	0	10	40	0	REAP PPOD/Graham Excavating/MIS
	Tire Collection Wood County 2014	Tire Pile	2014/05/19	1	1	$11440.75	59.09	8	0	5109	0	0	REAP PPOD/Graham Excavating/WV Tire

Open Dump Clean Ups for Day Report

Location	Description of Items	Date Cleaned Up	Complete
6647 Deerwalk Hwy	Garage full of tires	02/14/2013	Yes
180 Deer Ridge Rd.	Trash dumped in yard- building materials	02/07/2013	Yes
Deer Ridge Rd.	Open Dump	02/07/2013	Yes
Nicolette Rd.	Small dump by roadside	02/07/2013	Yes
Viscose Rd.	Couch dumped by gate	02/08/2013	Yes
Second Butcher Bend Rd.	2 Dumps- Trash, mattress, futon & other items	02/21/2013	Yes
Roth Rd.	Open dump - Red fence, insulation & misc.	02/28/2013	Yes
Willard Rd.	Open Dump	03/14/2013	Yes
Summit Rd.	Open dump by road- Couch, box springs & mattress	03/14/2013	Yes
Fort Boreman	Tires, gas tank, & some trash	04/22/2013	Yes
Phoenix St.	Open Dump with 4 TV's (Day Report could not find) Bob Enoch took to Pkg. Recycling	05/24/2013	Yes
Dry Run Rd. (Josh Thorn & Spring Stoops)	TV Dump on property	09/03/2013	Yes
Fort Boreman (Reopen)	Trash dumped on dirt road to right of Park entrance	09/09/2013	Yes
Blenn Hgts. (Redneck Riviera)	(Reopen) Dump with tires & other items	09/16/2013	Yes
Mill Run Rd. (Dave Hawkins property)	Dump with mattresses & tires	10/08/2013	Yes
Mark Arthur- Ewing Ridge Rd.	Numerous dumps on his property	10/16/2013	Yes
Mary Toler- Black Diamond Rd.	Drywall dumped on her property	10/17/2013	Yes
David Oliver- 78 Dead End Lane	Trash Dump	11/01/2013	Yes
	EMAIL LISA AT WM TAX EXEMPTION FORM EVERYTIME DRC DOES CLEAN UP		
	William DRC email- (drc_william@live.com)		
	Dennie DRC email- (dhuggins@woodcountywv.com)		

APPENDIX K

MAP OF OPEN DUMP CLEAN-UP PROJECTS IN WEST VIRGINIA


basemap:
100 km
50 mi
-82.55452 38.60040 NAD83
364,445E 4,262,483N UTM17

APPENDIX L

WOOD COUNTY BUSINESSES THAT MAY PRODUCE MORE THAN 5 TONS OF WASTE/MONTH

AJR, Inc.
28 S. 1st He 95 Box W
Parkersburg, WV 26101
Manufactures truck trailers, extruded aluminum products, truck bodies, and body parts

Allied Logistics
5300 Rosemar Road
Parkersburg, WV 26105-9153
Warehousing

Anderson-Stephens News Co. LLC
1919 Garfield Avenue
Parkersburg, WV 26101-2524
Wholesale books and newspapers

Astorg Motors
2028 7th Street
Parkersburg, WV 26101-3802
Retail New/Used automobiles, general auto, repair/paint auto body, home supplies

Bayberry Inns
100 Star Avenue, Suite 112
Parkersburg, WV 26101-5456
Hotel/Motel Operation

Belk, Inc.
300 Grand Central Mall
Parkersburg, WV 26101-1111
Department Store

Blennerhassett Corp.
320 Market Street
Parkersburg, WV 26101-5337
Hotel/Motel Operation

Bob Evans Farms, Inc.
90 Park Shopping Center
Parkersburg, WV 26101-1944
Eating Establishment

Bureau of Public Debt
200 3rd Street
Parkersburg, WV 26106-5312
Public Finance, Taxation, Monetary Policy

Camden Clark Memorial Hospital
800 Garfield Avenue
Parkersburg, WV 26101-5340
General Hospital

City of Parkersburg
One Government Square
Parkersburg, WV 26101-5347
City Government

City of Vienna
609 29th Street
Vienna, WV 26105-2466
City Government

Community Bank of Parkersburg
631 Juliana Street
Parkersburg, WV 26101-5137
State Commercial Bank

County of Wood
One Court Square
Parkersburg, WV 26101-7500
County Government

Danser, Inc.
1758 Murphytown Road
Davisville, WV 26142
Steel Fabricator, Manufactures nonmetallic mineral statuary and other decorative products, nonclay refractories and concrete products; plate metal fabricator; sheet metal fabricator

DTC, Inc.
3700 Emerson Avenue
Parkersburg, WV 26104-1119
Eating Establishment

Eaglecare, Inc.
1600 27th Street
Parkersburg, WV 26101-2815
Skilled nursing care, outpatient clinic

Erie Indemnity Co.
3700 Poplar Street, Suite 200
Parkersburg, WV 26101-1063
Insurance

Extras Support Staffing
1217A Garfield Avenue
Parkersburg, WV 26101-3206
Staffing Services

Fenton Art Glass Co.
700 Elizabeth Street
Williamstown, WV 26187-1028
Manufactures art or decorative glassware

Gabriel Brothers, Inc.
280 Park Shopping Center
Parkersburg, WV 26101-1927
Retail Family Clothing

GMRI, Inc.
3705 Murdoch Avenue
Parkersburg, WV 26101-1028
Seafood Restaurants

Home Depot USA, Inc.
200 Grand Central Avenue
Vienna, WV 26105-4101
Retail Lumber/Building Materials; Equipment Rental/Leasing

House of Campbell, Inc.
723 Summers Street
Parkersburg, WV 26101-6022
Intermediate Care Facility; Skilled Nursing Care Facility

JC Bosley Construction, Inc.
1 Bosely Avenue
Parkersburg, WV 26101
Nonresidential Construction; Industrial Building Construction

K-Mart Corp.
800 Grand Central Avenue
Vienna, WV 26105-2150
Discount Department Store

Kroger Co.
2007 7th Street
Parkersburg, WV 26101
Retail Super Market Chain; Commercial Bakery; Eating Place; Drug Store; Florist; Gas Station

Lowe's Home Centers, Inc.
2 Walton Drive
Parkersburg, WV 26101-8652
Retail and Wholesale Building Materials and Home Appliances

Mid-Ohio Valley Medical Group
604 Ann Street
Parkersburg, WV 26101-5122
Medical Doctor's Office

Mountain State Blue Cross Blue Shield
700 Market Street
Parkersburg, WV 26101-4629
Accident/Health Insurance Carrier

Mountaineer Family Restaurant
4006 7th Street
Parkersburg, WV 26104-3848
Eating Establishment

Murray's Sheet Metal Co., Inc.
3112 7th Street
Parkersburg, WV 26104-3846
Sheet Metal Fabricator; Roofing Contractor

Neighborhood Restaurants
802 Grand Central Avenue
Vienna, WV 26105-0165
Eating Establishment

Northwest Pipe Co.
183 Northwest Drive
Washington, WV 26181-3511
Aluminum Rolling and Drawing; Gray and Ductile Iron Foundry

Ogden Newspapers, Inc.
519 Juliana Street
Parkersburg, WV 26101-5135
Publishes Newspapers without Printing; Commercial Lithographic Printing; Plate Making Services; Typesetting Service

Ohio Valley University
1 Campus View Drive
Vienna, WV 26105-8000
University/Religious

Ohio Valley Nursing Home, Inc.
222 Nicolette Road
Parkersburg, WV 26104-7282
Intermediate Care; Facility Skilled Nursing Care Facility

Outback Steakhouse of Florida
105 Grand Central Mall
Parkersburg, WV 26101-1110
Eating Establishment

Parkersburg Bedding LLC
180 Airport Industrial Park
Parkersburg, WV 26104-9751
Manufactures Mattresses and Bedsprings

Parkersburg Country Club
4910 1st Avenue
Vienna, WV 26105-1850
Membership Sports Club, Physical Fitness Facility, Eating Establishment

Phoenix Associates, Inc.
501 East Street
Parkersburg, WV 26101-4903
Nonresidential Construction; Industrial Building Construction; Engineering Services

Presley Ridge
47 Chambers Circle Road
Walker, WV 26180-3585
Residential Care Services for Youth; Individual and Family Services

Proud Eagle
RR 9
Parkersburg, WV 26101-9807
Wholesale Beer/Ale

Quantum Resource Corp.
3901 Briscoe Road
Parkersburg, WV 26104-8100
Employment Agency

St. Joseph Hospital
1824 Murdoch Avenue
Parkersburg, WV 26101-3230
General Hospital

Sunbridge Care Enterprises, Inc.
1716 Gihon Road
Parkersburg, WV 26101-9655
Skilled Nursing Care Facility

Supervalu, Inc.
1206 Plum Street
Parkersburg, WV 26101-4939
Retail Grocery Store

SW Resources, Inc.
1007 Mary Street
Parkersburg, WV 26101-5223
Job Training, Related Services

Teknetix, Inc.
2501 Garfield Avenue
Parkersburg, WV 26101-1916
Manufactures Printed Circuit Boards, Custom Computer Software Systems Analysis, and Design Service

Tri-State Roofing and Sheet Metal
101 S. Meadville Road
Davisville, WV 26142-7124
Roofing Contractor; Warm Air Heating and Air Conditioning Contractor; Sheet Metal Fabricator

United Bank, Inc.
514 Market Street
Parkersburg, WV 26101-5144
State Commercial Bank

United Construction Co., Inc.
1340 Old Rosemar Road
Parkersburg, WV 26104-7668
Industrial Building Construction

United States Postal Services
401 Juliana Street
Parkersburg, WV 26101-7503
Postal Services

Wal-Mart Stores, Inc.
1100 Grand Central Avenue
Vienna, WV 26105-1049
Warehouse Club Store

West Virginia Department of Transportation
624 Depot Street
Parkersburg, WV 26101-5127
State Transportation Department

West Virginia Department of Military
387 Aviation Drive
Williamstown, WV 26187-7952
National Security

West Virginia Rehabilitation
3 Western Hills Drive
Parkersburg, WV 26105-8122
Rehabilitation Hospital

West Virginia University-Parkersburg
300 Campus Drive
Parkersburg, WV 26104-8647
College

Westbrook Health Services, Inc.
2121 7th Street
Parkersburg, WV 26101
Specialty Outpatient Clinic

Winans Services
4302 29th Street
Parkersburg, WV 26101
Janitorial Services

Wood County Board of Education
1210 13th Street
Parkersburg, WV 26101
County School System

Woodcraft Supply Corp.
948 County Industrial Park
Parkersburg, WV 26101
General Warehouse; Storage; Woodworking

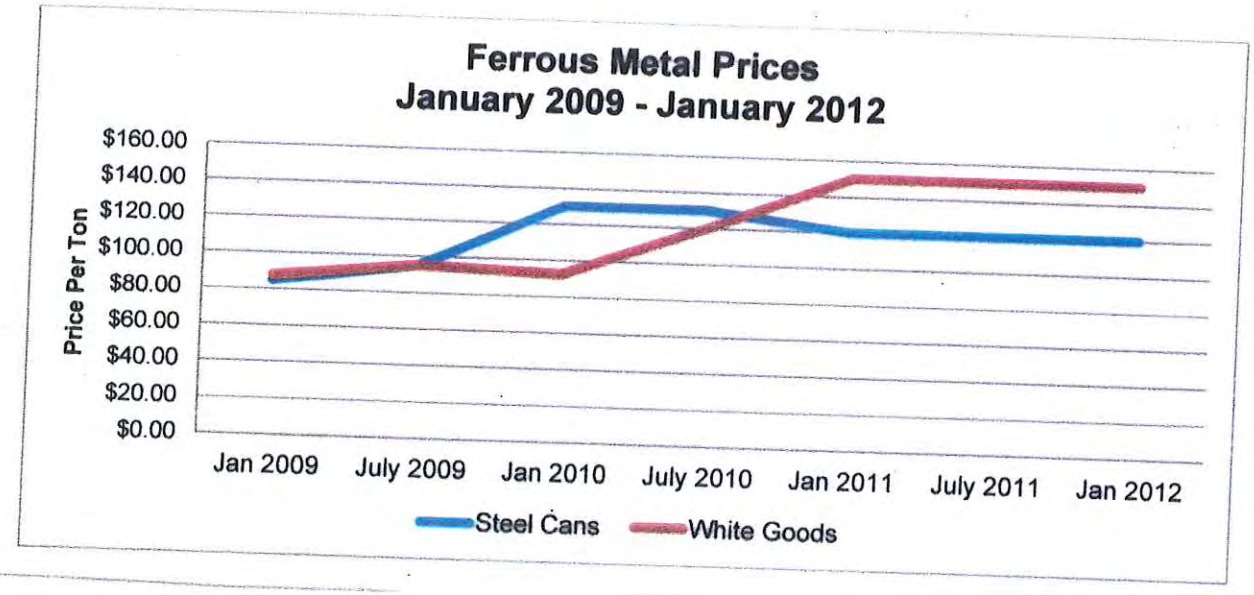
Worthington Manor, Inc.
2635 26th Street
Parkersburg, WV 26104-2730
Skilled/Intermediate Care Nursing Facility

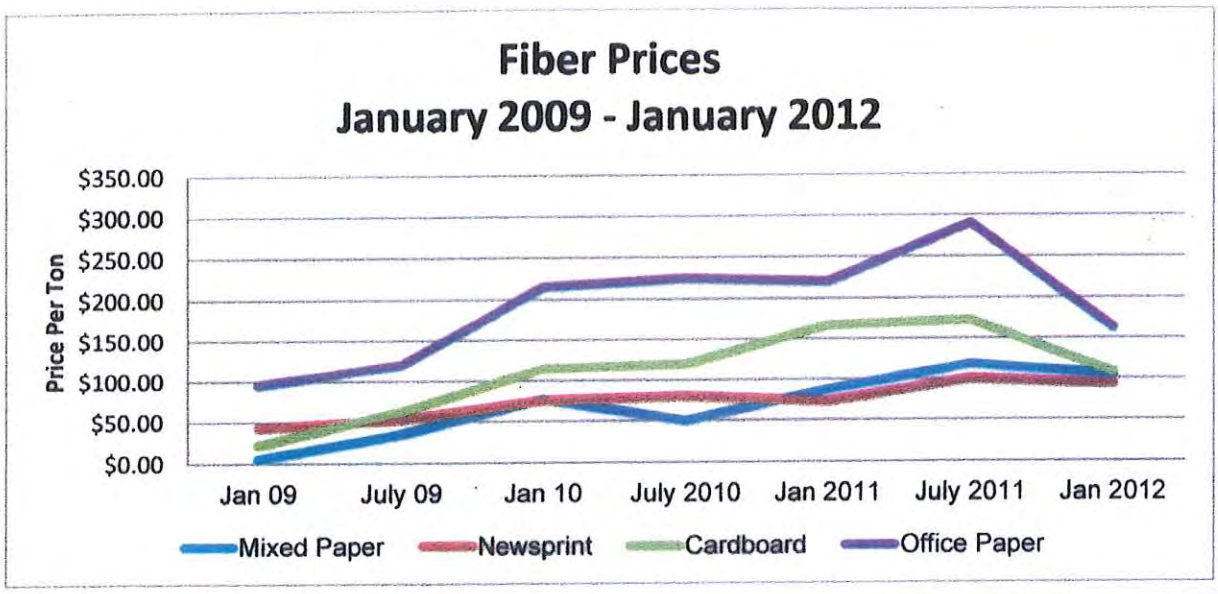
YMCA
1800 30th Street
Parkersburg, WV 26101-2700
Physical Fitness Facility

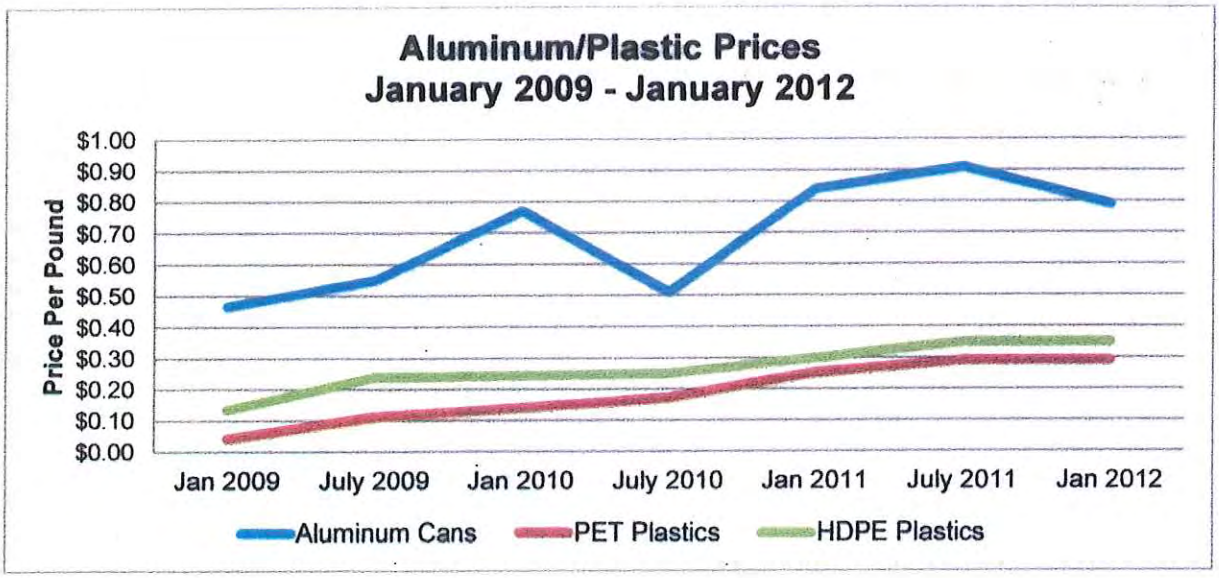
APPENDIX M

PRICING TRENDS OF RECYCLABLE ITEMS


Glass Prices
January 2009 - January 2012
$35.00
$30.00
$25.00
$20.00
$15.00
$10.00
$5.00
$0.00
Price Per Ton
Jan 2009
July 2009
Jan 2010
July 2010
Jan 2011
July 2011
Jan 2012
Glass - Clear
Glass - Brown
Glass - Green


Ferrous Metal Prices
January 2009 - January 2012
$160.00
$140.00
$120.00
$100.00
$80.00
$60.00
$40.00
$20.00
$0.00
Price Per Ton
Jan 2009
July 2009
Jan 2010
July 2010
Jan 2011
July 2011
Jan 2012
Steel Cans
White Goods


Fiber Prices
January 2009 - January 2012
Price Per Ton
$350.00
$300.00
$250.00
$200.00
$150.00
$100.00
$50.00
$0.00
Jan 09
July 09
Jan 10
July 2010
Jan 2011
July 2011
Jan 2012
Mixed Paper
Newsprint
Cardboard
Office Paper


Aluminum/Plastic Prices
January 2009 - January 2012
Price Per Pound
$1.00
$0.90
$0.80
$0.70
$0.60
$0.50
$0.40
$0.30
$0.20
$0.10
$0.00
Jan 2009
July 2009
Jan 2010
July 2010
Jan 2011
July 2011
Jan 2012
Aluminum Cans
PET Plastics
HDPE Plastics

APPENDIX N

YARD WASTE COMPOSTING RULE

TITLE 33
LEGISLATIVE RULE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT

SERIES 3
YARD WASTE COMPOSTING RULE

'33-3-1. General.

1.1. Scope. -- This legislative rule establishes requirements for the proper handling and composting of yard waste including siting, bonding, design, construction, modification, operation, closure and permitting procedures pertaining to any facility or activity that generates, processes, composts or otherwise reuses or recycles yard waste by whatever means and sets forth requirements for operator training and certification.

1.2. Authority. -- W. Va. Code '20-11-8(c).

1.3. Filing Date. -- June 26, 2001.

1.4. Effective Date. -- June 26, 2001.

1.5. Legislative Mandate.

Effective January 1, 1997 it is unlawful to deposit yard waste, including grass clippings and leaves, in a solid waste facility in West Virginia: Provided, That such prohibitions do not apply to a facility designed specifically to compost yard waste or otherwise recycle or reuse such items: Provided, That reasonable and necessary exceptions to such prohibitions are included in subsection 3.1.c of this rule.

1.6. Incorporation by Reference.

Whenever federal or state statutes or rules are incorporated into this rule by reference, the reference is to the statute or rule in effect on the effective date of this rule.

'33-3-2. Definitions.

All definitions in W. Va. Code '22-15-2 and all definitions in '33CSR1 and '33CSR2 are fully incorporated into this rule by reference. The following additional definitions apply to this rule:

2.1. "Buffer Zone" means the distance between the composting operation and the adjacent property boundaries.

2.2. "Commercial Yard Waste Composting Facility" means any solid waste facility which is authorized to handle or accept up to thirty-six thousand (36,000) tons per year of yard waste and/or other compostable solid waste materials generated by sources other than the owner or operator of the facility, provided that, a commercial yard waste composting facility does not include an approved solid waste facility owned and operated by a person for the sole purpose of composting yard waste created by that person or other persons on a cost-sharing or nonprofit basis and shall not include land upon which finished compost is applied for use as a soil amendment/soil conditioner.

2.3. "Domestic yard waste" means yard wastes generated in small quantities by the resident or tenant of

residential property.

2.4. "Non-residential composting activities" means a composting activity by persons such as landscape contractors, nurseries or greenhouses, lawn and garden companies, solid waste authorities and municipalities which are authorized to compost up to twelve thousand (12,000) tons per year of yard waste materials consisting of grass clippings, weeds, leaves, brush/shrub or tree prunings and other acceptable compostable materials which have been approved in writing by the Chief to produce a safe product for use as a soil amendment/soil conditioner.

2.5. "Nuisance" means any practice or condition created by a composting facility or activities which results in dust, dirt, mud, infectious molds, bacteria or fungi, or offensive odor, or attracts vectors such as insects, rodents, snakes or in any way interferes with the normal use of any properties or causes harm or injury to any person or the environment.

2.6. "Runoff" means any flowing water and associated contaminants originating from any part of the solid waste facility or activity that drains over the land.

2.7. "Run-on" means any rainwater, snow melt, wastewater, leachate or other liquid that drains over land onto any part of the compost facility.

2.8. "Soil amendment/soil conditioner" means an organic matter source or yard waste compost that when added to the soil improves the general physical, chemical and biological properties of the soil.

2.9. "Yard waste composting" means the controlled decomposition of yard waste to produce a stable and beneficial humus-like material.

2.10. "Yard waste" means grass clippings, weeds, leaves, brush, garden waste, shrub or tree prunings and other living or dead plant tissues, except that, such materials which, due to inadvertent contamination or mixture with other substances which render the waste unsuitable for composting, shall not be considered to be yard waste: Provided, That the same or similar waste generated by commercial agricultural enterprises is excluded.

2.11. "Windrow" means an elongated pile created by the placement of yard waste.

'33-3-3. Yard Waste Composting and Permitting Requirements.

3.1. Applicability.

3.1.a. This rule applies to all persons who handle or manage yard waste to produce compost and requires that:

3.1.a.1. Methods employed for yard waste composting must be consistent with section 4 of the Solid Waste Management Board's program for the AProper Handling of Yard Waste,@ dated May 1, 1993.

3.1.a.2. Yard wastes must not be combined with Asludge,@ as defined in 33CSR1 section 2 of the Solid Waste Management Rule, Apetroleum contaminated soil@ or other solid waste materials specified by the Secretary.

3.1.a.3. A yard waste composting facility may not be situated atop a partially or fully closed solid waste disposal area, unless approved by the Secretary in writing; An existing solid waste facility by minor

permit modification may include yard waste composting operations.

3.1.b. Domestic Yard waste shall be disposed of in a manner consistent with one or any combination of the following options as provided for in W.Va. Code '20-11-8:

3.1.b.1. Disposal in a publicly or privately operated commercial or noncommercial composting facility or activity;

3.1.b.2. Disposal by composting on the property from which domestic yard waste is generated or on adjoining property or neighborhood property if consent is obtained from the owner of the adjoining or neighborhood property;

3.1.b.3. Disposal by open burning where such activity is not prohibited by the W. Va. Code, rules promulgated thereunder or municipal or county codes or ordinances.

3.1.c. Reasonable and Necessary Exceptions to Prohibition. Solid waste landfills may accept and dispose of domestic yard waste delivered to the facility by a municipality, solid waste hauler, resident or tenant when the Secretary determines that none of the options contained in subdivision 3.1.b are available.

3.2. Location Standards for Siting a Commercial Yard Waste Composting Facility.

3.2.a. The following location standards apply to commercial yard waste composting facilities, unless otherwise approved by the Secretary:

3.2.a.1. A yard waste composting facility shall be located in an area which has been authorized for composting facilities by the county and/or regional solid waste authority approved siting plan;

3.2.a.2. Yard waste composting facilities shall not be sited or constructed in areas subject to a one hundred year flood plain and no facility shall be closer than three hundred (300) feet to any regularly flowing stream, perennial stream, pond, lake, wetland or spring;

3.2.a.3. Yard waste composting facilities shall not be located in areas which are geologically unstable or where the site topography exceeds six (6) percent grade;

3.2.a.4. Acceptable sites must have sufficient area and terrain to allow for proper management of run-on, runoff and leachate;

3.2.a.5. A yard waste composting facility shall not be located within two thousand (2,000) feet of any health care facility, school, church, or similar type of institution. The Secretary may reduce this setback distance if the owner or operator can successfully demonstrate that a nuisance will not be created due to the operation of the facility;

3.2.a.6. A yard waste composting facility shall not be located within two hundred (200) feet of drinking water supply wells and occupied dwellings;

3.2.a.7. A yard waste composting facility shall not be located within fifty (50) feet of a federal or state highway right-of-way or within twenty-five (25) feet of a city street right-of-way;

3.2.a.8. The operational area of a yard waste composting facility shall not be located within one hundred (100) feet of an adjacent property owner's boundary line;

3.2.a.9. A yard waste composting facility shall not be located on land where runoff drains into a sinkhole;

3.2.a.10. A yard waste composting facility shall not be located on land that has a seasonal high groundwater table (based on soil maps) less than two (2) feet from the land surface;

3.2.a.11. A yard waste composting facility shall not be located on land that has less than twenty (20) inches of soil over bedrock or on an impervious pan; and

3.2.a.12. A yard waste composting facility shall not be located within ten thousand (10,000) feet to the closest point of any airport runway used or planned to be used by turbojet aircraft or within five thousand (5,000) feet to the closest point of any airport runway used only by piston type aircraft or within other areas where a substantial bird hazard to aircraft would be created.

3.3. Location Standards for Siting Non-Residential Composting Activities.

3.3.a. The following location standards apply to non-residential composting activities:

3.3.a.1. Non-residential composting activities shall not be sited or constructed in areas closer than one hundred (100) feet to any regularly flowing stream, perennial stream, pond, lake, wetland or spring;

3.3.a.2. Non-residential composting activities shall have sufficient area and terrain to allow for the proper management of run-on, runoff and leachate;

3.3.a.3. Non-residential composting activities shall not be located within one hundred (100) feet of an adjacent property owner's boundary line without obtaining prior written permission from the adjacent property owner;

3.3.a.4. Non-residential composting activities shall not be located within one hundred (100) feet of a sinkhole; and

3.3.a.5. Non-residential composting activities shall not exceed five (5) acres in size without written approval from the Secretary.

3.3.b. Compliance with any of the location standards for yard waste composting facilities or activities in this rule does not relieve the owner or operator from compliance with all other codes, ordinances or rules.

3.4. Design and Construction of Commercial Yard Waste Composting Facility.

3.4.a. A handling area and proper equip-ment shall be provided to segregate waste other than yard waste and non-compostable components in the yard waste and to store such components in properly constructed containers prior to their disposal at a permitted solid waste disposal facility.

3.4.b. If the yard waste composting facility is located in any area where the seasonal high water table (based on soil maps) lies within five (5) feet of the ground surface, the composting and handling areas shall be hard-surfaced in a manner acceptable to the Secretary and diked to prevent entry of run-on or escape of runoff and other liquids, and a sump with an adequately sized pump located at the low point of the hard-surface area shall be provided to convey liquids to a wastewater treatment, disposal or holding facility.

3.4.c. Accepted engineering practices shall be incorporated into the design of facilities located on

sites with:

3.4.c.1. Springs, seeps, and other groundwater intrusions;

3.4.c.2. Gas, water, phone, sewage lines or other utilities under the active areas; or

3.4.c.3. Electrical transmission lines above or below the active areas; and

3.4.c.4. Additional design and construction considerations.

3.4.c.4.A. Areas used for mixing, curing, and storing of compost shall be graded to prevent run-on, collect runoff, and provided with a drainage system to route the collected runoff to a wastewater storage, treatment, or disposal facility.

3.4.c.4.B. A buffer zone with the minimum width of one hundred (100) feet shall be incorporated in the facility design between facility adjacent property boundaries and the operational areas of the facility.

3.4.c.4.C. Roads serving the unloading, handling, composting, and storage areas shall be of all-weather construction and the design features for each shall be shown on drawings submitted to the Department of Environmental Protection in the application.

3.4.c.4.D. The design of a commercial yard waste composting facility shall be signed and sealed by a W. Va. registered professional engineer.

3.5. Permits Required.

3.5.a. Applicability.

No person may establish, install, construct or operate the following:

3.5.a.1. A commercial yard waste composting facility without obtaining a solid waste facility permit from the Department of Environmental Protection, provided that first, the applicant fulfills the pre-siting requirements of subsection 3.4 of the West Virginia Solid Waste Management Rule, 33CSR1; or

3.5.a.2. A non-residential composting activity without the property owner/operator obtaining a registration number from the Department of Environmental Protection, Division of Waste Management, Solid Waste Management Section.

3.5.b. Exemptions.

Residential and non-residential composting activities are exempt from obtaining a commercial solid waste facility permit. However, the non-residential activity shall be located and operated in compliance with the location standards and the operational requirements as set forth in subsections 3.3 and 3.8 of this rule.

3.6. Permit Application Requirements.

3.6.a. The applicant for a permit to establish, install, construct, operate and close a commercial yard waste composting facility shall include in the permit application the following:

3.6.a.1. A copy of the Certificate of Convenience and Necessity (CON) obtained from the WV

Public Service Commission;

3.6.a.2. A copy of the Certificate of Siting Approval;

3.6.a.3. The name, address, and location of the proposed facility;

3.6.a.4. The proposed operator's and owner's name, address, telephone number, ownership status, and status as a federal, state, private, public or other entity;

3.6.a.5. A copy of legal documents demonstrating that the applicant has legal right to enter and conduct commercial yard waste composting operations on the property including a copy of the deed description or lease agreement;

3.6.a.6. A safety program designed to prevent hazards and accidents at the proposed facility;

3.6.a.7. Proof of liability insurance to cover the operations of the proposed facility; and

3.6.a.8. A detailed description of the activities to be conducted by the applicant at the facility.

3.6.b. An engineering report for an application to obtain a permit to construct shall contain, at a minimum, the following:

3.6.b.1. A regional map, or maps, (of appropriate scale) that delineate the entire service area of the proposed facility (both existing and proposed); existing and proposed collection, processing, and disposal operations; the location of the closest population centers; and the transportation systems including highways, airports, railways and waterways;

3.6.b.2. A vicinity map (minimum scale of 1"=2000') that delineates the area within one mile of the facility boundaries, zoning and land uses, residences, surface waters, access roads, bridges, railroads, airports, historic sites, and other existing and proposed manmade or natural features relating to the projeet;

3.6.b.3. A site plan (minimum scale of 1"=200') with five foot contour intervals that delineates property boundaries, the location of existing and proposed soil boring, monitoring wells, buildings and appurtenances, fences, gates, roads, parking areas, drainage, culverts, storage facilities or areas, loading areas; existing and proposed elevation contours and direction of prevailing winds; and the location of residences, potable wells, surface water bodies, wetlands, and drainage swales located within the site and in the site plan area;

3.6.b.4. A detailed description of the operation of the facility including precautions or procedures for operation during heavy winds, thunderstorms, snowstorms, prolonged freezing conditions and an operational narrative describing the following:

3.6.b.4.A. Collection methods to be employed;

3.6.b.4.B. Methods to be utilized in constructing compost piles or windrows, including equipment;

3.6.b.4.C. Proposed dimensions of compost piles or windrow;

3.6.b.4.D. A source of supplemental water to maintain an optimal moisture content of compost piles or windrows;

3.6.b.4.E. Proposed turning frequency, including the method for determining that frequency;

3.6.b.4.F. Proposed duration of the composting process, including curing or storage time, and the term of compost distribution;

3.6.b.4.G. A distribution plan for the yard waste compost;

3.6.b.4.H. A residue disposal plan including the location of disposal site(s);

3.6.b.4.I. Provisions for emergency response; and

3.6.b.4.J. A public information and education program;

3.6.b.5. A schedule of operation, including the days and hours that the facility will be open, preparations before opening, and procedures followed after closing for the day;

3.6.b.6. Anticipated daily traffic flow to and from the facility;

3.6.b.7. A description of the ultimate use for the finished yard waste compost, method for removal from the site, and a plan for use or disposal of any yard waste compost that cannot be used in the expected manner due to poor quality or change in market conditions;

3.6.b.8. Identification of the personnel required to operate and maintain the facility and their job descriptions and responsibilities;

3.6.b.9. A detailed description of the origin, quality, quantity, and type of yard waste anticipated to be received at the proposed facility. The quantity of yard waste anticipated to be received shall be estimated in both cubic yards and tonnage, and the maximum amount of compost estimated to be produced daily, monthly and annually shall be stated;

3.6.b.10. Contingency plans detailing corrective (or remedial) action to be taken in the event of equipment breakdown; air pollution (odors); unacceptable waste delivered to the facility; groundwater contamination; spills; and undesirable conditions such as fires, dust, noise, vectors, lack of a market for the yard waste compost product and unusual traffic conditions;

3.6.b.11. The procedures for the development of an operations manual. The manual must contain general design information, detailed operational information and instructions including methods of monitoring for moisture, temperature, and other quality control measures during the composting process. In addition, the manual must outline the specific procedures to be used in monitoring, sampling and analyzing finished compost material, which must be acceptable to the Secretary, provided that, as a minimum the finished compost material shall be analyzed by an approved EPA method for the concentration levels of heavy metals prior to its use. If any heavy metal concentration level exceeds regulatory standards, the finished compost material must be disposed of in an approved landfill; and

3.6.b.12. A detailed description of the yard waste composting technology to be utilized at the proposed facility.

3.6.c. Six (6) copies of the application, including all supporting documents shall be submitted as follows: four (4) copies shall be filed with the Department of Environmental Protection, Division of Waste

Management, Solid Waste Management Section, one (1) copy shall be submitted to the Solid Waste Management Board, and one copy shall be submitted to the county or regional solid waste authority for the area in which the proposed facility is to be located.

3.7. Permit Application Fees.

3.7.a. Each application filed for a commercial yard waste composting facility permit must be accompanied by a nonrefundable application fee made payable to the Department of Environmental Protection in the amount of five hundred (500) dollars.

3.7.b. The Department of Environmental Protection may require a fee of fifty (50) dollars or ten (10) percent of the application fee for any application refiled due to incompleteness.

3.8. Operational Requirements for Commercial Yard Waste Composting Facilities and Non-Residential Composting Activities.

3.8.a. The addition of any other solid waste including but not limited to hazardous, sludges, infectious, construction debris, demolition, industrial or other municipal solid waste to the yard waste is strictly prohibited.

3.8.b. Waste other than yard waste and non-compostable solid wastes shall be segregated from the compostable yard waste and promptly removed from the site for proper disposal at an approved facility. Segregated solid waste shall be removed from the facility at the end of each working day unless it is stored in containers specifically designed for storage of solid waste, provided that the material shall not remain at the facility more than thirty (30) days.

3.8.c. Screening and removal of non-compostable solid wastes from the windrows or compost piles shall occur after the composting process is completed.

3.8.d. Access to a yard waste composting facility is allowed only when an attendant is on duty.

3.8.e. Any nuisance created by a commercial yard waste composting facility or a non-residential composting activity which causes harm or injury to any person or the environment shall be abated or the composting facility or activity may be required by the Secretary to cease and desist operations.

3.8.f. Shrubs, brush, tree prunings or any other bulky, woody type materials shall be shredded, ground or otherwise reduced in size prior to being mixed with other yard wastes to be composted.

3.8.g. The operator of a yard waste composting facility shall implement, and enforce a safety program designed to prevent hazards and accidents.

3.8.h. Open burning is prohibited, except as provided by paragraph 3.1.b.3 of this rule.

3.8.i. Fugitive dust and mud deposits on main off-site roads and access roads shall be minimized at all times to limit nuisances and the operator must immediately abate any nuisances.

3.8.j. Leachate or other runoff from a compost facility shall not be permitted to drain or discharge into surface waters except when authorized under a West Virginia NPDES permit issued by the Department of Environmental Protection.

3.8.k. A one hundred (100) foot buffer zone shall be provided and maintained in a manner acceptable to the Secretary.

3.9. Other Acceptable Compostable Materials.

3.9.a. Other acceptable compostable materials may include, but are not limited to, coffee grounds, kitchen scraps, pet and human hair, shredded newspapers, lint and sweepings, wood ashes, fish and poultry carcasses/litter, and animal manures.

3.10. Incorporation by Reference.

3.10.a. The following subsections of the West Virginia Solid Waste Management, 47 CSR 38, Rule, 33CSR1 are hereby incorporated and implemented as a part of this yard waste composting rule and apply only to commercial yard waste composting facilities:

3.10.a.1. Subsection 3.4; "Pre-Siting Requirement for Commercial Solid Waste Facilities";

3.10.a.2. Subsection 3.13; "Bonding and Financial Assurance";

3.10.a.3. Subsection 3.17; "Draft Permit";

3.10.a.4. Subsection 3.18; "Permit Modification, Suspension and Revocation";

3.10.a.5. Subsection 3.19; "Transfer of permit";

3.10.a.6. Subsection 3.20; "Permit Renewal";

3.10.a.7. Subsection 3.21; "Public Notice";

3.10.a.8. Subsection 3.22; "Public Comments and Request for Public Hearings";

3.10.a.9. Subsection 3.23; "Public Hearings";

3.10.a.10. Subsection 3.24; "Reopening of the Public Comment Period";

3.10.a.11. Subsection 3.25; "Public Participation File";

3.10.a.12. Subsection 3.26; "Public Availability of Information";

3.10.a.13. Subsection 3.27; "Issuance and Effective Date of Permit";
3.10.a.14. Subsection 3.28; "Permit Review by the Secretary";

3.10.a.15. Subsection 3.29; "Appeals";

3.10.a.16. Subsection 4.5.5; "Quality Assurance and Quality Control" (applicable portions only);

3.10.a.17. Subsection 4.8; "Leachate Management"; and

3.10.a.18. Subsection 4.12; "Reporting.®

33-3-4. Closure Requirements for a Commercial Yard Waste Composting Facility.

4.1. Maintenance Minimization.

The owner or operator shall close the facility in a manner that minimizes the need for further maintenance. All solid waste, compost, and residues shall be removed and disposed in a permitted solid waste disposal facility.

4.2. Closure Plan and Closure Plan Amendments.

The owner or operator of a commercial yard waste composting facility shall have a written closure plan.

4.2.a. Closure Plan Inclusions.

4.2.a.1. This plan shall identify the steps necessary to completely close the facility at the time when its operation is most extensive or operating at peak capacity. The closure plan must include, at a minimum, a schedule for final closure, the anticipated date when wastes will no longer be received, the date when completion of final closure is anticipated, and intervening milestone dates which will allow tracking of the progress of closure.

4.2.a.2. The closure plan shall be submitted to the Department of Environmental Protection as a part of the application for a permit. If the Secretary finds the closure plan is deficient, the closure plan shall be amended by the owner or operator within ninety (90) days of the Secretary=s finding. The permit will not be issued by the Department of Environmental Protection until the amended plan meets the closure requirements.

4.2.b. Closure Plan Amendments.

4.2.b.1. The owner or operator shall update the closure plan with any changes in operation or facility design that affects the closure plan. The updated plan shall be submitted to the Department of Environmental Protection for approval fifteen (15) days prior to such changes. The Secretary may require modifications to any updated plan which does not meet the closure requirements.

4.2.b.2. At any time during the operating life of the facility, the amended closure plan shall be made available to the Department of Environmental Protection or the county or regional solid waste authority upon request.

4.3. Time Allowed for Closure.

The owner or operator shall complete closure activities in accordance with the approved closure plan and within six months after receiving the final volume of wastes. The Secretary may approve a longer closure period if the owner or operator can demonstrate that the required or planned closure activities will, of necessity, take longer than six months to complete; and that he or she has taken all necessary steps to eliminate any threat to human health and the environment from the unclosed but inactive facility.

4.3.a. At least thirty (30) days prior to the beginning of closure activities, the owner or operator shall post a sign at all points of access to the facility notifying all persons of the closing, and state that further receipt of waste materials is prohibited. Further, upon closure, suitable barriers shall be installed at all former access points to prevent new waste from being deposited.

4.3.b. Notice of the upcoming closure is a Class II legal advertisement which must be published in a local newspaper at least thirty (30) days prior to closure and a copy of the notice must be provided to the Secretary within ten (10) days of the date of publication.

4.4. Site Reclamation Responsibilities.

A uniform and compacted layer of soil that is at least six (6) inches in thickness and capable of supporting revegetation shall be placed over all disturbed land surface areas within the facility's boundaries. A revegetation plan shall be a part of the closure plan requirements and must conform with the provisions of subdivision 4.5.f of 33CSR1, the Solid Waste Management Rule.

4.5. Evidence of Proper Closure.

A compost facility shall be considered properly closed when the actions required by subsection 4.4 of this rule have been taken by the owner or operator and duly authorized representatives of the Secretary verify compliance by an on-site inspection and provide a written confirmation that closure has been completed properly.

'33-3-5. Commercial Yard Waste Composting Operator Training and Certification Program.

5.1. Experience, Training and Education.

In order to ensure the proper, safe and efficient composting of yard waste, operators of commercial yard waste composting facilities must have a minimum of two (2) years on the job experience in yard waste composting or receive training and education in yard waste composting. The training and education shall consist of but not be limited to forty (40) classroom hours. Topics should include:

5.1.a. Proper and safe equipment operation and equipment preventive maintenance; and

5.1.b. Composting science technology which encompasses the composting process, composting methods, composting operations, site and environmental considerations, facility design and use, compost quality control, using and marketing compost, composting economics, record keeping and reporting, worker safety, business math and volumetric calculations.

5.2. Approved Training and Education Programs.

Training and education for yard waste composting shall include programs sponsored by, but not limited to, colleges and universities, agricultural extension services, and county or regional solid waste authorities: Provided that all training and education programs must be approved by the Department of Environmental Protection, Division of Waste Management.

5.3. Certification.

Any person who meets the requirements as listed in subsection 5.1 of this rule is considered a certified yard waste composting operator, provided that, written verification of on the job experience or training and education is properly submitted to, and approved by the Department of Environmental Protection.

APPENDIX O

WASTE TIRE MANAGEMENT RULE

TITLE 33
LEGISLATIVE RULE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT

SERIES 5
WASTE TIRE MANAGEMENT RULE

'33-5-1. General.

1.1. Purpose and Applicability.

1.1.a. Purpose. This rule is intended to meet the requirements of W. Va. Code ''20-11-8 and 22-15-21, as amended, to properly manage waste tires, including collection, accumulation, storage, disposal, processing, monofilling, reusing, transporting, recycling, permitting and recordkeeping.

1.1.b. Applicability. This rule applies to and establishes requirements for any person or persons who manage waste tires by whatever means in the State of West Virginia, as of the effective date of this rule.

1.1.c. Reference to Other State Agency Requirements.

1.1.c.1. Persons who manage waste tires may also be regulated under W. Va. Code, ''17-23 or 24, 20-11, 24-2, and rules promulgated thereunder.

1.1.c.2. In the event of conflict between this rule and other state agencies= rules, the more stringent rule prevails.

1.2. Authority. W. Va. Code ''22-1-3, 22-1-3a, 20-11-8(d), and 22-15-21(k), as amended.

1.3. Filing Date. -- June 26, 2001.

1.4. Effective Date. -- June 26, 2001.

1.5. Legislative Mandate.It is unlawful to dispose of tires in a solid waste landfill in West Virginia , except for waste tires collected as part of the Division of Highways waste tire remediation projects or other collection efforts in accordance with W. Va. Code '17-24 or the Department of Environmental Protection=s Pollution Prevention and Open Dump Program or other state authorized remediation or cleanup programs: Provided, That waste tires may be disposed of in solid waste landfills only when the state agency authorizing the remediaton or cleanup program has determined there is no reasonable alternative available.

1.6. Penalties. Any person who violates the provisions of the "Solid Waste Management Act," W. Va. Code '22- 15, or any permit, rule, or order issued pursuant to W. Va. Code '22-15, is subject to the same criminal and or civil penalties as set forth in W. Va. Code ''22-11-24 and 22-15-15.

'33-5-2. Definitions.

Unless the context clearly requires a different meaning, all terms contained in this rule and not defined by tjhis section are defined by their plain meaning. This section contains definitions for terms that appear throughout this rule.

2.1. "Access Road" means all roads providing access to a solid waste facility from a road that is under federal, state, or local authority, or internal roads providing access from one portion of the facility to another.

2.2. "Automobile Dealer" means any business engaged in the sale of automobiles, trucks or motorized recreational vehicles in the State of West Virginia.

2.3. ABeneficial Use@ means the use or reuse of whole waste tires or tire derived material which are reused in constructing retaining walls, rebuilding highway shoulders and subbase, building highway crash attenuation barriers, and other civil engineering applications, feed hopper or watering troughs for livestock, or other agricultural uses approved by the Department of Environmental Protection, playground equipment, boat or truck dock construction, house or building construction, go-cart, motorbike or race track barriers, recapping, alternative daily cover, or similar types of beneficial applications: Provided, That waste tires may not be reused as fencing, as erosion control structures, along stream banks or river banks or reused in any manner where human health or the environment, as determined by the Secretary of the Department of Environmental Protection, is put at risk.

2.4. "Bond" means any performance bond or other form of financial assurance provided by W. Va. Code '22-15-12 and the Solid Waste Management Rule (33CSR1).

2.5. "Chief" means the chief of the Division of Waste Management of the West Virginia Department of Environmental Protection or his or her authorized representative.

2.6. ADepartment of Transportation Symbol@ means the identification number placed on new tires mandated by the Federal Motor Vehicle Safety Standards for motor vehicles and motor vehicle equipment pursuant to Section 103 of the National Traffic and Motor Vehicle Safety Act of 1966, as amended.

2.7. AD.O.T. Regulated Tire@ means any tire that was originally used for those purposes defined under Atire@or meets the definition of Awaste tire@ that is identified with a Department of Transportation symbol.

2.8. ARemediate or Remediation@ means to remove all tires located above grade at a site and may also include the removal of the solid waste incidental to the removal of waste tires at a site: Provided, That remediation does not include clean up of hazardous waste.

2.9. ARetail Tire Dealer@ means any person or persons engaged in the business of retail sale of tires to an end user in the state of West Virginia.

2.10. "Sale and/or Selling" includes exchange, consignment, barter, gift, and offer for sale. Sale and/or selling includes the removal of tires from a stock of merchandise by a wholesale distributor, or a retail tire dealer, for its own use.

2.11. ASalvage@ means old or scrap brass, copper, iron, steel, other ferrous or nonferrous materials, batteries or rubber and any junked, dismantled or wrecked machinery, machines or motor vehicles or any parts of any junked, dismantled or wrecked machinery, machines or motor vehicles.

2.12. ASalvage Yard@ means any place which is maintained, operated or used for the storing, keeping, buying, selling or processing of salvage, or for the operation and maintenance of a motor vehicle graveyard: Provided, That no salvage yard shall accept, store or process more than one hundred waste tires unless it has all of the permits necessary to operate a monofill, waste tire processing facility or solid waste facility. Any salvage yard which currently has on its premises more than one hundred waste tires not on a vehicle must establish a plan in conjunction with the Department of Environmental Protection for the proper disposal of the waste tires.

2.13. "Shredded Waste Tires" means tires or tire derived material, which has been processed by shredding to particle sizes not greater than 72 square inches.

2.14. "Storage Cell" means a dedicated monofill area for long term storage for waste tires or tire derived material located within an approved solid waste disposal facility for the purpose of long term storage for the eventual retrieval for marketing purposes.

2.15. "Tire" means any continuous solid or pneumatic rubber covering designed to encircle the wheel of a vehicle and may include the following types of tires: passenger car tires, light-duty and heavy-duty truck tires, high speed industrial tires, bus tires, and special service tires (including military, off-the-road, recreational/all terrain vehicle, and slow speed industrial).

2.16. "Tire Derived Material" means any shredded, chipped, crumb rubber or other such tire material that has been processed from a tire, or waste tire.

2.17 "Vector" means any insect, rodent, or other organism capable of directly or indirectly transmitting infectious diseases or pathogenic organisms from one person to another or from an animal to a person.

2.18. AWaste Tire@ means any continuous solid or pneumatic rubber covering designed to encircle the wheel of a vehicle but which has been discarded, abandoned or is no longer suitable for its original, intended purpose nor suitable for recapping, or other beneficial use, as defined in W. Va. Code ' 17-24-2, because of wear, damage or defect. A tire is no longer considered to be suitable for its original intended purpose when it fails to meet the minimum requirements to pass a West Virginia motor vehicle safety inspection. Used tires located at a commercial recapping facility or retail tire dealer for the purpose of being reused or recapped are not waste tires.

2.19 "Waste Tire Chips" means tires or tire derived materials that have been reduced to particle sizes not greater than 2 inches by 2 inches.

2.20 Waste Tire Generator means any person or persons whose activity results in the generation of waste tires by whatever means.

2.21. AWaste Tire Monofill@ or AMonofill@ means an approved solid waste facility where waste tires not mixed with any other waste are placed for the purpose of long term storage for eventual retrieval for marketing purposes.

2.22. AWaste Tire Pile@means a collection and/or accumulation of more than one hundred waste tires into a single location or given parcel or tract of land.

2.23. AWaste Tire Processing Facility@ means a solid waste facility or manufacturer that accepts waste tires generated by sources other than the owner or operator of the facility for processing by such means as cryogenics, pyrolysis, pyroprocessing, cutting, splitting, shredding, quartering, grinding or otherwise breaking down waste tires for the purposes of disposal, reuse, recycling or marketing.

2.24. AWaste Tire Transporter@ means any person who transports waste tires collected from retail tire dealers or other sources in this state. Waste tire transporters must be in compliance with W. Va. Code 24-2-1b(a) to lawfully transport tires. Provided, That persons transporting waste tires generated by their own business activities, citizens transporting their own waste tires, or persons who are transporting waste tires generated from state authorized waste tire remediation or cleanup projects are not, in this instance, waste tire

transporters.

' 33-5-3. Permitting Requirements.

3.1. Applicability.

3.1.a. A permit from the Department of Environmental Protection is required for any person or persons who generate, accumulate, collect, transport, store, process, dispose, or otherwise manage waste tires in the State of West Virginia on and after the effective date of this rule.

3.1.b. Exceptions to permitting requirements. Persons who use no more than one hundred waste tires for beneficial use, as defined in this rule, may, in the discretion of the Secretary, accumulate waste tires for this specific purpose without a permit. The commissioner of the Division of Highways may temporarily accumulate, without a permit, as many waste tires as he or she deems necessary at any location or locations necessary to effectuate waste tire pile remediation. A recycling facility is exempt from permitting whose only function is to accept at no charge, buy or transfer source separated material, including waste tires for reuse, resale or transfer for further processing. Provided that, a solid waste permit from the Department is not required for transporting waste tires.

3.1.c. Use of Waste Tires as Alternative Fuel. Waste tires or tire derived material that is used as an alternative or supplemental fuel shall not require a solid waste facility permit or be regulated under this rule: Provided, That the facility utilizing such material is permitted and regulated by the Division of Air Quality within the Department of Environmental Protection or other appropriate state regulatory agency.

3.1.c.1. Use of Waste Tires as a Raw Material Feedstock. A facility or pilot project which utilizes waste tires as raw material feedstock in a process such as pyrolysis, cryogenics, (chemical/thermal) or high pressure waterjetting to break down waste tires into their respective constituents of crumb rubber, polyester or nylon fiber, steel belts and other constituents not herein specified to develop new and/or recyclable materials shall not require a solid waste facility permit or be regulated under this rule: Provided, That the facility is permitted and regulated including the handling, storage, and stockpiling of waste tires consistent with this rule by the Division of Air Quality, Division of Water Resources or other appropriate state regulatory agency. Additionally, the Secretary may allow, without a solid waste facility permit, pilot or test projects using the latest best available technology.

3.1.c.2. Beneficial Use of Waste Tires. Whole waste tires or tire derived materials may be reused in the applications described under the definition of Abeneficial use@ in section 2 of this rule, or in other acceptable civil engineering applications. At the discretion of the Secretary, the Department may require a permit for the accumulation of more than 100 waste tires for beneficial use. Additionally, the Secretary has the authority to determine if an unreasonable number of waste tires have been accumulated for an unreasonable length of time for beneficial use. In such determination, the Secretary may take enforcement action for creating an open dump and require the removal and proper disposal of the waste tires.

3.1.d. Commercial Solid Waste Facilities Required to Accept Waste Tires.

3.1.d.1. Commercial solid waste facilities shall accept whole waste tires from any person and may charge a reasonable fee for acceptance of waste tires. Provided however, whole waste tires accepted may not be disposed of in a landfill except as allowed in paragraph 3.1.e.1 of this section and W. Va. Code ' 22-15-21(j). Provided further, that whole waste tires accepted which are not eligible for disposal shall be stored in accordance with 3.5.e.

3.1.d.2. Except as required in paragraph 3.1.e.2 of this section, whole waste tires accepted by

commercial solid waste facilities are exempt from the calculation of monthly tonnage limits and from any solid waste disposal assessment fees.

3.1.e. Exceptions to Prohibiting Waste Tires from Disposal in Landfills.

3.1.e.1 Commercial solid waste landfill facilities may only dispose of whole waste tires generated from the Division of Highways waste tire remediation projects and the Department of Environmental Protection Open Dump Program when the Division of Highways or the Department of Environmental Protection has determined that there is no other reasonable alternative available.

3.1.e.2. Whole waste tires accepted from the Division of Highways or the Department of Environmental Protection projects and program which are permanently disposed of in a landfill are not exempt from the calculation of monthly tonnage limits or any solid waste disposal assessment fees.

3.1.e.3. The Division of Highways and the Department of Environmental Protection may negotiate with a solid waste landfill facility for rates and charges for the disposal of waste tires regardless of the rates and charges established by the Public Service Commission.

3.1.e.4. Waste Tire Monofills. Waste tires may be disposed in waste tire monofills to provide a long term storage site for waste tires or tire derived material, while minimizing the risk of vector attraction, fire and leachate generation until such time that markets are further developed for reuse and recycling.

3.1.e.5. Alternative Daily Cover. Beneficial use of shredded waste tires is acceptable and may be substituted as alternative daily cover at solid wastelandfills, if approved in writing by the Department: Beneficial use of shredded waste tires as alternative daily cover is exempt from the calculation of monthly tonnage limits and solid waste disposal assessment fees. Provided, That the amount (tons) of shredded waste tires used beneficially as alternative daily cover must be included in each monthly tonnage report.

3.1.e.6. Beneficial Use as Select Waste in Commercial Solid Waste Landfill Facilities. Tire derived material may be beneficially used for the first eight (8) feet of select waste by being placed on the protective cover of the composite liner system and shall be exempt from the calculation of monthly tonnage limits and solid waste disposal assessment fees.

3.2. Types of Permits Required.

3.2.a. Waste Tire Monofill and Waste Tire Processing Facility. A permit must be obtained from the Secretary prior to the installation, establishment, construction or operation of a waste tire monofill or a waste tire processing facility. Provided, That a portable tire grinder or tire shredding machine shall not constitute a waste tire processing facility, unless determined otherwise by the Secretary.

3.2.a.1. Minor Modifications. A permittee of an existing approved commercial solid waste facility shall apply to the Secretary for a minor permit modification to conduct waste tire processing activities. The permittee may also apply for a minor permit modification to install and operate a designated monofill storage cell for the placement of waste tires and/or tire derived material at the facility: Provided, That such activities fully comply with this rule. Each designated monofill storage cell must be located at least two hundred (200) feet from any other solid waste disposal cells.

3.2.a.2. Salvage Yard. In addition to a license issued by the Division of Highways, a salvage yard which on and after the effective date of this rule has on its premises, at any given time, more than 100 waste tires not mounted on wheels on vehicles or machines must obtain a commercial solid waste facility permit to

store said tires or have entered into an agreement with the Department of Environmental Protection for the proper disposal of the waste tires.

3.3. Permit Application Requirements.

3.3.a. Regulatory Requirements. Unless otherwise approved by the Secretary in writing, all applicants for a waste tire monofill, storage cell, salvage yard or waste tire processing facility or activity shall comply with the permit application requirements of '33CSR1 subsection 3.7, as applicable, and the following additional requirements:

3.3.b. Projected Maximum Quantity/ Tonnage Information. The proposed annual quantity/tonnage of waste tires and tire derived material to be received, processed and stored at the processing facility/activity shall be stated in the application. The maximum quantity/tonnage received, processed and stored at any given time, may not exceed a projected (quarterly) three month supply. However, if the applicant can verify a market or an end use for the tire derived material by copies of signed contractual agreements, the applicant may be eligible, if approved by the Secretary in writing, to receive, process and store at any given time, up to a six month supply: Provided, That no more waste tires and tire derived material shall be received at the facility until the previous maximum quantity/tonnage allowed by the Secretary to be received, processed and stored has been removed from the facility for marketing.

3.3.c. Market Analysis Information. A market analysis relating to waste tires and tire derived material shall be provided by the applicant including:

3.3.c.1. Identification of Potential and Verified Markets. A listing of specific information utilized by the applicant to identify potential and verified markets for the material to be received and processed at the facility shall be provided. Data supplied must also include any material quality requirements of the potential market contacts, market pricing structures, as available and applicable; and the identification of marketing services available for assistance in product quality or material preparation and transportation.

3.3.d. Flow Diagram. The applicant shall provide a flow diagram along with a narrative description of the operation and activities involving the flow of the waste tires from their receipt, processing into tire derived material, storage and transport to market (end use). There must be sufficient explanation in the flow diagram and narrative descriptions to explain the complete flow of the proposed facility's operation and activities.

3.3.e. Emergency Response Plan. An emergency response plan must be included in the application that includes, at a minimum, the following:

3.3.e.1. Notification Procedures. A notification procedure to summon emergency assistance from the local police departments, fire departments, Department of Environmental Protection and state or local emergency response teams. This procedure must be posted at the facility's office in a conspicuous location and at the main entrance gate visible and legible to the public.

3.3.e.2. Fire Plan. The application shall include a written fire plan with a description of the procedures to be implemented, detailed map depicting location of existing and/or proposed fire hydrants, water supply lines, fire extinguishers or fire ponds if no fire hydrants are to be included in the facility operation or activity and any other proposed fire control equipment. The fire plan must be designed to effectively control a worst case scenario tire fire which could occur at the facility.

3.3.f. Groundwater Protection Plan. All applicants for a waste tire monofill or storage cell, salvage yard, waste tire processing facility or activity shall submit a groundwater protection plan in accordance with

47CSR58 as part of the application.

3.4. Permit Application Fees.

3.4.a. Amount. The application fee is two thousand five hundred dollars ($2,500) for a waste tire processing facility and three thousand dollars ($3,000) for a waste tire monofill or salvage yard. The application fee for a waste tire processing activity or waste tire storage cell at an existing permitted solid waste facility is five hundred dollars ($500).

3.4.b. Incomplete Application Fee. The Department of Environmental Protection may require an additional fee of ten percent (10%) of the applicable application fee for any application refiled due to deficiency or incompleteness.

3.5. Minimum Design and Construction Requirements for a Waste Tire Processing Facility or Activity.

3.5.a. Perimeter Security. A waste tire processing facility or activity must be secured and enclosed within a minimum six (6) foot high woven wire or chain link perimeter fence with a lockable entrance gate and an emergency exit gate at another location.

3.5.b. Grade. No portion of the surface of the ground on which waste tires or tire derived material is stored may be less than two percent or greater than eight percent in grade.

3.5.c. Access Roads. All access roads including fire lanes/fire breaks and the buffer zone must be designed and constructed for all-weather conditions with proper storm drainage provisions.

3.5.d. Access Flow and Restrictions. The facility shall be designed in a manner that restricts unauthorized access. Signs shall be posted at the main entrance gate that direct persons entering the facility during regular business hours to report to the site office.

3.5.e. Storage Plan for Waste Tire and Tire Derived Material. The storage plan must address the receiving and handling of waste tires and tire derived material at, to and from the facility. The plan must address the following items at a minimum:

3.5.e.1. Storage Requirements. The facility or activity must be designed to receive, process and store a quantity/tonnage of waste tires and tire derived material in accordance with the provisions of subdivision 3.3.b of this rule. Include in the application, the calculations necessary for determining the quantity/tonnage.

3.5.e.2. Other Solid Waste Materials. All miscellaneous solid waste materials generated as a result of operations must be properly disposed at an approved solid waste facility within one week after being received and/or generated at the facility.

3.5.e.3. Size Restriction on Waste Tire Storage.

3.5.e.3.A. Waste tire storage piles may not exceed a maximum dimension of 50 feet wide by 50 feet long by 15 feet in height. A minimum of a 50 foot wide zone around each pile shall be maintained free of all debris and vegetation at all times. The facility shall not exceed a maximum of 18 piles of tires or tire derived material.

3.5.e.3.B. In the absence of an available water supply of at least 500 gallons per minute provided by fire hydrants within 1,000 feet of the facility, a minimum of 10,000 gallon water supply on site for

the exclusive use of fire fighting personnel shall be established.

3.5.e.4. Location of Storage Piles. Waste tire and tire derived material storage piles at the proposed facility or activity must be shown on a map in sufficient detail including the length, width and height of each storage pile and the location and dimensions of all fire lanes/fire breaks and buffer zones.

3.5.e.5. Spacing of Storage Piles (Fire Lane/Fire Break). Waste tire and tire derived material storage piles must have a minimum fire lane/fire break spacing of fifty (50) feet between piles at the base and fifty (50) feet from buildings or other structures at the base. Fire lanes/fire breaks must be maintained free of any obstructions at all times so that emergency fire fighting equipment will always have access in the event of an incident.

3.5.e.6. Buffer Zone. A buffer zone of fifty (50) feet wide minimum shall be provided between the perimeter fence and any storage piles. The buffer zone must be kept clear of weeds, trees, vegetation, debris or other materials that may restrict access to all portions of the facility by emergency fire fighting equipment.

3.5.f. Vector Control Plan. A vector control plan shall be submitted that includes the following:

3.5.f.1. Methods of Vector Control. A description of how storage piles and any fire pond impoundment will be maintained to prevent and/or control mosquito breeding and harborage of disease carrying vectors. Methods of acceptable vector control may include, but are not limited to, the following:

3.5.f.1.A. Covering of Storage Pile. Covering by plastic sheets or other impermeable barriers, other than soil, to prevent the accumulation of precipitation in whole tires; and

3.5.f.1.B. Chemical Treatment. Chemical treatment to eliminate harborage or breeding may be utilized. Provided, That any chemical treatment program utilized as part of the vector control plan must be approved by the West Virginia Department of Agriculture.

3.6. Minimum Design and Construction Requirements for a Waste Tire Monofill or Storage Cell.

3.6.a. Unless otherwise approved by the Secretary in writing, the following specific requirements must be followed in designing and constructing a waste tire monofill or storage cell.

3.6.a.1. Liner System. A liner system shall consist of the following elements:

3.6.a.1.A. Subbase;

3.6.a.1.B. Compacted soil liner;

3.6.a.1.C. Leachate collection and protective cover zone; and

3.6.a.1.D. Daily Q.A./Q.C. reports in accordance with '33CSR1 subparagraph 4.5.e.2.I as applicable, shall be prepared and maintained in a bound log book at the site in regard to liner system construction.

3.6.a.2. The subbase portion of the liner system shall consist of a cleared and grubbed natural ground surface capable of supporting the entire liner system.

3.6.a.3. The compacted soil liner shall:

3.6.a.3.A. Be a minimum compacted thickness of one (1) foot;

3.6.a.3.B. Be compacted in six (6) inch lifts;

3.6.a.3.C. Be no more permeable than 1×10^{-6} cm/sec based on laboratory and field testing;

3.6.a.3.D. Be free of particles greater than two (2) inches in any dimension;

3.6.a.3.E. Be placed without damaging the subbase;

3.6.a.3.F. Be placed during a period of time when both the air temperature and the soil temperature are above freezing so that neither the compacted soil nor the subbase are frozen;

3.6.a.3.G. Have a slope of at least two percent (2%) to facilitate the drainage of any leachate across the liner surface; and

3.6.a.3.H. Be designed, operated, and maintained so that the physical and chemical characteristics of the liner and its ability to restrict the flow of constituents, or leachate is not adversely affected by the leachate.

3.6.a.3.I. The construction of the compacted soil liner shall be certified by a W. Va. registered professional engineer and a Q.A./Q.C. report shall be submitted to the Secretary prior to the placement of the leachate collection and protective cover zone.

3.6.a.4. The leachate collection and protective cover zone shall:

3.6.a.4.A. Create a flow zone between the compacted soil liner and waste tires and/or tire derived material more permeable than 1×10^{-3} cm/sec based on laboratory and field testing. The leachate collection zone including the piping system must be designed and placed on a minimum slope of two percent (2%) to facilitate efficient leachate drainage and prevent ponding on the compacted soil liner;

3.6.a.4.B. Be at least nine (9) inches thick;

3.6.a.4.C. Be constructed of soil or earthen materials to ensure that the hydraulic leachate head on the compacted soil liner does not exceed one (1) foot at the expected flow capacity from the drainage area except during storm events;

3.6.a.4.D. Be comprised of clean soil or earthen materials that contain no debris, plant material, rocks, or other solid material larger than one-quarter (1/4) inch in diameter and no material with sharp edges;

3.6.a.4.E. Be graded, uniformly compacted, and smoothed;

3.6.a.4.F. Be installed in a manner that prevents damage to the compacted soil liner; and

3.6.a.4.G. Contain a perforated piping system capable of intercepting liquid within the leachate collection zone and conveying the liquid to control collection points. The piping system shall also

meet the following:

3.6.a.4.G.1. The slope sizing and spacing of the piping system shall assure that liquids drain efficiently from the leachate collection zone;

3.6.a.4.G.2. The distance between pipes in the piping system may not exceed one (100) hundred feet on center;

3.6.a.4.G.3. The pipes shall be installed perpendicular to the flow;

3.6.a.4.G.4. The minimum diameter of the perforated pipe shall be four (4) inches with a wall thickness of Schedule 40 or greater;

3.6.a.4.G.5. The pipe shall be capable of supporting anticipated loads without failure based on facility design;

3.6.a.4.G.6. Rounded stones or aggregates shall be placed around the pipes of the piping system. The stones or aggregates shall be sized to prevent clogging of the pipes and damage to the composite liner;

3.6.a.4.G.7. The piping system shall be installed in a fashion that facilitates cleanout, maintenance, and monitoring. Manholes or cleanout risers shall be located along the perimeter of the leachate collection piping system. The number and spacing of the manholes or cleanout risers shall be sufficient to insure proper maintenance of the piping system by water jet flushing or an equivalent method; and

3.6.a.4.G.8. The leachate collection system shall be cleaned and maintained as necessary.

3.6.a.4.H. The construction of the leachate collection and protective cover zone shall be certified by a W. Va. registered professional engineer and a Q.A./Q.C. report shall be submitted to the Secretary prior to the placement of waste tires or tire derived material in the monofill.

3.7. General Operational Requirements.

3.7.a. General Requirements for a Waste Tire Monofill Processing Facility or Activity. Unless otherwise approved by the Secretary in writing, no person may operate a waste tire monofill, processing facility or activity that does not conform to an approved plan of operation and the following:

3.7.a.1. Provisions must be made to secure the facility from theft, vandalism and fire, which may include posting a security guard during non-operational hours if so directed by the Secretary;

3.7.a.2. Confining windblown material within the operational area and controlling dust and noise;

3.7.a.3. Installing and maintaining surface water diversion ditches around the areas;

3.7.a.4. Access to the monofill, processing facility or activity must be restricted through the use of fencing (woven wire or chain link), not less than six feet in height;

3.7.a.5. Effective means must be taken to control flies, rodents, vectors, insects and vermin;

3.7.a.6. A supervisor must be on duty at the facility at all times while it is open;

3.7.a.7. The main entrance gate and emergency exit gate must be kept locked when an attendant is not on duty;

3.7.a.8. No person shall engage in the open burning of waste tires.

3.7.a.9. All topsoil within the facility construction limits shall be salvaged and stored/seeded within the property boundaries for use in the facility closure; and

3.7.a.10. Whole waste tires must be cut into at least four (4) near equal portions, or split into at least two (2) near equal portions, or shredded or chipped prior to placement in a monofill.

3.7.b. Monitoring Wells Required for Waste Tire Monofills. A minimum of one (1) downgradient monitoring well must be drilled to intersect the uppermost significant aquifer. If the disposal area is between five (5) to ten (10 acres, a minimum of two (2) downgradient monitoring wells must be drilled. If the disposal area is greater than ten (10) acres, a minimum of three (3) monitoring wells must be drilled.

3.7.b.1. A minimum of four (4) independent samples from each well (background and downgradient) must be collected and analyzed in accordance with 33CSR1, subparagraph 4.11.b.2.B, during the first semiannual sampling event.

3.7.b.2. At least one (1) sample from each well (background and downgradient) must be collected and analyzed during subsequent semiannual sampling events.

3.7.b.3. The Secretary may specify an appropriate alternative frequency for repeated sampling and analysis for Appendix I constituents, or the alternative list approved in accordance with 33CSR1 subparagraph 4.11.b.2.B, during the active life (including closure) and the post-closure care period.

3.8. Quarterly, and Semiannually Recordkeeping and Reporting Requirements.

3.8.a. Recordkeeping and reporting requirements for waste tire monofills/storage cells, processing facilities/activities and salvage yards shall include the following:

3.8.a.1. Quarterly Reports. Quarterly reports shall be submitted to the Secretary prior to the fifteenth day of the next quarterly reporting period on forms provided by, or acceptable to, the Secretary. More specifically, the report must include:

3.8.a.1.A. Date, quantity and origin of waste tires and tire derived material received at the facility;

3.8.a.1.B. Quantity/tonnage of waste tires and tire derived material processed at the facility;

3.8.a.1.C. Quantity/tonnage of waste tires and tire derived material stored at the facility; and

3.8.a.1.D. Name, address, telephone number and certificated motor carrier identification numbers of the waste tire transporters who transport waste tires and tire derived material transported to and from the facility, including the quantity/tonnage of waste tires and tire derived material so transported.

3.8.a.2. Problems, Conditions or Changes. Also, describe in the quarterly report any fires, vector or environmental problems, other conditions, or changes in the facility's operational procedures. In regard to fire, vector or environmental problems which have occurred, describe steps taken to prevent a recurrence.

3.8.a.3. Pesticide Application. Identify the name, type and quantities of pesticides used during the reporting period for vector control.

3.8.b. Semiannual Groundwater Monitoring Reports.

3.8.b.1. The groundwater sampling analysis monitoring reports and accompanying report of determining whether there was a statistically significant increase over background values for each parameter or constituent required in the particular groundwater monitoring program that applies to the facility, as determined for Phase I and Phase II monitoring programs, as required in 33CSR1 subsection 4.11 and must be submitted semiannually.

3.8.c. Term of Record Keeping. The permittee must retain records of the quarterly reports at the facility for not less than five (5) years.

3.9. Bonding and Financial Assurance Requirements for Permitted Waste Tire Processing Facilities/Activities, Monofills/ Storage Cells, Salvage Yards and Commercial Recycling Facilities.

3.9.a. Bonding. Bonding shall be in the amount of six thousand ($6,000) dollars per acre with a minimum amount of ten thousand ($10,000) dollars as specified in W. Va. Code '22-15-12 of the Code. An additional financial assurance of two ($2) dollars per whole waste tire, accumulated at any given time, as projected in the application and/or permit shall be required. Such two ($2) dollar per tire bond will not be released until all tires are removed from the waste tire processing facility, waste tire monofill, storage cell or salvage yard. Provided that, permitted landfills as defined in the Solid Waste Management Rule (33CSR1) are exempt from additional bonding and financial assurance as required in this subdivision.

3.10. Closure Requirements for a Waste Tire Monofill/Storage Cell or Processing Facility/Activity.

3.10.a. Closure of a Waste Tire Monofill/Storage Cell or Processing Facility/Activity. Should a facility or activity cease operations, or be required to do so by any agency, all of the requirements of '33CSR1, section 6 shall be complied with as applicable including, but not limited to, those specified below:

3.10.a.1. Removal of Miscellaneous Materials. All miscellaneous waste materials including but not limited to wheel rims, hubcaps, paper, trucks, trailers, containers, machinery and other items or debris remaining at the facility at closure shall be removed and taken to a Department of Environmental Protection approved solid waste facility for reuse, recycling and/or disposal as provided in subdivision 3.9.a of this rule, no bond may be released until all provisions of this rule have been met;

3.10.a.2. Security During Closure. All trucks, trailers, containers, structures and machinery shall be secured until removed;

3.10.a.3. Revegetation. All disturbed ground shall be graded, mulched and seeded; and

3.10.a.4. Sediment and Erosion Control Structures. Sediment and erosion control structures shall be installed and maintained as necessary to comply with '33CSR1, paragraph 4.5.b.3.

3.10.a.5. Facility Closure Plan. All applicants must submit a closure plan in the permit application.

3.10.b. Storm Water. Storm water and surface water drainage must be directed away from the facility or activity in a manner consistent with state water quality standards.

3.10.c. Closure Cap for a Waste Tire Monofill. A closure cap shall immediately be installed over the final placement of waste tires or tire derived material consisting of:

3.10.c.1. A substantial separation filter cloth to prevent soil or any other material from coming in contact with the tire material;

3.10.c.2. A minimum of one (1) foot of intermediate cover soil shall be placed and compacted directly over the filter cloth to create a fire break, minimize the inflow of precipitation and to protect the filter cloth from damage; and

3.10.c.3. A final one (1) foot minimum layer of soil sloped not less than three percent (3%) nor more than twenty-five percent (25%) grade shall be placed and compacted directly over the intermediate cover and revegetated (amendments, mulch, seed) as applicable in accordance with '33CSR1 subdivision 4.5.f.

3.10.d. Daily Q.A./Q.C. reports in accordance with '33CSR1 subparagraph 4.5.e.2.I as applicable, shall be prepared and maintained in a bound log book at the site in regard to the closure cap construction.

3.11. General Requirements for Retail Tire Dealers. Tire dealers shall be required to accept D.O.T. regulated tires if offered by their customers in exchange for tires purchased in a quantity equal to the number of tires purchased at the point of transfer or require the customer to sign the waiver form.

3.11.a. A tire dealer may temporarily contain five hundred (500) or less waste tires on the premises for a period not exceeding ninety (90) days, unless otherwise approved by the Secretary in writing. The temporary containment shall be in a safe and orderly manner which does not constitute solid waste disposal. However, the Secretary is authorized to limit the number of waste tires stored by a tire dealer if the Secretary determines that the waste tires are stored in an unsafe, disorderly, or unsightly manner.

3.11.b. Annual Record Keeping Requirements for Retail Tire Dealers.

3.11.b.1. Retail tire dealers must keep records which include the name, address, telephone number and certificated motor carrier identification number of the waste tire transporter and the number of whole waste tires transported from the retail tire dealers business location(s) by the waste tire transporter(s). These records must be kept on site at each business location and made available for inspection by the Secretary or by his or her authorized representative within five (5) days upon request. All records shall be retained for a period of not less than three (3) years.

3.11.c Public Notice and waiver Requirements for Retail Tire Dealers. Tire dealers are required to post written notices on at least 8 2 inch by 11 inch poster clearly visible to all customers and containing the universal recycling symbol and the following language:

3.11.c.1 AWaste Tire Management;@

3.11.c.2. AState law requires us to accept your (old) waste tires for recycling or proper disposal if you purchase new tires from us.@

3.11.c.3. AState law authorizes us to charge you no more than the actual cost of disposal of your waste tires even if you do not leave your tires with us.@

3.11.c.4. AIt is a crime to burn, bury, abandon or throw away waste tires without authorization and or permits from the Department of Environmental Protection.@

3.11.c.5. Public notices and waiver forms are available from the Department of Environmental Protection, Division of Waste Management.

3.11.c.6. Retail tire dealers may not charge a disposal fee to persons having winter tires changed or buying new winter tires and keeping usable summer tires for later installation or require such persons to provide a used or waste tire or sign a waiver.

3.12. General Requirements for Waste Tire Transporters and Other Persons Transporting Waste Tires.

3.12.a. No waste tire transporter or other person shall knowingly transport or knowingly allow waste tires under his or her control to be transported to a site or facility that does not have a valid permit or license to accept waste tires.

3.12.b. Recordkeeping Requirements for Waste Tire Transporters. Waste tire transporters must keep records which include the name, address and telephone number of the retail tire dealer(s), and the number of whole waste tires transported from the retail tire dealer(s) business location(s) by the waste tire transporter. Also, records showing the name, address and telephone number of the permitted site or facility to where the whole waste tires were transported by the waste tire transporter. These records must be made available for inspection by the Secretary or his or her authorized representative within five (5) days upon request. All records shall be retained by the waste tire transporter for a period of not less than three (3) years.

AMENDMENT PROCEDURE

AMENDMENT PROCEDURE

It is mandated that this Plan be updated every five years. However, the Plan can be amended at any time. In order to add updates or amendments to the Plan, a public legal notice and public hearing in accordance with Section 54-4-7 of Title 54, Series 4must occur. A revised plan is to cover a twenty (20) year period, and the Solid Waste Management Board must approve amendments in the same manner as in the previous plan. Minutes from the Wood County Solid Waste Authority meetings in which the new, updated, or amended plan is approved shall include:

- New, updated, or amended plan.
- Previous plan submitted for approval by the Solid Waste Management Board.
- Minutes signed by the Chair.
- The Solid Waste Authority's responsibility that it is legally constituted to conduct business.

PUBLIC COMMENTS

PUBLIC COMMENTS

The first public hearing on this Plan was held on February 24, 2014. Prior to the hearing a legal notice was placed in the local newspaper, and a copy of the notice was placed at the Wood County Courthouse. Copies of the Plan were provided to the following agencies for public review:

- Wood County Public Library
- South Parkersburg Public Library
- Vienna Public Library
- Williamstown Public Library
- Mid-Ohio Valley Regional Planning and Development Council
- Wood County Clerk Office
- Wood County Solid Waste Authority Office

At the February 24, 2014 public hearing there was no public in attendance, and there were no written comments sent to the Director of the Wood County Solid Waste Authority within the ten day time period.

The second public hearing was held on April 30, 2014. The same procedure was followed with regards to public notification and distribution of the Plan. No one was present at the public hearing, and there were no written comments sent to the Director of the Wood County Solid Waste Authority within the ten day time period.

Included in this section are the following:

- Published Announcement of Public Hearing Affidavit confirming publication for the February 24, 2014 public hearing.

- Minutes of the February 24, 2014 public hearing.
- Published Announcement of Public Hearing Affidavit confirming publication of the April 30, 2014 public hearing.
- Minutes of the April 30, 2014 public hearing.
- Minutes of the August 2014 Wood County Solid Waste Authority Meeting indicating the Solid Waste Authority approved the Plan to be sent to the West Virginia Solid Waste Management Board for their approval.

Classified/Legal Advertising Invoice

The News and Sentinel

PO Box 1787
519 Juliana St
Parkersburg, WV
26101
(304) 485-1891

WOOD COUNTY SOLID WASTE AUTHORITY
ATTN: JOHN REED
#1 COURT SQUARE
PARKERSBURG, WV

26101

01/22/2014 9:22:25AM

No: 136635

Phone: 304 424-1873

Ad No	Customer No:	Start Date	Stop Date	Category:	Classification:
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Identifier
WOOD COUNTY SOLID WASTE AUTHORITY NOTICE OF PUBLIC HEARING TO SOLICIT COMMENTS AND QUESTIONS ABOUT REVISED COMPREHENSIVE

*=Extend Expiration Date

WOOD COUNTY SOLID WASTE AUTHORITY
NOTICE OF PUBLIC HEARING TO SOLICIT COMMENTS AND QUESTIONS ABOUT REVISED COMPREHENSIVE SOLID WASTE MANAGEMENT AND LITTER CONTROL PLAN

Notice is hereby given that the Wood County Solid Waste Authority, as required by law, is in the process of updating the Comprehensive Solid Waste Management and Litter Control Plan for Wood County, West Virginia. An initial public hearing to solicit questions and comments from the general public about updating the Comprehensive Solid Waste Management and Litter Control Plan is scheduled for Monday, February 24, 2014 IN THE JACK BUCKLEY CONFERENCE ROOM, THIRD FLOOR, WOOD COUNTY COURTHOUSE. THE MEETING TIME IS 4:00 PM. ORAL comments will be limited to four minutes per speaker and sign-up for comments will last from 3:30 pm to 4:00 pm.

WRITTEN comments may be submitted to the Wood County Solid Waste Authority, ATTN.: John Reed, #1 Court Square, Suite 308, Parkersburg, West Virginia 26101. The deadline for receiving written comments is March 6, 2014. There are no restrictions on the length of WRITTEN comments.

The hearing will be transcribed from audio and video tape, and the transcription will be included as part of the final Plan submitted to the West Virginia Solid Waste Management Board in Charleston, WV in April/May 2014.

Copies of the plan are available for public review at the following locations:

The County Clerk's Office in the
Wood County Court House

The Solid Waste Authority Office in the
Wood County Court House

Public library and branches in Parkersburg, Vienna, and Williamstown

Mid-Ohio Valley Regional Planning and Development Council
531 Market Street, Parkersburg, WV

The Wood County Commission/Solid Waste Authority is an Equal Opportunity Employer and the location of the Hearing is ADA Accessible.

Jan 18, 22

.....MARY J BUCK.....

Being first duly sworn, says that the

"NOTICE OF PUBLIC HEARING".....

.....

Hereto attached was printed in the

..XX...The Parkersburg News and Sentinel,

.....The Marietta AM,

A daily newspaper published in the City of Parkersburg, Wood County, West Virginia, for ...TWO..... successive Week(s), the first publication and posting thereon being on the .....18TH.....day of ...JANUARY..... 2014.., and subsequent publication on the .....22ND..... day (s) ...JANUARY.... 2014....

Printer's Fee $....113.75...

Notarized Signature $.....2.00...

Additional Copy Fee $.....

Total Due: $.....115.75...

By:.....Mary J. Buck.....

Subscribed and sworn to before me this

22nd **day of** January **20**14.

.....Melani Zyla.....
Notary Public for Wood County, West Virginia

My commission expires .....3-23-14.....

OFFICIAL SEAL
NOTARY PUBLIC, STATE OF WEST VIRGINIA
MELANI ZYLA
1629 - 19th ST. PARKERSBURG, WV 26101
MY COMMISSION EXPIRES MARCH 23, 2014

MINUTES

On Monday, February 24, 2014 the Wood County Solid Waste Authority held its first public hearing on the updating of its Comprehensive Solid Waste Management and Litter Control Plan. The hearing was called to order at 4:00 pm. Those in attendance included:

- John Reed, Wood County Solid Waste Authority Director
- Stacey Fleak, Wood County Solid Waste Authority Secretary
- Toni Tiano, Wood County Grant Consultant

There was no public in attendance. At 4:40 pm John Reed declared the public hearing closed.

Classified/Legal Advertising Invoice

The News and Sentinel

PO Box 1787
519 Juliana St
Parkersburg, WV
26101
(304) 485-1891

WOOD COUNTY SOLID WASTE AUTHORITY
ATTN: JOHN REED
#1 COURT SQUARE
PARKERSBURG, WV

26101

03/28/2014 11:00:14AM

No: 136861

Phone: 304 424-1873

Ad No	Customer No:	Start Date	Stop Date	Category:		Classification:	
136861	**L00917**	**03-21-2014**	**03-28-2014**	**Legals**		**Legals**	
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	LE	**50**	**289**	**4.98**	**115.75**	**.00**	**115.75**
Publications ... Runs	Solicitor:	Origin:	Sales Rep:	Credit Card	Credit Card Number		Card Expire
News Legals ... 2	**MB**	**10**	**114**				

Identifier
WOOD COUNTY SOLID WASTE AUTHORITY NOTICE OF PUBLIC HEARING TO SOLICIT COMMENTS AND QUESTIONS ABOUT REVISED COMPREHENSIVE

*=Extend Expiration Date

WOOD COUNTY SOLID WASTE AUTHORITY
NOTICE OF PUBLIC HEARING TO SOLICIT COMMENTS AND QUESTIONS ABOUT REVISED COMPREHENSIVE SOLID WASTE MANAGEMENT AND LITTER CONTROL PLAN

Notice is hereby given that the Wood County Solid Waste Authority, as required by law, is in the process of updating the Comprehensive Solid Waste Management and Litter Control Plan for Wood County, West Virginia. An initial public hearing to solicit questions and comments from the general public about updating the Comprehensive Solid Waste Management and Litter Control Plan is scheduled for Wednesday, April 30, 2014 IN THE JACK BUCKLEY CONFERENCE ROOM, THIRD FLOOR, WOOD COUNTY COURTHOUSE. THE MEETING TIME IS 4:00 PM. ORAL comments will be limited to four minutes per speaker and sign-up for comments will last from 3:30 pm to 4:00 pm.
WRITTEN comments may be submitted to the Wood County Solid Waste Authority, ATTN.: John Reed, #1 Court Square, Suite 306, Parkersburg, West Virginia 26101. The deadline for receiving written comments is May 10, 2014. There are no restrictions on the length of WRITTEN comments.
The hearing will be transcribed from audio and video tape, and the transcription will be included as part of the final Plan submitted to the West Virginia Solid Waste Management Board in Charleston, WV in April/May 2014.
Copies of the plan are available for public review at the following locations:

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Wood County Court House

The Solid Waste Authority Office in the
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531 Market Street, Parkersburg, WV

The Wood County Commission/Solid Waste Authority is an Equal Opportunity Employer and the location of the Hearing is ADA Accessible.

Mar 21, 28

.....MARY J BUCK.....

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.....

Hereto attached was printed in the

..XX...**The Parkersburg News and Sentinel,**

.....**The Marietta AM,**

A daily newspaper published in the City of Parkersburg, Wood County, West Virginia, for ...TWO..... **successive Week(s), the first publication and posting thereon being on the** .....21ST.....**day of** ...MARCH..... **2014.., and subsequent publication on the** .....28TH..... **day (s)** ...MARCH.... **2014....**

Printer's Fee $.....113.75...

Notarized Signature $.....2.00...

Additional Copy Fee $.....

Total Due: $.....115.75...

By: Mary J Buck

Subscribed and sworn to before me this

28TH day of March 20 14.

Lisa C. Kelley
Notary Public for Wood County, West Virginia

My commission expires 3-4-2024

Official Seal
Notary Public, State of West Virginia
Lisa C Kelley
Parkersburg Newspapers Inc
519 Juliana Street
Parkersburg WV 26101
My commission expires March 4, 2024

MINUTES

On Wednesday, April 30, 2014 the Wood County Solid Waste Authority held its second public hearing on the updating of its Comprehensive Solid Waste Management and Litter Control Plan. The hearing was called to order at 4:00 pm. Those in attendance included:

- John Reed, Wood County Solid Waste Authority Director
- Toni Tiano, Wood County Grant Consultant
- Stacey Fleak, Wood County Solid Waste Authority Secretary

There was no public in attendance. At 4:30 pm John Reed declared the public hearing closed.

WOOD COUNTY SOLID WASTE AUTHORITY

Wood County Courthouse - Third Floor - Jack Buckley Conference Room

Minutes of Regular Meeting
August 14, 2014
3:00 P.M.

Present:
Harold Taylor.....Chairman
Barb Lewis.....Secretary
Gene Cumpston.....Member
John Reed.....Wood County SWA Director
Stacey Fleak.....Wood County SWA Secretary

Absent:
Paul Thornton.....Vice Chairman
David Blair Couch.....Treasurer

Guests:
Toni Tiano

The meeting was called to order by Chairman Harold Taylor at 2:56 p.m. The meeting had been properly posted. There was a quorum with three of the five Board Members present.

Mr. Harold Taylor asked the board members if they had looked over the July 10, 2014 Regular Meeting Minutes. Motion made by Gene Cumpston to approve the minutes as presented, seconded by Barb Lewis and passed unanimously.

John Reed presented the July Financial Reports to the board members. Motion made by Gene Cumpston to approve the Financial Reports, seconded by Barb Lewis and passed unanimously.

Toni Tiano went over the 5 year plan with the board members. Barb Lewis moved that we adopt the 5 year update to the Wood County Solid Waste Management and Litter Control Plan, seconded by Gene Cumpston and passed unanimously.

John spoke about to the board members about applying for the 2015 CED Recycling Grant and using the funds from that grant to hold another electronic recycle day in the fall.

John told the board that the Board of Education has tabled the bids from Waste Management and Kindle. We have to wait for them to make the decision on what company they will use for trash service before we can order the poppers and recycling bins.

Stacey gave the board members registration forms for the State Conference.

The Board members tabled the reorganization of the office until all board members can be present.

Meeting adjourned at 3:40.

The next meeting of the Wood County Solid Waste Authority will be held on **Thursday, September 11, 2014 at 3:00 p.m.** in the Jack Buckley Room, third floor of the Courthouse.