



**Comprehensive
Solid Waste Management Plan
Worcester County, Maryland
2017–2026**

Prepared for

Worcester County Department of Public Works
6113 Timmons Road
Snow Hill, Maryland 21863

Prepared by

EA Engineering, Science, and Technology, Inc., PBC
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(410) 641-5341

December 2016
EA Project No. 10609.32

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LIST OF ACRONYMS AND ABBREVIATIONS

ABCR	Apartment Building and Condominium Recycling
C&D	Construction and demolition
CFR	Code of Federal Regulations
COMAR	Code of Maryland Regulations
DPW	Department of Public Works
ft	Foot (feet)
FY	Fiscal year
HazMat	Hazardous material
MDE	Maryland Department of the Environment
MRA	Maryland Recycling Act
MSW	Municipal solid waste
O&M	Operation and maintenance
RCRA	Resource Conservation and Recovery Act
SERP	Special Events Recycling Program
WWTP	Wastewater treatment plant

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1. INTRODUCTION

The Solid Waste Management Plan is a continuously active County planning document, which is required by Section 9-503(b) of the Environment Article, Annotated Code of Maryland to be reviewed by the County at least once every 3 years. This Plan is compliant with COMAR 26.03.03 and includes new data from the latest period, identifies objectives relative to the solid waste management program, incorporates changes in operation, and addresses the Maryland Department of the Environment (MDE) comments on the last update of the Plan. Additionally, the Worcester County Recycling Plan is contained within this document.

An initial public hearing was held on Tuesday, 21 April 2009 at 10:30 a.m. for the Comprehensive Solid Waste Master Plan. Following the public hearing, this solid waste management plan was officially adopted by the Worcester County Board of County Commissioners on 21 April 2009. A second public hearing was held on Tuesday, 21 September 2010 at 10:10 a.m. for the updates to the Comprehensive Solid Waste Master Plan. The updates included the recycling efforts within Worcester County Public Schools. Following this public hearing, these updates to the Solid Waste Management Plan were officially adopted by the Worcester County Board of County Commissioners on 21 September 2010. The revisions to the Solid Waste Master Plan, including efforts by the County to implement a recycling program within the County public schools, are discussed in Section 5.2.14, *Recycling at Worcester County Public Schools*. The notices of the public hearings; resolutions adopting the Comprehensive Solid Waste Master Plan; approvals by Worcester Comprehensive Planning, Town of Snow Hill; and letters of transmittals to all Worcester County municipalities are included in Appendix A. The Plan will serve as the County's solid waste disposal guideline throughout the 10-year planning period, 2017 through 2026.

A letter of approval from MDE has been enclosed with this plan and is included within Appendix B.

1.1 STATEMENT OF COUNTY GOALS

In developing its Comprehensive Solid Waste Management Plan, Worcester County's overall goal is to provide for a system of solid waste management and resource recovery that will handle the County's current and anticipated future volume of solid waste as economically as possible, while protecting environmental quality and preserving public health and safety, and thus maintaining a better quality of life within the County.

1.2 OBJECTIVES

The objectives of the County's Solid Waste Management Plan are to:

- Ensure that all solid waste will be processed by such means that will effectively protect the quality of the ambient air, groundwater, and surface water resources, including the Coastal and Chesapeake bays, and will minimize the possibility of pollution from the management and disposal of solid waste.

- Effectively and efficiently serve existing and future land uses and development within the County, including residential, agricultural, industrial, commercial, and marine areas.
- Address issues related to the handling of special and hazardous wastes including, but not limited to, household hazardous waste, commercial and industrial waste, medical waste, and agricultural waste.
- Develop and promote specific reuse (waste diversion) and reduction programs.
- Extend the useful life of the Central Landfill Facility, a municipal solid waste landfill meeting all Subtitle D regulations.
- Promote the use of recycled material by continuing to promote programs that increase the amount to be recycled. The current goal is to divert a minimum of 20 percent from the solid waste stream through recycling. As of December 31, 2015, The Maryland Recycling Act's (MRA's) mandated recycling goal of 20 percent for Worcester County is based upon the County's population of less than 150,000. In 2014, the County achieved a 27 percent recycling rate through the County's recycling efforts. However, this number has been achieved through the reuse of chicken waste. The recent closing of chicken waste processing facilities in Worcester County is expected to decrease the recycling rate significantly. Additional recycling efforts will need to be identified if the County is to continue to achieve a 27 percent or higher recycling rate and continue to exceed the mandated goal of 20 percent.
- Continue to research, develop, and implement new economically feasible programs designed to divert more of the waste stream through recycling (including building additional recycling centers and/or separate recyclables collection), and promote landfill mining and the perpetual landfill concept.
- Expand opportunities for public participation by welcoming participation in all aspects of the management of the County's solid waste. This includes participation in the biweekly Commissioner's meetings, which are open to the public, and the public participation meetings, as required by State law, which are held during any siting and facilities placement process. In addition, participation in the regular meetings of the Solid Waste Advisory Board is encouraged. (People wishing to participate should contact the Department of Public Works, Solid Waste Division at 410-632-3177.)
- Communicate to citizens and users of the solid waste facilities within the County the goals of the Comprehensive Solid Waste Management Plan as described below.

1.2.1 Policies

It is the policy of the Worcester County Government to promote public participation through continued communications concerning solid waste issues and through ongoing public input.

Worcester County will continue to aggressively promote voluntary programs to meet the State's municipal solid waste and recycling mandates.

1.2.2 Conformance with Land Use Plans

The stated goals and objectives are consistent with the land uses stated in the County's Comprehensive Plan approved 7 March 2006.

1.3 COUNTY GOVERNMENT STRUCTURE

The Board of County Commissioners of Worcester County is the governing body for Worcester County Government (Figure 1-1). The Worcester County Department of Public Works (DPW), Solid Waste Management Division has been designated to oversee solid waste management and recycling programs.

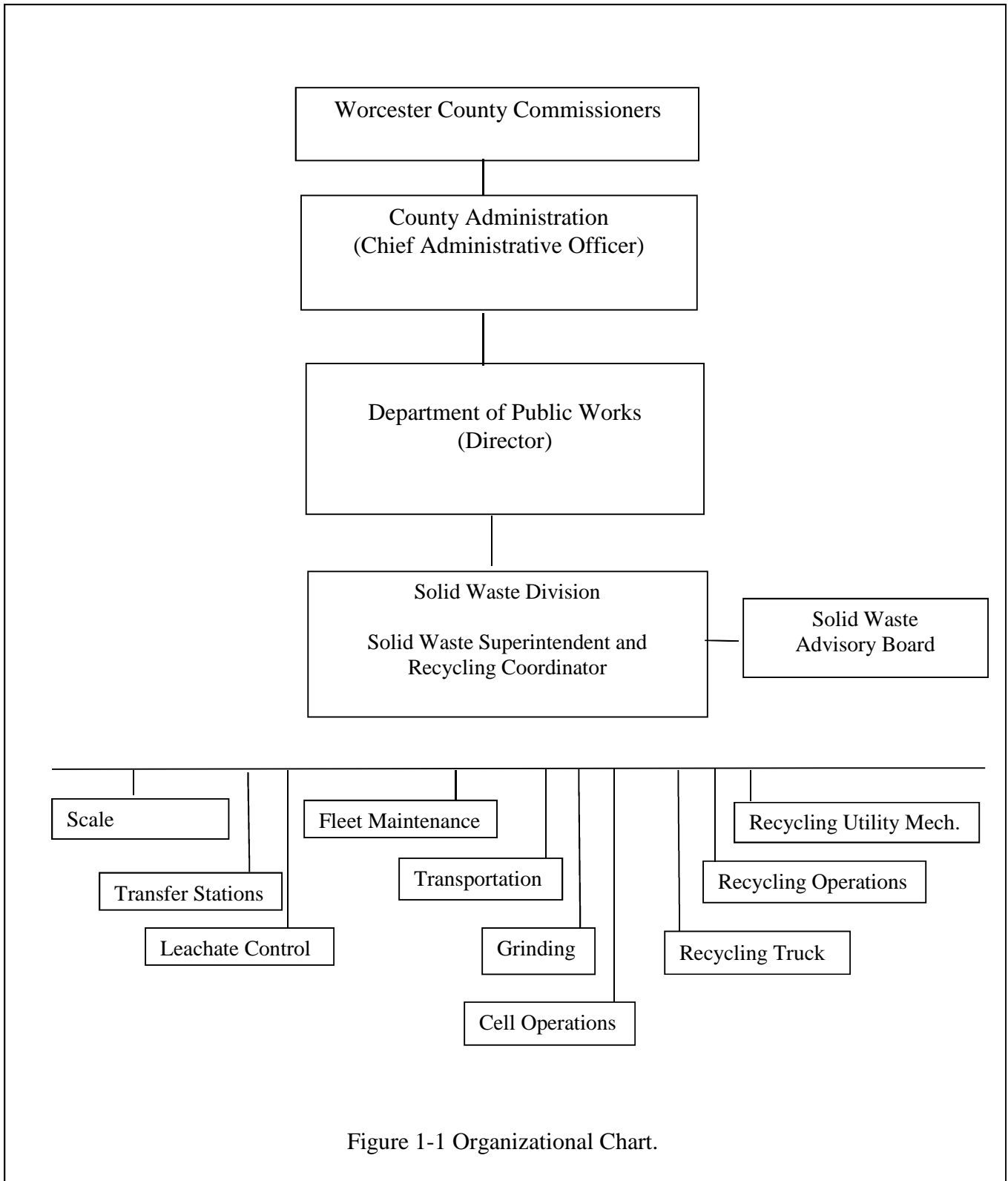


Figure 1-1 Organizational Chart.

1.4 FEDERAL, STATE, AND LOCAL CONTROLS

The legal controls for solid waste were established by an act of Congress, which resulted in the Resource Conservation and Recovery Act of 1976 (RCRA). RCRA requires that responsibilities for solid waste management are clearly delineated, and calls upon the U.S. Environmental Protection Agency to monitor state management of landfills.

The State of Maryland has agencies that are involved in a wide range of activities relating to solid waste. MDE is the State's principal regulatory agency with respect to solid waste management. MDE is the State's lead agency for implementation of RCRA. The requirements for facilities that accept and dispose of solid waste are defined in the Code of Maryland Regulations (COMAR) Title 26, Department of the Environment; Subtitle 04 Regulation of Water Supply, Sewage Disposal, and Solid Waste; Chapter 07 Solid Waste Management (COMAR 26.04.07).

Title 9, Subtitle 2, of the Environment Article of the Annotated Code of Maryland states that each county shall have a permit issued by MDE before the county installs, materially alters, or materially extends a refuse disposal system. "Refuse disposal system" includes: (1) an incinerator; (2) a transfer station; (3) a landfill system; (4) a landfill; (5) a solid waste processing facility; and (6) any other solid waste acceptance facility.

Title 9, Subtitle 5, of the Environment Article of the Annotated Code of Maryland requires that each county adopt and submit to MDE for approval a Comprehensive Plan covering a 10-year planning period that addresses water supply and sewerage systems and solid waste management.

Title 9, Subtitle 17, of the Environment Article of the Annotated Code of Maryland requires that each county shall submit a recycling plan to MDE for approval when the county submits its county plan to MDE in accordance with the provisions of Title 9, Subtitle 5.

The plan is required to be reviewed by the county and updated, if necessary, at least every 3 years. After a public hearing and adoption of any changes by the county, the plan is then submitted to MDE for approval.

The Board of County Commissioners of Worcester County is empowered to adopt local rules and regulations addressing solid waste and protecting the public health and safety. To that end, the Board of County Commissioners has enacted regulations that govern the siting of solid waste disposal facilities. A copy of these regulations is included herein as Appendix C.

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2. BACKGROUND DATA

2.1 POPULATION CHARACTERISTICS

Worcester County is unique within Maryland, particularly with respect to population. The variability resulting from the influx of recreational visitors to the Town of Ocean City, Maryland causes large fluctuations in the seasonal population. Table 2-1 shows population projections through the year 2026. The County had a permanent population of 51,540 in 2015 (Table 2-1). This was expected to grow to 56,100 in the year 2020, to 58,750 in 2025, and to 59,090 in 2026. The Town of Ocean City, however, was expected to have a seasonal peak population of approximately 345,000 in 2015, which was projected to grow to 360,000 in the year 2020, 376,000 in 2025, and 380,400 in 2026.

The seasonal population levels vary by peak and off-peak season. This variability in the projected population has been accounted for in projecting solid waste disposal needs.

Table 2-1 Year-Round Population Projections for Worcester County and Seasonal Population Projections for Ocean City

Year	Worcester County Population (Year Round)	Ocean City Weekend Population	
		Population (June/July/August)	Population (April/May/September/October)
2015	51,540		
2016	52,452	348,000	228,000
2017	53,364	351,000	231,000
2018	54,276	354,000	234,000
2019	55,188	357,000	237,000
2020	56,100	360,000	240,000
2021	56,635	363,200	243,500
2022	57,165	366,400	246,700
2023	57,695	369,600	249,900
2024	58,225	372,800	253,100
2025	58,750	376,000	256,300
2026	59,090	380,400	260,700

2.2 MAP OF COUNTY

2.2.1 Municipalities Indicated

The municipalities located in Worcester County are Snow Hill, Berlin, Pocomoke, and Ocean City. Ocean City is under contract with an outside agency to remove solid waste and recyclables. Ocean City sporadically delivers construction and demolition debris, beach cleaning and street sweeping debris during the summer months and sewage sludge to Worcester County Central Landfill Facility. These municipalities are indicated on Figure 2-1.

2.2.2 Federal Facilities Indicated

The only federal facility located in Worcester County is the Assateague Island National Seashore. This facility is indicated on Figure 2-1.

2.3 DISCUSSION OF ZONING REQUIREMENTS

Solid waste activities are identified and discussed in Subtitle ZS 1/329 Solid Waste Disposal Sites of the Supplementary Districts and District Regulations of the Code of Public Local Laws of Worcester County, Maryland, and are subject to state and federal regulations. This plan shall not be used to create or enforce local land use and zoning requirements.

2.4 COMPREHENSIVE PLANNING AND LAND USE

The Comprehensive Development Plan for Worcester County, prepared by the Office of Planning and Zoning, originally adopted in 1963 and last revised in 2006, provides the basic policy guidance that will shape future decisions relating to County growth and development. The first part of the plan, a set of goals and objectives, is an official statement of the County's desires for its future. The second part is a set of specific actions and policies that outline what steps should be taken to ensure that the goals and objectives are met. The Office of Planning and Zoning periodically reviews and makes recommendations for updating the Comprehensive Plan. It should be noted that the individual municipalities have their own subsidiary plans.

A specific element of the Comprehensive Plan addresses Public Facilities and Services to include provisions for providing public facilities that meet the needs of the County's residents, businesses, and industries. It specifically recommends that the County:

- Provide for the safe and environmentally sound disposal of solid and hazardous waste generated in Worcester County
- Promote conservation of resources through source reduction, reuse, and recycling
- Keep curbside trash collection the responsibility of property owners
- Maintain, update, and implement the County's solid waste plan
- Implement technologies and techniques to extend the life of the Central Landfill Facility
- Enforce, review, and update solid waste management regulations on an ongoing basis
- Institute mandatory recycling
- Recycle 40 percent of the County's solid waste.

WORCESTER COUNTY

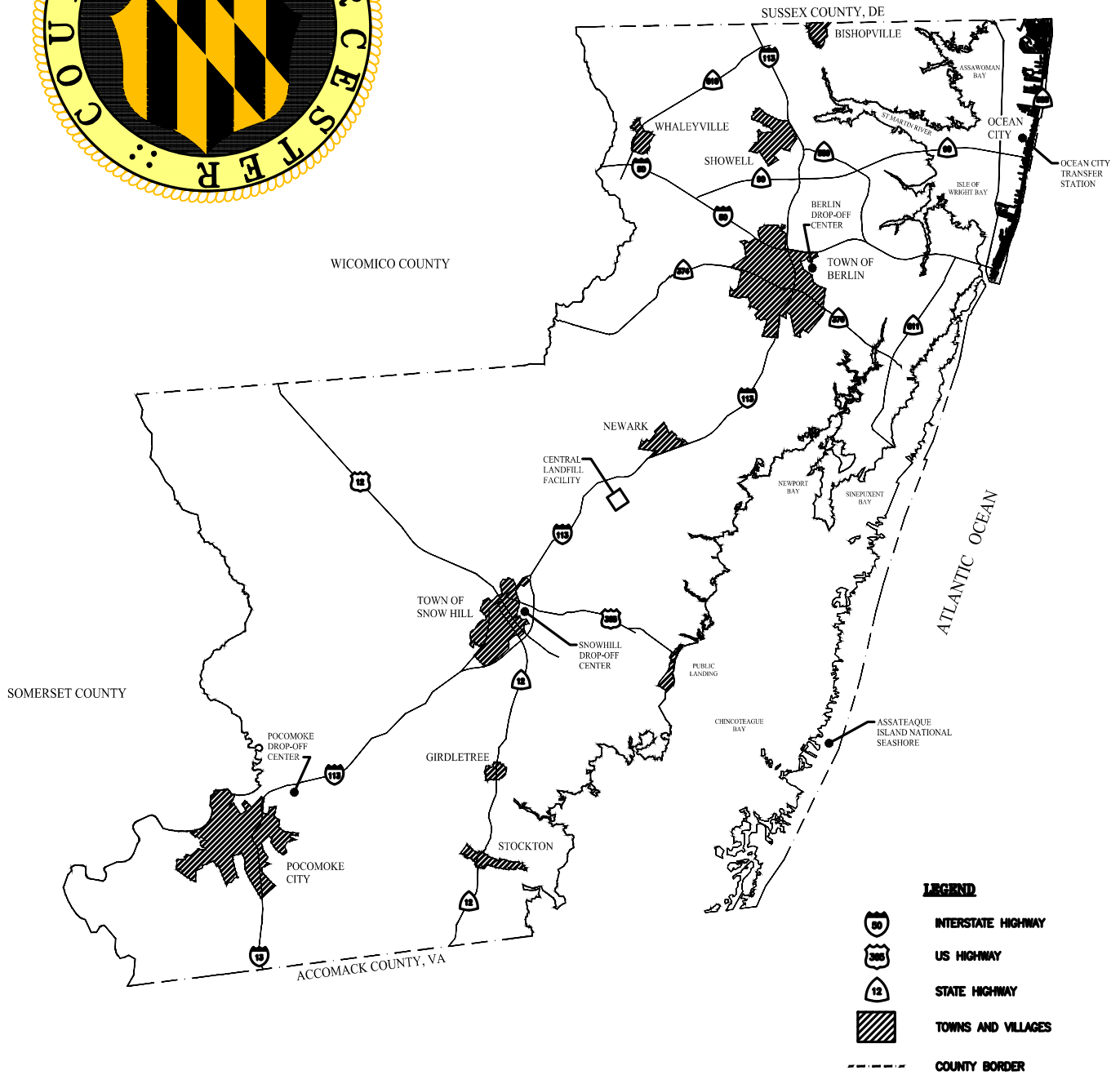


FIGURE 2-1 MAP OF WORCESTER COUNTY

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3. EXISTING AND PROJECTED SOLID WASTE MANAGEMENT

3.1 EXISTING AND PROJECTED SOLID WASTE STREAM

Worcester County's Central Landfill Facility opened in 1990 and is located off Route 113 near Newark, Maryland. The Central Landfill Facility is a 725-acre state-of-the-art facility with a liner and leachate collection system. The Central Landfill is currently filling Cell 4, with construction of Cell 5 about to begin. The planned design capacity is in excess of 5 million tons. The projected useful life of the site is in excess of 20 years. The landfill has been designed and constructed and is operated in accordance with COMAR and Subtitle D requirements.

3.1.1 Municipalities

In addition to receiving County-generated waste at the Central Landfill Facility, the facility does service three citizen-convenient drop-off centers located in the Town of Snow Hill, Town of Berlin, and City of Pocomoke, as shown on Figure 2-1. The transfer station located in Ocean City does not send collected solid waste or recyclables, but does send construction and demolition debris, sewage sludge and beach/street cleaning waste during the summer months to the Central Landfill Facility.

3.1.1.1 Snow Hill

Local in-town trash pickup is coordinated by the Town of Snow Hill, and residents or private haulers deliver the trash to the Central Landfill Facility's active cell working face. The County, however, operates the County owned citizen-convenient drop-off center within the limits of the Town of Snow Hill. When this transfer station nears capacity for trash or recyclables, a County vehicle will deliver an empty dumpster and haul the full dumpsters to the Central Landfill Facility active cell working face or unload recyclables at the recycling building.

3.1.1.2 Berlin

Local in-town trash pickup is coordinated by the Town of Berlin, and residents or private haulers deliver the trash to the Central Landfill Facility's active cell working face. The County, however, operates the County owned citizen-convenient drop-off center within the limits of the Town of Berlin. When this station nears capacity for trash or recyclables, a County vehicle will deliver an empty dumpster and haul the full dumpsters to the Central Landfill Facility active cell working face or unload recyclables at the recycling building.

3.1.1.3 Pocomoke

Local in-town trash pickup is coordinated by the City of Pocomoke, and residents or private haulers deliver the trash to the Central Landfill Facility's active cell working face. The County, however, operates the County owned citizen-convenient drop-off center within the limits of the City of Pocomoke. When this transfer station nears capacity for trash or recyclables, a County vehicle will deliver an empty dumpster and haul the full dumpsters to the Central Landfill Facility active cell working face or unload recyclables at the recycling building.

3.1.1.4 Ocean City

From the solid waste management perspective, Ocean City is unique, because the Town collects solid waste and operates the transfer station. The Town of Ocean City is under contract by a private company whereby the generated trash and recyclables are removed and taken to a waste-to-energy facility. The only waste that the Town of Ocean City currently transports to the Worcester County Central Landfill Facility consists of waste accumulated from street sweeping, construction and demolition debris and sewage sludge generated from the wastewater treatment plant (WWTP). This sewage sludge is hauled by the Town of Ocean City to the Central Landfill Facility's active cell working face. Seasonal population fluctuations, as presented in Table 2-1, drive many waste management practices.

3.1.2 Waste Defined

3.1.2.1 Residential Waste

This type of waste includes household trash and small furniture that is collected by commercial haulers or brought in by County residents to the solid waste facilities.

3.1.2.2 Commercial Waste

Commercial waste includes industrial non-hazardous solid waste that is generated by businesses operating within the County and collected by haulers that are privately owned and operated, or by the business itself, and transported to the disposal facilities.

3.1.2.3 Institutional Waste

Institutional waste includes non-hazardous waste originating in schools, hospitals, and public and private institutional buildings.

3.1.2.4 Land Clearing, Demolition, and Construction Debris

Land clearing debris includes brush, tree limbs, soils, tree stumps, root mats, logs, and rocks that are generated from the clearing of land. Building demolition includes shingles, wallboard, non-refractory bricks, insulation materials, and used lumber that are generated from remodeling or demolition of buildings. Construction debris includes new lumber and scrap material that is generated from construction. Concrete, stone, and dirt that are generated from road construction, building, remodeling, replacement, or excavation are included. Brush and yard waste includes branches less than 3-inch diameter, grass clippings, and leaves.

3.1.2.5 Controlled Hazardous Substances

Hazardous wastes are defined by COMAR 26.13, *Disposal of Controlled Hazardous Substances*. The disposal of hazardous waste is not allowed at the Worcester County solid waste facility.

3.1.2.6 Dead Animals and Litter

Dead Animals—Generally includes animals that have been killed on the road and collected by the State Highway Administration, municipal road crews, and Worcester County Public Works. (Dead animals are generally not collected, but are removed from the traveled portion of the roadway.)

Litter—The indiscriminate scattering of paper, bottles, and cans upon roadways, waterways, and abutting lands is usually referred to as litter. In actuality, litter includes all solid waste. Litter has been observed on residential properties, parking lots, wooded areas, ravines, and waterways throughout the County.

3.1.2.7 Bulky Objects

Automobiles—The Maryland Department of Transportation regulates the abandonment of junked motor vehicles. In addition to fines for convictions, provisions for impounding the abandoned vehicles, and, if necessary, selling the vehicle at auction to recover the impounding and storage costs, are included in the regulations. Automobiles are not included in Worcester County's Solid Waste quantities, since they are not allowed to be disposed of at County facilities.

White Goods—White goods include metal appliances, such as washing machines and refrigerators.

Other—Other items include objects such as furniture, mattresses, carpeting, etc.

3.1.2.8 Scrap Tires

Scrap tires may be accepted at the Central Landfill Facility in accordance with the MDE scrap tire license for the facility. Scrap tires are prohibited from being disposed of in the landfill by Section 9-228 of the Environment Article, Annotated Code of Maryland.

3.1.2.9 Wastewater Treatment Plant Sewage Sludge

Sewage sludge is from WWTPs located in Ocean Pines, Mystic Harbour, Snow Hill, Berlin, and Ocean City.

3.1.2.10 Septage

Septage includes liquid and solid material pumped or removed from chemical toilets, septic tanks, seepage pits, privies, cesspools, or holding tanks when the system is cleaned and maintained. Septage haulers are regulated under separate regulations and septage is not accepted at any County facility, except for provisions that have been made to allow for septage to be discharged into the Ocean City, Berlin, Pocomoke, and Snow Hill WWTPs (see Section 5.2.10).

3.1.2.11 Other Wastes

Agricultural Wastes and Crop Residues—Includes crop residue, waste, or residue remaining after the harvesting of crops.

Other—Includes water treatment plant sewage sludge, mining wastes, dusts (e.g., bag house), grease, and oil contaminated soils.

3.1.3 Waste Quantities

Table 3-1 shows the annual generation of waste in Worcester County.

Over the last 10 years, the municipal solid waste (MSW) acceptance rate has remained static, in the range of 80,000 to 90,000 tons per year. In 2006 the construction and demolition (C&D) debris acceptance rate was at a high of approximately 54,000 tons. This increase was largely driven by a building boom of second homes, both single family and condominium. This building boom is typified by the replacement of 1950s-era hotels with new condominiums. The current C&D acceptance rate is approximately 18,000 to 20,000 tons per year. The building boom, that was seen from 2002 to 2006 has since subsided and the amount of C&D acceptance has since leveled out. The following factors will have a minimal effect on the actual quantity of solid waste generated and disposed of in the County:

- Continued moderate (12 percent for the planning period) anticipated growth of the residential population
- Moderate (11 percent for the planning period) growth in the County's tourism and recreation industries
- Consumer awareness of waste reduction
- The impact of the County's recycling efforts in reducing solid waste.

The following will significantly impact the waste generation trends:

- Economic factors
- Natural disaster
- Worcester County does not independently track quantities of waste by category (e.g., residential vs. commercial).

3.1.4 Recycling Program

The Recycling Program targets major fractions of the waste stream including:

- Commingled (mixed) materials: aluminum, tin “steel,” and bimetal food and beverage cans, plastic food and beverage containers (codes #1, 2, and 3), and glass food and beverage containers.
- Newspaper.
- White goods: appliances and scrap metal.
- Yard waste: includes branches less than 3-inch diameter, grass clippings, and leaves. State, County, and municipal road crews deliver their cut and/or chipped roadside brush to the yard waste site at the Central Landfill Facility and Pocomoke citizen-convenient drop-off centers. The Snow Hill and Berlin citizen-convenient drop-off center and Ocean City transfer station do not accept yard waste.
- Batteries: car, truck, and marine lead/acid batteries, and household batteries are also accepted. Battery bags are available at the Central Landfill Facility.
- Corrugated cardboard: small quantity generators of corrugated cardboard.
- New construction wall board.
- Textiles.
- Scrap Tires: passenger car and truck.
 - * Section 9-228, Environment Article, Annotated Code of Maryland that states that “no tires will be landfilled after January 1, 1994.” Scrap tires are being hauled by the commercial hauler to a tire recycling facility for processing.
- Wastewater Treatment Plant Sewage Sludge: from Ocean Pines WWTP, Mystic Harbour, Snow Hill WWTP, Berlin WWTP, and Ocean City WWTP.

3.1.5 Computer and Electronic Recycling

The recycling program has been expanded to encompass the collection of computers and electronics (i.e., e-cycling). Worcester County began a program to collect old computers and their related components in 2004. A permanent collection site was established at the Central Landfill Facility where County residents are allowed to bring in their electronics (i.e., televisions, radios, printers, scanners, cell phones, fax machines) and old computers, computer monitors, and peripherals. The site is permitted to be open from 8:00 a.m. to 4:00 p.m., 7 days a week from May through September, and Monday through Saturday from October through April. These items are also accepted at the three County drop-off facilities (Berlin, Pocomoke, and Snow Hill). They are then transported back to the Central Landfill facility, where they are stored and separated into various types of waste, such as televisions, monitors, computers, etc.

Currently these materials are then picked up by SamR Recycling or other certified commercial recycling hauler, who is contracted through the County for recycling of these items.

3.1.6 Recyclable Materials Separated

Recyclable material (tonnage) currently diverted is shown in Table 3-1. The quantities shown are the total MRA recyclables diverted including those collected at the landfill and those directly recycled by businesses. The waste stream was reduced by 27 percent through recycling efforts. Therefore, the State recycling goal of 20 percent reduction is being exceeded consistently. The figures include private sector recycling activities, which contribute significantly towards helping the County meet the State recycling mandate. The County anticipates recycling the same materials in the 10-year planning period; however, there may be a significant drop in recycling percentage due to major changes in the poultry industry. Currently, the County has been achieving a 27 percent recycling rate through the County's recycling efforts.

3.1.7 Recycling at Worcester County Public Schools

In accordance with Section 9-1703(b) of the Environment Article of the Annotated Code of Maryland, Worcester County implemented the collection, processing, marketing and disposition of recyclable materials from County schools in 2011. Worcester County has been coordinating the recycling in public schools since 1995 and added two private schools to the program in February 2011. Worcester County will continue with the collection of recycling materials within these schools. It is the responsibility of the Worcester County DPW and the Worcester County Board of Education to ensure the implementation of the school recycling plan.

Program

Through assistance from the Worcester County Commissioners, Worcester County will provide each Worcester County public school and two additional private schools with 15-gallon containers for the collection of recyclable materials. The Program encompasses 14 local public schools and 2 local private schools. The Worcester County Recycling Coordinator provides technical support and recycling knowledge to administrators, teachers, and students on a continuing basis.

The County will collect recyclables from the following Worcester County public schools:

Elementary Schools:

Buckingham Elementary School	100 Buckingham Road, Berlin 21811
Ocean City Elementary School	12828 Center Drive, Ocean City 21842
Pocomoke Elementary School	2119 Pocomoke Beltway, Pocomoke City 21851
Showell Elementary School	11318 Showell School Road, Berlin 21811
Snow Hill Elementary School	515 Coulbourne Lane, Snow Hill 21863

Middle Schools

Pocomoke Middle School	8 th Street, Pocomoke City 21851
Snow Hill Middle School	522 Coulbourne Lane, Snow Hill 21863
Stephen Decatur Middle School	9815 Seahawk Road, Berlin 21811

High Schools

Pocomoke High School	1817 Old Virginia Road, Pocomoke City 21851
Snow Hill High School	305 South Church Street, Snow Hill 21863
Stephen Decatur High School	9913 Seahawk Road, Berlin 21811

Intermediate Schools

Berlin Intermediate School	309 Franklin Avenue, Berlin 21811
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Special Schools

Cedar Chapel Special School	510 Coulbourne Lane, Snow Hill 21863
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Technical Schools

Worcester Career & Technology Center	6290 Worcester Highway, Newark 21841
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This list of schools is inclusive of the schools within Worcester County that are subject to the regulations identified within Section 9-1703(b) of the Environment Article of the Annotated Code of Maryland. Should a new school start operation and should it be determined to be subject to the above-mentioned regulation, the new school will begin participating in the program within 3 months of the new school year session.

The County will also collect recyclables from the following Worcester County private schools (Recycling effort within the following private schools is considered voluntary):

Private Schools

Most Blessed Sacrament Catholic School	11242 Racetrack Road, Berlin 21811
Worcester Preparatory School	508 South Main Street, Berlin 21811

Collection

The Worcester County DPW will provide the coordination and collection services inclusive of recycling within Worcester County Schools, rather than soliciting and establishing a third party recycling contract. The Worcester County Recycling Coordinator will manage the recycling within Worcester County Schools. Each school will be provided with 15-gallon blue containers clearly labeled “Worcester County Recycles” to collect paper, cardboard, and metal cans. The Worcester County DPW will provide the schools with the recycling containers. All staff and students will be instructed to place together all acceptable materials in these bins. Instruction pamphlets are prepared and provided by the Worcester County DPW to each participating school. The quantity of recycling containers provided to each school will be unlimited and is based on the specific need and request of each school. The recycling containers will be collected at the end of each school day by the school’s recycling coordinator or janitorial custodian, and emptied into 55-gallon recycling drums, also provided by the Worcester County DPW.

The recycling containers will be picked up once per week by County personnel and transported to the Worcester County Central Landfill Facility. The Worcester County Recycling Coordinator will identify a specific staff person associated with the Worcester County DPW Solid Waste Division who will be responsible for the delivery, tracking, and collection of the recycling containers from each school.

At the recycling facility, materials will then be offloaded and separated into the appropriate areas. The Worcester County DPW will coordinate with the schools to provide these services with no tipping fees at the Worcester County Central Landfill Facility.

Processing and Disposition

Upon delivery of the segregated recycling materials from the County schools to the Worcester County Central Landfill Facility, each bundle of segregated recycling material will be combined with like recycling materials for processing. Recyclables will then be processed at the County recycling facility for bundle and re-sale.

Collection Schedule

The recyclable materials will be picked up once per week from each school by the Worcester County DPW Solid Waste Division staff personnel, and more frequently if needed. When schools are not in session, recyclables will be picked up on an as-needed basis.

Implementation Schedule

The Worcester County Recycling within County Schools Program is already developed and currently in operation. The County will continue to implement this program indefinitely in accordance with the Ten Year Solid Waste Management Plan. The following Implementation Schedule will be utilized by Worcester County for recycling within public schools:

- Complete Evaluation/Adoption of Recycling Program by Worcester County Commissioners 1 October 2011
- Approval by MDE 1 November 2011
- Begin Implementation into public schools 1 December 2011
- Deadline for Implementation by public schools 2 January 2012

Materials Included in the Program

Recyclables include mixed paper defined as all paper products such as: newspaper, books, colored paper, computer paper, letters, envelopes, file folders, paper bags, etc.; commingled items including aluminum beverage cans, glass bottles (any color), glass jars (any color), plastic bottles (drink containers), paperboard (cereal boxes, etc.) and flattened and non-flattened corrugated cardboard boxes. Other items may be added to the recycling collection program as markets become available.

Stakeholders

Stakeholders involved in the school recycling program include the Worcester County Commissioners, the Worcester County Public Schools, the Worcester County Board of Education, and the Worcester County DPW. The Worcester County Board of Education and the Worcester County DPW are responsible for ensuring that all publically funded schools are participating in the School Recycling Program. The Worcester County Recycling Coordinator will ensure the County is providing the recycling services to each facility including collection containers and regularly scheduled pick-up service. The Worcester County Recycling Coordinator will provide the recycling program management to ensure that each school has a recycling coordinator to ensure participation. The Worcester County DPW will submit a progress report every 2 years to MDE to identify changes or updates to the Recycle Program to be included in the Ten Year Solid Waste Management Plan.

Marketing

Each school supports an Environmental Club which administers the recycling efforts for their school. Each club prepares and distributes recycling marketing material to school staff and students to provide the information to the student's parents or legal guardian. The marketing material illustrates the importance of recycling and how each person can become more involved. In addition to the Environmental Club at each school, County personnel and the Worcester County Recycling Coordinator are available to meet with school representatives to discuss approaches to promote recycling within the County schools.

Program Monitoring

The Worcester County Recycling Coordinator ensures that each school has the required number of collection bins and will ensure that the pick-up service meets each school's collection needs. Worcester County DPW shall conduct inspections, review service levels, investigate reported or unreported pick-up and disposal complaints, meet with the County staff to educate or review practices, and identify a corrective action plan. Any issues which arise from these visits that are deemed deficiencies on the part of the County will be detailed in writing and reported to the County stakeholder consisting of the Worcester County Recycling Coordinator. The Recycling Coordinator will document the deficiencies and initiate the corrective actions. The Worcester County Recycling Coordinator will ensure corrective actions are in place within 2 weeks of the deficiency identification. The County shall promptly initiate actions to correct all deficiencies found. If deficiencies are not being satisfactorily corrected, the Worcester County Commissioners may elect to solicit a contractor to take over the services and pursue it to completion, by contract or otherwise. If changes need to be made to the Recycling Program, the Board of Education and the DPW Recycling Coordinator work together to make the changes, and such changes will be included in the Ten Year Solid Waste Management Plan.

3.1.8 Fluorescent and Compact Fluorescent Lamp Recycling

In Accordance with Section 9-1703(b)(11) and Section 9-1703(g) of the Environment Article of the Annotated Code of Maryland, and proposed House Bill 685 entitled *Environment – Fluorescent and Compact Fluorescent Light Recycling – County Plans*, the Worcester County Central Landfill Facility has begun accepting, and will continue to accept, fluorescent and

compact fluorescent lights as part of its recycling program. The program accepts fluorescent lamp tubes and compact fluorescent lamps for recycling. The service is free to County residents.

Residents are encouraged to recycle fluorescent lamp tubes and compact fluorescent lamps by dropping them off at the Worcester County Central Landfill Facility, Monday through Friday between the hours of 8:00 a.m. and 4:00 p.m., or Saturday between the hours of 8:00 a.m. and 12:00 p.m. Fluorescent lights are not collected at curbside by the County. Residents may also bring these items to any of the County's Household Hazardous Waste collection events, which are held twice per year. The household hazardous waste collection events are advertised locally. Fluorescent light items are not accepted at any of the homeowner convenience centers.

All items are placed into large-capacity boxes especially designed for the lights, and then processed offsite by a State-approved Hazardous Waste Specialist. The County provides recycling information at <http://www.co.worcester.md.us/pw/recycling.aspx>.

3.1.9 Apartment Building and Condominium Recycling (ABCR)

In April 2012, the Maryland General Assembly passed House Bill 1 – Environment – Recycling – Apartment Buildings and Condominiums, requiring recycling in all apartment buildings and condominiums that contain 10 or more dwelling units. The law became effective on 1 October 2012 (amending Section 9-17036 of the Environment Article, Annotated Code of Maryland). Section 9-1703(b)(12) of the Environment Article requires that the County revise its recycling plan to address the collection and recycling of recyclable materials from residents of apartment buildings and condominiums that contain 10 or more dwelling units by property owners or managers of apartment buildings and council of unit owners of condominiums. The plan amendment should be in place some period of time before 1 October 2014 to provide the required guidance to the owners or managers of ABCR participants. The ABCR Program must be implemented by 1 October 2014. In accordance with Senate Bill 1049, the Town of Ocean City is exempt from participating in the ABCR.

Through the cooperation of the County Office of Recycling and owners or managers of apartment buildings or councils of unit owners of condominiums (“apartment and condominium officials”), and other stakeholders involved in the implementation of this law, the County has identified 13 apartment buildings and condominiums that fall under the scope of the law. The County Office of Recycling scheduled a meeting inviting the apartment and condominium officials to discuss the requirements of the law, including the materials that must be recycled (i.e., plastic, metal, glass containers, and paper) at the identified locations. Due to the lack of attendance, the County Office of Recycling sent out a supplemental letter to the apartment and condominium officials outlining the ABCR Program, requirements, and implementation schedule.

Apartment and condominium officials identified how the materials will be stored, collected, and transported to the recycling markets for the collected materials. Apartment and condominium officials must report to the County on an annual basis details on the required recycling activities. Other program requirements include the following:

Materials Included in Program

Recyclables must include: plastic, metal, and glass containers, and paper.

Collection of Materials

Apartment and condominium officials are responsible for providing all containers, labor, and equipment necessary to fulfill recycling requirements throughout their buildings. Distinctive colors and/or markings of recycling containers should be provided to avoid cross contamination. The apartment and condominium officials must ensure collection and transportation of recyclable materials from apartment and condominium locations to markets. Eight-cubic-yard containers are to be used for the collection of a building's recyclable materials. Residents will be responsible for placing recyclables in building recycling bins prior to their removal on the scheduled pick-up day.

Marketing of Materials

Apartment and condominium officials are responsible for the marketing of their recyclables. The apartment and condominium officials shall submit annual reports to the County Office of Recycling detailing the recycling and waste tonnages removed from the apartment and condominium and the markets for the materials.

Stakeholders

Stakeholders that will be involved in implementing the law are:

1. County Council or Commissioners—Responsible for adopting the MDE-approved language of ABCR Program for the Plan amendment.
2. County DPW—Responsible for overseeing County Office of Recycling activities and ensuring that all apartment buildings and condominiums that fall under the requirements are included in the ABCR Program.
3. County Office of Recycling—Communicate the requirements of the law to the apartment and condominium officials. Assist apartment and condominium officials in developing a recycling program. Monitor the progress and performance of the ABCR Program. Develop the requirements of an ABCR Program in conjunction with input from apartment and condominium officials. Update the County's recycling plan to include the ABCR program and amend the County Solid Waste Management Plan. Develop a recycling reporting survey to be used by apartment and condominium officials in reporting recycling activities.
4. County Office of Planning—Responsible for amending the Solid Waste Management Plan to include the ABCR Program.
5. Owner or Manager of the Apartment Building or Councils of the Unit Owners of Condominium—Responsible for providing recycling to the residents of each apartment building or condominium by 31 October 2014. Secure and manage recycling contracts with the contractor for providing material collection and recycling services from the

building locations. Provide material collection bins and containers for transporting the materials from the buildings to the markets. Perform recordkeeping and report to the County on an annual basis.

The following are the participating apartment buildings or condominiums in the ABCR program. When two addresses are listed, the first is the Owner and the second is the Property address.

A F W Enterprises

12403 Ocean Gateway,
Ocean City, MD 21842
528 Bay St., Berlin MD 21811

Berlin LLC

1854 Chesapeake Rd., Pasadena, MD 21122
509 Bay St., Berlin MD 21811

Decatur Limited Partnership

410 Severn Ave. - Ste B413,
Annapolis, MD 21403
Old City Blvd., Berlin, MD 21811

Decatur Limited Partnership

410 Severn Ave. - Ste B413,
Annapolis, MD 21403
10218 Old Ocean City Blvd., Berlin 21811

Harrison Enterprises

300 Strode Ave., Coatsville, PA 19320
430 Market St., Snow Hill, MD 21863

Hemingway Rph Holdings, LLC

4938 Hampden Ln. - Ste 326,
Bethesda, MD 20814
3908 Bayside Rd., Snow Hill, MD 21863

Heritage Limited Partnership

3423 Olney Laytonsville Rd. S-7
Olney, MD 20832
Purnell St., Snow Hill, MD 21863

Lake Haven Mhp Associates, LLC

642 Kreag Rd. - Ste 302
Pittsford, NY 14534
11003 Grays Corner Rd.,
Berlin, MD 21811

Locus Group, Inc.

1540 Ocean Hwy.,
Pocomoke City, MD 21851

Pocomoke Villas

3424 Olney Laytonsville Rd. S-7
Olney, MD 20832
Tenth St., Pocomoke City, MD 21851

Riverview Park, LLC

P. O. Box 321 Bishopville, MD 21813
12623 Shell Mill Rd., Bishopville, MD
21813

Shivam, Inc.

912 Ocean Hwy. Pocomoke City, MD
21851

Sunshine Village Ltm. Partnership C/oMultifamily Mgmt. Group

Rockville, MD 20847
22 Bradley Ct.
Pocomoke City, MD 21851 P. O. Box 2046

Note: New apartment buildings or condominiums that will fall under the requirements of the law will begin participating in the ABCR program within 3 months of being notified by the County.

Schedule for the Development and Implementation of the Program

The ABCR Program will be implemented according to the following schedule:

1. 15 July 2014—The County will hold an information meeting and distribute MDE-approved language of the ABCR Program to the apartment and condominium officials for ABCR Program implementation.
2. 26 September 2014—Apartment and condominium officials will educate the residents about the ABCR Program and discuss the requirements of the law.
3. 3 October 2014—Apartment and condominium officials will provide training or assistance to the residents and advise them of the date when the residents can start collecting the materials.
4. 17 October 2014—Apartment and condominium officials will finalize and secure recycling services contracts with the private contractors.
5. On or before 31 October 2014—Residents start collecting and recycling the materials at the participating apartment buildings or condominiums.

Program Monitoring

The County Office of Recycling shall oversee the progress and performance of the ABCR Program. However, the apartment and condominium officials will conduct inspections, review service levels, investigate reported or unreported pick-up and disposal complaints, meet with residents or recycling contractor staff to educate or review practices, and review contractor compliance with the recycling contract. Any issues which arise from these visits that are deemed deficiencies on the part of the residents or recycling contractor will be detailed in writing and reported to the violator. The apartment and condominium officials shall initiate actions to correct all deficiencies within 60 days of being notified.

The apartment and condominium officials will also be available to conduct educational seminars and/or tours regarding new materials, practices, and procedures for residents. Also, the owner, manager, or council shall be responsible for keeping the residents current on new regulations, laws, and mandates affecting recycling in the apartment buildings or condominiums.

Program Enforcement

The County Office of Recycling will ensure that the recycling at apartments and condominiums will be implemented in accordance with Sections 1703 and 1711 of the Environment Article, Annotated Code of Maryland. The County Attorney's Office will determine if a County should enforce the law and what level of enforcement actions should be used. The law allows for fines to a person that violates the recycling or reporting requirements of the law or a civil penalty not exceeding \$50 for each day on which the violation occurs. Further, any penalties collected under

the law shall be paid to the county, municipality, or other local government that brought the enforcement action.

3.1.10 Special Events Recycling Program (SERP)

In 2014, the Maryland General Assembly passed Senate Bill 781, *Environment – Recycling – Special Events*. The law requires organizers of special events meeting certain criteria to provide a recycling receptacle adjacent to each trash receptacle, ensure recycling receptacles are clearly distinguished from trash receptacles, and ensure that recyclable materials are collected for recycling. Special event organizers must conduct recycling in accordance with Worcester County's Comprehensive Solid Waste Management Plan.

A. Special Events Subject to the Recycling Program:

Environmental article Section 9-1712, Annotated Code of Maryland, requires special events organizers to provide for recycling at special events that meet the following three criteria:

1. Includes temporary or periodic use of a public street, publicly owned site or facility, or public park;
2. Serves food or drink; and
3. Is expected to have 200 or more people in attendance.

Projected attendance may be estimated based on past attendance, number registered to attend, the venue's seating capacity, or other similar methods.

In consultation with municipalities, the County has identified the following public sites within the County that host or may host special events meeting the above criteria. In addition to the sites listed individually, special events taking place on any local, State, or Federally owned streets are also included in the Special Events Recycling Program (SERP).

Municipally owned sites:

POCOMOKE CITY AREA

POCOMOKE FAIRGROUNDS	BROAD ST.	POCOMOKE CITY, MD
CYPRESS PARK	FRONT ST & RIVER	POCOMOKE CITY, MD
POCOMOKE CITY COMMUNITY CENTER	1410 MARKET ST.	POCOMOKE CITY, MD
YMCA	RT. 113	POCOMOKE CITY, MD
ELKS LODGE 1624	RT. 113	POCOMOKE CITY, MD

SNOW HILL AREA

SNOW HILL LIONS CLUB	MARKET ST.	SNOW HILL, MD
STURGIS PARK	BANK ST	SNOW HILL, MD
BYRD PARK	MARKET ST. & RIVER	SNOW HILL, MD

BERLIN AREA

BERLIN MAIN STREET EVENTS	MAIN ST.	BERLIN, MD
HENRY PARK	FLOWER ST.	BERLIN, MD
BERLIN LIONS CLUB	RT 113	BERLIN, MD
STEPHEN DECATUR PARK	RT 113	BERLIN, MD

OCEAN CITY AREA

OCEAN CITY CONVENTION CENTER	4001 COASTAL HWY.	OCEAN CITY, MD
SUNSET PARK	SOMERSET AVE.	OCEAN CITY, MD
NORTHSIDE PARK	125TH ST. & the BAY	OCEAN CITY, MD
OCEAN CITY INLET PARKING LOT	INLET	OCEAN CITY, MD

County-owned sites:WORCESTER COUNTY PARKS

WORCESTER COUNTY PARK & REC.	BAY RD	SNOW HILL, MD
JOHN WALTER SMITH PARK	BAY RD	SNOW HILL, MD
NEWTOWNE PARK	GROTON RD	POCOMOKE CITY, MD
SHOWELL PARK	RT 589 - RACETRACK RD.	OCEAN PINES, MD
NORTHERN WORCESTER ATHLETIC COMPLEX	RT 113	BERLIN, MD

WORCESTER COUNTY SCHOOLS

BUCKINGHAM ELEMENTARY SCHOOL	100 BUCKINGHAM RD	BERLIN, MD
BERLIN INTERMEDIATE SCHOOL	309 FRANKLIN ST.	BERLIN, MD
STEPHEN DECATUR MIDDLE SCHOOL	9815 SEAHAWK RD	BERLIN, MD
STEPHEN DECATUR HIGH SCHOOL	9913 SEAHAWK RD	BERLIN, MD
POCOMOKE ELEMENTARY SCHOOL	2119 POCOMOKE BELTWAY	POCOMOKE CITY, MD
POCOMOKE MIDDLE SCHOOL	800 8TH ST.	POCOMOKE CITY, MD

POCOMOKE HIGH SCHOOL	1817 OLD VIRGINIA RD	POCOMOKE CITY, MD
SNOW HILL ELEMENTARY SCHOOL	515 COULBOURNE LA.	SNOW HILL, MD
SNOW HILL MIDDLE SCHOOL	522 COULBOURNE LA.	SNOW HILL, MD
SNOW HILL HIGH SCHOOL	305 S. CHURCH ST	SNOW HILL, MD
CEDAR CHAPEL SCHOOL	510 COULBOURNE LA.	SNOW HILL, MD
OCEAN CITY ELEMENTARY SCHOOL	12828 CENTER DR.	OCEAN CITY, MD
SHOWELL ELEMENTARY SCHOOL	11318 SHOWELL SCHOOL RD	BERLIN, MD
WORCESTER TECHNICAL HIGH SCHOOL	6268 WORCESTER HWY.	NEWARK, MD

State-owned sites:

SHAD LANDING STATE PARK	RT 113	SNOW HILL, MD
ASSATEAGUE STATE PARK	STEPHEN DECATUR HWY	BERLIN, MD

Federally owned sites:

ASSATEAGUE NATIONAL SEASHORE	STEPHEN DECATUR HWY	BERLIN, MD
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B. Materials and Obligations:

Special events organizers are responsible for:

1. Providing and placing recyclables receptacles adjacent to each trash receptacle at the event (except where already existing on site);
2. Ensuring that recycling receptacles are clearly distinguished from trash receptacles by color or signage;
3. Providing any other labor and equipment necessary to carry out recycling at the event;
4. Ensuring that materials placed in recycling receptacles are collected and delivered for recycling; and
5. Paying any costs associated with recycling at the special event;

Special events organizers may fulfill the requirement to ensure materials are collected and delivered for recycling through one or more of the following methods:

1. Self-hauling the materials to the County recycling center;

2. Contracting with a recycling hauler to collect the materials and deliver them for recycling; or
3. Receiving prior agreement from the site owner to use an existing recycling collection system available at the site.

The special events recycling program must include collection of at least plastic containers, metal containers, glass containers, and paper. The special events organizer must assess the availability of food scraps recycling services for the event. If services are available, the special events organizer must provide for food scraps recycling, including separate containers for organic and non-organic recyclables.

Recycling at a State-owned site must follow the State agency's recycling plan, if available. Recycling at a Federally owned site must follow any applicable federal recycling plan. If no State or federal recycling is available for the site, the special event organizer must set up a recycling program in accordance with the SERP. Recycling at municipally owned sites must follow any additional regulations established by the municipality.

C. Stakeholders:

The following stakeholders will be involved in the SERP:

1. The County Department of Public Works – Recycling Division: Responsible for overseeing the County Office of Recycling activities and assuring that all properties that potentially host events falling under the recycling mandate in Section 9-1712 are included in the SERP.
2. The County Office of Recycling will assist special events organizers in setting up recycling programs; monitor the progress and performance of the SERP; and develop and communicate any additional requirements for recycling under the SERP at county-owned sites
3. Special events organizer: Responsible for providing recycling bins and ensuring collection in accordance with the requirements in Section B, beginning 1 October 2015.

D. Program Monitoring:

The County Office of Recycling and special events organizers will monitor progress and performance of the SERP. The special events organizer is responsible for monitoring the implementation of recycling at the special event. Special event organizers must oversee placement and labeling of recycling receptacles and the collection and recycling of recyclables. Performance of any recycling contractor engaged for compliance with the SERP must be monitored by the special event organizer. The special event organizer must promptly take action to correct any deficiencies in the contractor's performance.

E. Program Enforcement:

The County Office of Recycling or the equivalent office of the municipality in which the event is located may conduct inspections of the event to ensure compliance with the SERP. If a violation is detected, the County or municipality may pursue an enforcement action against the special events organizer. A person that violates the SERP is subject to a civil penalty not exceeding \$50.00 for each day the violation exists. Any penalties collected for violation of the SERP must be paid to the county, municipality, or other local government that brought the enforcement action.

3.2 BASIS FOR DATA

The total tonnage of solid waste disposed of in Worcester County has been developed from the monthly reports, which are compiled from the data collected at the Central Landfill Facility scale house.

3.3 TYPES AND QUANTITIES OF WASTE IMPORTED

Worcester County solid waste facilities currently do not accept waste and recyclables generated outside the County.

3.4 TYPES AND QUANTITIES OF WASTE EXPORTED

Worcester County solid waste facilities are adequate to handle the waste generated within its borders; therefore, the County does not export MSW for disposal. Disposal fees are such that very little MSW leaves Worcester County for disposal.

Worcester County maintains no public facilities for the disposal of hazardous wastes. All generators of hazardous waste, including small ones, are required by RCRA to manifest their hazardous wastes and to arrange for their legal disposal at a permitted treatment, storage, and disposal facility. Household hazardous waste is collected occasionally under a special program sponsored by the County and run by the Maryland Environmental Service.

Section 9-228 of the Annotated Code of Maryland prohibits the disposal of scrap tires in a landfill. Therefore, scrap tires that are accepted at the Central Landfill Facility are segregated from the general solid waste stream, and then transported to Austons Contracting for shredding and reuse.

Recyclables, which have been segregated from the general solid waste stream, are sold on the recyclables commodity market. The tonnage of recyclable materials exported by the Worcester County Central Landfill Facility for processing is also shown on Table 3-1. Table 3-1 reflects the waste and recycling volumes reported for the Central Landfill Facility's Annual Tonnage Reports. Waste and recycling projections through calendar year 2026 are illustrated in Table 3-1.

Recycling volumes throughout Worcester County are reported annually in accordance with the MRA Tonnage Reporting Survey. Table 3-1 includes the recycling volumes for Worcester County in accordance with the MRA Tonnage Reporting Survey. Further, Table 3-1 illustrates the projected recycling volumes through year 2026.

Table 3-1 Annual Generation of Waste in Worcester County—Projected Tonnage Totals 2016–2026

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
MSW Mixed	63,852	65,768	67,741	69,773	71,866	74,022	76,243	78,530	80,886	83,312	85,812	88,386	91,038
Construction and Demolition Debris (C&D)	17,279	17,797	18,331	18,881	19,448	20,031	20,632	21,251	21,889	22,545	23,222	23,918	24,636
Land Clearing	3,602	3,710	3,821	3,936	4,054	4,176	4,301	4,430	4,563	4,700	4,841	4,986	5,136
Wastewater Treatment Plant Sludges	3,196	3,292	3,391	3,492	3,597	3,705	3,816	3,931	4,049	4,170	4,295	4,424	4,557
Special Medical Waste	2	2	2	2	2	2	2	2	3	3	3	3	3
Recyclables Stored at the site	2,204	2,270	2,338	2,408	2,481	2,555	2,632	2,711	2,792	2,876	2,962	3,051	3,142
Yardwaste stored at the site	60	62	64	66	68	70	72	74	76	78	81	83	86
Asbestos	110	113	117	120	124	128	131	135	139	144	148	152	157
Glass	180	185	191	197	203	209	215	221	228	235	242	249	257
Concrete	136	140	144	149	153	158	162	167	172	177	183	188	194
Soil	180	185	191	197	203	209	215	221	228	235	242	249	257
Stumps	32	33	34	35	36	37	38	39	41	42	43	44	46
Total Maryland Recycling Act (MRA) & Non-MRA Waste	90,833	93,558	96,365	99,256	102,233	105,300	108,459	111,713	115,065	118,516	122,072	125,734	129,506
Total MRA and Non-MRA Recyclables	48,536	49,992	51,492	53,037	54,628	56,267	57,955	59,693	61,484	63,328	65,228	67,185	69,201
Total Waste Generated	139,369	143,550	147,857	152,292	156,861	161,567	166,414	171,406	176,548	181,845	187,300	192,919	198,707
NOTE: Projections are based on an average increase of 3 percent utilizing 2014 as the base year.													

3.5 DESCRIPTION OF COLLECTION SYSTEMS

3.5.1 Solid Waste Collection Systems

There is no permanent County-provided solid waste collection system in Worcester County. The methods of solid waste collection utilized within the County are primarily self-served and private or commercial hauler.

3.5.2 Recyclable Materials Collection

There is no permanent County-provided recyclables collection system in Worcester County. Even the largest of the private haulers may find it uneconomical to invest in recycling equipment and operations. The following summarizes current forms of recyclables collected at the County's facilities:

- Residential drop-off containers
- Residential curbside collection by private haulers/municipalities
- Scrap metal
- Yard wastes
- Blue recycling containers are provided to Worcester County residents for a fee of \$5.00 each.

3.6 EXISTING SOLID WASTE FACILITIES

3.6.1 Solid Waste Facilities

Table 3-2 exhibits current information regarding the existing solid waste facilities including location, ownership, permit status, and remaining life.

Table 3-2 Existing Solid Waste Facilities

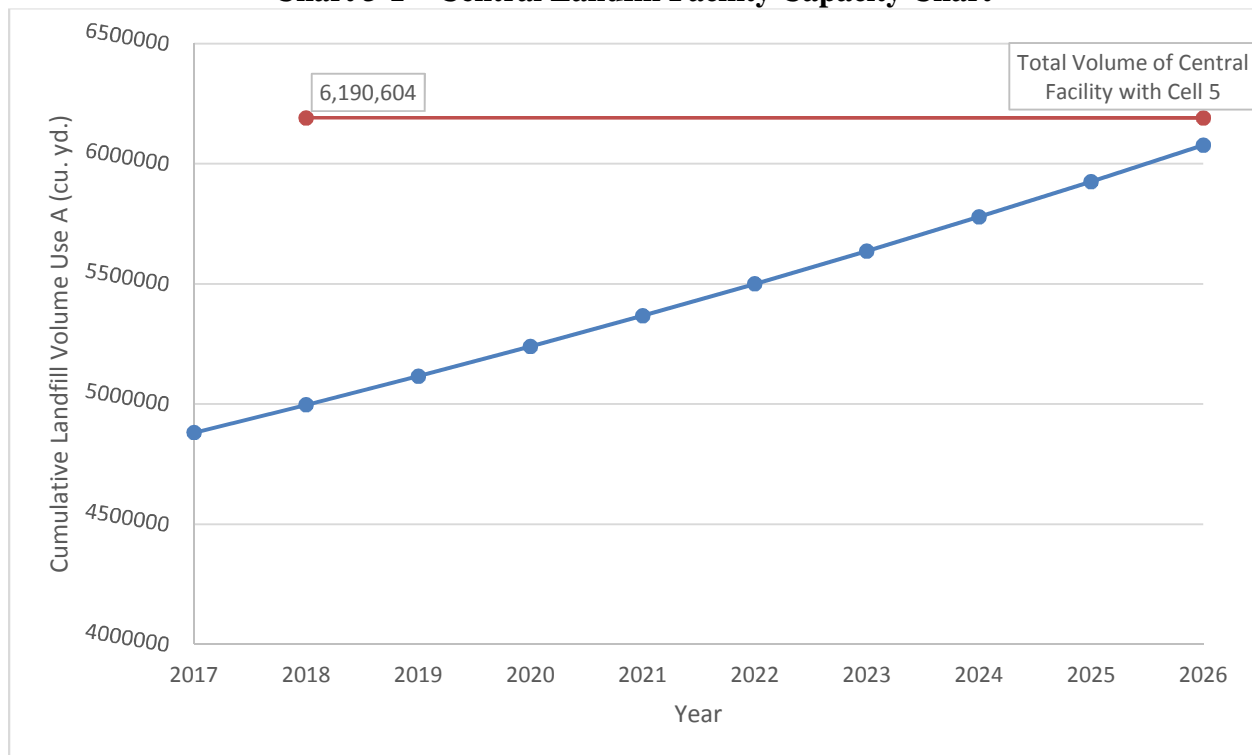
Name	Central Landfill Facility	Pocomoke ^(a)	Snow Hill ^(a)	Berlin ^(a)	Ocean City
Type	Municipal Solid Waste (MSW) Landfill	Drop-Off Center	Drop-Off Center	Drop-Off Center	Transfer Station
Location	7091 Central Site Newark, MD 21863	Byrd Road	Holly Lane	Mill Haven Road off of Flower Street	65 th Street
Maryland Grid	N. 1278 E. 140	N. 1220 E. 090	N. 1260 E. 130	N.1315 E. 183	N. 1353 E. 207
Size in Acres	725	25	30	100	2
Wastes Accepted	Residential Commercial Industrial Non-Hazardous Wastes Institutional Wastes Land Clearing & Demolition Debris C&D – Highway C&D – Structural Land Clearing Debris Bulky or Special Wastes Bulky Waste Asbestos Scrap Tires ^(b) WWTP Sewage Sludge Other Wastes Litter Concrete/Stone/Dirt (reused onsite) Recyclables	Residential Recyclables Yard Waste	Residential Recyclables	Residential Recyclables	Residential Recyclables Commercial
Ownership	Worcester County	Worcester County	Worcester County	Worcester County	Town of Ocean City
Permit Status	Active	Not applicable	Not applicable	Not applicable	Active
Remaining Life	20 years +	Indefinite	Indefinite	Indefinite	Indefinite
<p>(a) Three citizen-convenient drop-off centers haul waste to the Central Landfill Facility. Town of Ocean City only hauls sewage sludge to the Central Landfill Facility.</p> <p>(b) Scrap tires may be accepted at the Central Landfill Facility, but disposal in the landfill is prohibited.</p> <p>NOTES: C&D = Construction and demolition. WWTP = Wastewater treatment plant.</p>					

3.6.2 Landfill Facilities

There are two solid waste receiving facilities within Worcester County consisting of the Central Landfill Facility owned and operated by the Worcester County Commissioners and the Town of Ocean City Transfer Station owned and operated by the Town of Ocean City.

The Central Landfill Facility is an active Municipal Solid Waste Landfill Facility that accepts solid waste within the active landfill cell. The permitted hours for the Central Landfill Facility are 7:00am to 4:00pm 7 days a week. Currently the County operates the landfill from 8:00am to 4:00pm 6 days a week (closed on Sunday). The Central Landfill Facility opened in 1990 and is located off Route 113 near Newark, Maryland. The Central Landfill Facility is a 725-acre state-of-the-art facility with a liner and leachate collection system. The Central Landfill Facility is currently filling Cell 4, with construction of cell 5 scheduled for the spring of 2017. The planned design capacity is in excess of 11 million tons. The projected useful life of the site is in excess of 20 years. The landfill has been designed and constructed and is operated in accordance with COMAR and Subtitle D requirements. The following Chart 3-1 illustrates the cumulative volume of waste received versus the landfill cell capacity over the planning period. It should also be noted that the Table 3-3 illustrates the facilities capacity to accept solid waste through year 2048 and the next in series landfill cell is constructed as each cell nears capacity.

Chart 3-1 – Central Landfill Facility Capacity Chart



Currently the Town of Ocean City accepts solid waste at the transfer station and contracts the removal of the waste to a waste-to-energy facility. Table 3-4 summarizes the solid waste accepted and handled at the Ocean City Transfer Station. As indicated between Tables 3-3 and

3-4, the Central Landfill Facility maintains capacity to accept the volume of solid waste from Ocean City should the Town elect to take their solid waste to the Central Landfill Facility.

Table 3-3 Worcester County Central Landfill Facility—Estimate of Remaining Life

Year	Anticipated Waste Loading (tons)	Anticipated Waste Loading (cubic yards)	Cumulative Waste in Place (cubic yards)	Anticipated Waste and Cover (cubic yards)	Cumulative Waste and Cover (cubic yards)	Anticipated Cell Completion Year
2013			2,278,833		4,457,101	
2014	54,144	77,349	2,356,182	100,803	4,557,904	
2015	56,039	80,056	2,436,238	104,073	4,661,977	
2016	58,000	82,858	2,519,096	107,716	4,769,693	
2017	60,030	85,758	2,604,855	111,486	4,881,179	Cell 4
2018	62,131	88,760	2,693,614	115,388	4,996,566	
2019	64,306	91,866	2,785,481	119,426	5,115,993	
2020	66,557	95,082	2,880,562	123,606	5,239,599	
2021	68,886	98,410	2,978,972	127,932	5,367,531	
2022	71,297	101,854	3,080,826	132,410	5,499,941	
2023	73,793	105,419	3,186,245	137,044	5,636,986	
2024	76,375	109,108	3,295,353	141,841	5,778,827	
2025	79,049	112,927	3,408,280	146,805	5,925,632	
2026	81,815	116,880	3,525,160	151,944	6,077,575	Cell 5
2027	84,679	120,970	3,646,130	157,262	6,234,837	
2028	87,643	125,204	3,771,335	162,766	6,397,603	
2029	90,710	129,587	3,900,921	168,463	6,566,065	
2030	93,885	134,122	4,035,043	174,359	6,740,424	
2031	97,171	138,816	4,173,860	180,461	6,920,885	
2032	100,572	143,675	4,317,535	186,777	7,107,663	
2033	104,092	148,704	4,466,238	193,315	7,300,977	
2034	107,735	153,908	4,620,146	200,081	7,501,058	Cell 6
2035	111,506	159,295	4,779,441	207,083	7,708,141	
2036	115,409	164,870	4,944,312	214,331	7,922,473	
2037	119,448	170,641	5,114,952	221,833	8,144,306	
2038	123,629	176,613	5,291,565	229,597	8,373,903	
2039	127,956	182,795	5,474,360	237,633	8,611,536	
2040	132,434	189,192	5,663,553	245,950	8,857,486	Cell 7
2041	137,069	195,814	5,859,367	254,558	9,112,045	
2042	141,867	202,668	6,062,034	263,468	9,375,513	
2043	146,832	209,761	6,271,795	272,689	9,648,202	
2044	151,971	217,103	6,488,898	282,233	9,930,435	
2045	157,290	224,701	6,713,599	292,112	10,222,547	Cell 8
2046	162,795	232,566	6,946,165	302,336	10,524,883	
2047	168,493	240,706	7,186,871	312,917	10,837,800	
2048	174,390	249,130	7,436,001	323,869	11,161,669	
2049	180,494	257,850	7,693,851	335,205	11,496,874	Cell 9 (11,294,497)

1. Assumes a 3.5 percent increase in annual acceptance rate based on historical averages.

Table 3-4 Town of Ocean City Transfer Station Solid Waste Management

Year	Waste Accepted (Tons)	Waste Managed (Tons)
2011	32,974	32,974
2012	34,195	34,195
2013	33,396	33,396
2014	32,556	32,556
2015	33,740	33,740

3.6.3 Recyclables Processing, Marketing, and Recovery

A transfer station is maintained in the following location:

- Ocean City (opened and operated by Town, located off of 65th Street).
 - The County understands that the Town of Ocean City is not currently providing recycling services.

Citizen-convenient drop-off centers are maintained in the following locations:

- Berlin (Mill Haven Road, off of Flower Street)
- Snow Hill (Holly Lane, located off of Timmons Street)
- Pocomoke (Byrd Road).

The Central Landfill Facility also accepts recyclables.

All centers and the Central Landfill Facility accept the following recyclables: glass, newspaper, aluminum and bi-metal cans, and all plastics. Cardboard is accepted at all drop-off centers, the Central Landfill Facility, Ocean Pines, the West Ocean City Walmart, and Bishopville and Whaleyville parks. Batteries, white goods, and metals are accepted at the Central Landfill Facility. Batteries and metals are accepted at the citizen-convenient drop-off centers.

Recycling drop-off centers are maintained in the following locations:

- Operated by Worcester County:
 - Pocomoke City Drop-Off Center – Byrd Road
 - Snow Hill Drop-Off Center – off of Timmons St. – Behind Tyson’s Feed Mill
 - Public Landing – Boat landing parking lot
 - Central Landfill Facility – Off of Route 113 – Central Site Lane
 - Berlin Drop-Off Center – off of Flower Street – Behind Stephen Decatur High School
 - West Ocean City – Walmart
 - Ocean Pines – by South Gate Fire House

- Bishopville Park
- Whaleyville Park.
- Operated by the Town of Pocomoke City:
 - Market Street – behind Tractor Supply
 - Linden Avenue – behind Advanced Auto Parts
- Operated by the Town of Snow Hill:
 - Save a Lot — as well as 1 day per week pickup by the Town.
- Operated by the Town of Berlin:
 - Picked up as needed by the County for a fee to the Town.
- Operated by the Town of Ocean City:
 - One facility located on 65th Street that accepts oil only
- Assateague State Park
 - Picked up as needed by the County for a fee to the Park.

Used oil containers located at the following locations:

- Pocomoke Drop-Off Center
- Snow Hill Drop-Off Center
- Berlin Drop-Off Center
- Ocean City Public Works Department
- Central Landfill Facility.

Scrap tires are accepted only at the Central Landfill Facility. These are transported to a permitted facility, currently Austons Contracting located in Joppa, Maryland.

3.6.4 Rubble Cell

The County currently has a closed rubble landfill on the Central Landfill Facility site. The rubble fill no longer receives debris of any type. Currently, the County is in the Construction Bid Phase for the creation of Central Landfill Facility Cell 5. Upon the start of construction the existing rubble cell will be mined and sent into Cell 4 as it is located within the limits of the proposed Cell 5. Once completed, the County will not have an active rubble cell.

4. ASSESSMENT OF NEEDS

4.1 ASSESSMENT OF THE COUNTY'S NEEDS

4.1.1 Requirements Defined

Worcester County's solid waste facilities are comprised of one central MSW sanitary landfill, one transfer station, three citizen-convenient drop-off centers, and more than 14 convenience centers. The facilities are operated by the Worcester County DPW, and individual municipal governments. Guidelines for operation at the solid waste facilities are set and regulated by federal, state, and local laws, statutes, code, ordinances, regulations, and permits. The current solid waste facilities adequately serve the population of Worcester County.

The Central Landfill Facility is located 2 miles east of the Town of Snow Hill on Route 113 and is bordered on three sides by Chesapeake Lumber Company forest land. The landfill opened in 1990. It services the residents and businesses of Worcester County as well as three citizen-convenient drop-off centers and one transfer station. The solid waste facilities are believed to have a capacity in excess of 20 years based upon current disposal trends and practices.

Citizen-convenient drop-off centers are located at each of the County's closed landfills, and a transfer station is located in the Town of Ocean City. The drop-off center in Berlin is located off Flower Street. The drop-off center in Snow Hill is located off Timmons Road. The drop-off center in Pocomoke is located off Byrd Road, and a transfer station in Ocean City is located off 65th Street. Currently, construction and demolition debris, accumulated waste from street sweeping and WWTP sludge is sent to the Central Landfill Facility from Ocean City. Municipal solid waste and recyclables are not currently being transferred to the Central Landfill Facility from Ocean City.

Extensive recycling opportunities are available at all of the solid waste facilities. Each of the three drop-off centers, the transfer station, and the Central Landfill Facility accept the following materials: lead-acid batteries, commingled material (cans, glass, and plastics), newspaper, telephone directories, used motor oil, and scrap tires. In addition to the above-listed materials, the Central Landfill Facility also accepts the following materials: mixed computer and office paper, cardboard from residents, white goods (appliances), sewage sludge, e-waste, and yard waste. See Chapter 3 for a discussion of current recyclable collection and processing.

Worcester County officials have met with representatives of both Wicomico and Somerset counties to discuss regional planning, and will continue to do so. Major differences in demographics and present solid waste management practices make extensive regional plans appear impractical. Nevertheless, cooperative plans on specific projects will be considered as they arise.

4.1.2 Capacities Defined

At the current waste generation rate, approximately 55,000 tons per year, and with a design capacity of more than 3.36 million tons, the remaining anticipated life of the Central Landfill

Facility is in excess of 32 years. The possibility of extending the life of the landfill through waste reduction and recycling activities looks promising. Further, the County is currently investigating the feasibility of landfill mining, which would extend the life of the landfill indefinitely.

With proper maintenance and care, the transfer station and drop-off centers should last long beyond the 10-year solid waste management planning period ending 2026.

4.1.3 Proposed Facilities

The existing landfill, transfer station, and drop-off facilities for waste management and recycling operations are adequate to meet the needs of the County during the 10-year planning period ending in 2026. The growth within the County is not uniform and is concentrated in the north end of the County. The County is considering an additional homeowner convenience center in the Showell/Bishopville area and in the Girdletree area.

4.2 GEOGRAPHICAL CONSIDERATIONS

4.2.1 Topography

The terrain is composed of broad plains, ranging in elevation from approximately sea level to 50 feet (ft), mostly in areas that are either flat and featureless or broadly rolling. The County is primarily comprised of pine timber tracts, farm lands, wetlands, and upland areas. The exception is along the Atlantic Ocean where there are large tidal estuaries and barrier islands.

4.2.2 Soil Types and Characteristics

The soil types listed are found within Worcester County and have the characteristics described:

- **Fallsington-Woodstown-Sassafras Association**

This association is level to steep, poorly drained to well-drained soils that have a subsoil dominantly of sandy clay loam.

- **Mattapex-Matapeake-Othello Association**

This association is level to steep, well-drained to poorly drained soils that have a subsoil dominantly of silty clay loams.

- **Othello-Fallsington-Portsmouth Association**

This association is level and nearly level, poorly drained and very poorly drained soils that have a subsoil dominantly of sandy clay loam or silty clay loam.

- **Lakeland-Klej-Plummer Association**

This association is level to steep, excessively drained to very poorly drained soils that are sand and loamy sand throughout.

- **Portsmouth-Mattapex-Elkton Association**

This association is level to gently sloping, very poorly drained to moderately well-drained soils that have a subsoil dominantly of plastic silty clay or silty clay loam.

- **Pocomoke-Rutlege-Plummer Association**

This association is level and nearly level, very poorly drained and poorly drained soils that have a subsoil of sandy loam, and sandy clay loam, or are underlain by loamy sand, sand, or both.

- **Muck Association**

This association is level, very poorly drained organic soils and alluvial land, which is subject to intermittent flooding.

- **Tidal Marsh-Coastal Beaches Association**

This association is dominantly level and nearly level, saline to brackish sediment, which is subject to intermittent flooding by tidal water.

4.2.3 Geologic Conditions and Locations

Worcester County lies in the Atlantic Coastal Plain physiographic province and is about 110 miles east of the fall line that separates the Coastal Plain from the Piedmont Plateau. The soils of the County are underlain by sediment consisting primarily of gravel, silt, clay, sand, and shell fragments. The sediment is relatively unconsolidated and generally is more than 1 mile thick, though under Ocean City it is more than 8,500 ft thick. Beneath the sediment is crystalline rock that dips to the southeast at a rate of about 150 ft per mile. Similarly, most of the overlying sediment dips to the southeast at a rate of 10 to 73 ft per mile. The sediment was deposited mainly in a marine or shallow-water environment, and this accounts for its dominantly gray or white color. The sediment most likely originated in the Appalachian Mountains and the Piedmont Plateau.

The County is a low, eroded plain where differences in relief are slight. Although it appears to be very level, the County actually includes terraces, stream channels, drowned valleys, basinline depressions, remnant dunes, swamps, and marshes. The terraces were laid down by meltwater from the continental ice mass; they are evidence that the level of the sea was higher in recent geologic time than it is today.

The three main physiographic divisions of the County are the mainland, the coastal beaches, and the tidal marshes. All of the farmland is on the mainland, where the soils generally are level to gently undulating, except for large level areas in the central and northern parts of the County. Many areas of the mainland are a few feet above the normal level of the streams, and in places they are adjacent to marshland. Many low swales surrounded by ridges make some parts of the mainland appear hummocky.

The low coastal beaches are mainly on reefs or barrier islands. The islands range from a few hundred feet to about a mile in width and extend the entire length of the County along the Atlantic Ocean.

The tidal marshes are usually found along the mainland, but a few large areas are in the southern and western parts of the County and on the bay side of the coastal beaches.

Large areas of muck are also in the County. These areas are in the western and southwestern parts of the County along the Pocomoke River, the Nassawango and Dividing creeks, and along small streams throughout the County. There are some small areas of muck along streams in the County.

Most of the County is less than 40 ft above sea level, except for an area west of Whiton. The highest natural elevation is 65 ft located 1 mile south of Furnace, Maryland, and the average elevation is about 35 ft.

Dunes occur at all elevations in the County, and all are capped by sand. The material that makes up the dunes, however, ranges from mostly sand to silt and clay.

All of the County is drained by streams that flow in a general southeasterly direction into tidewater embayments and then into the Atlantic Ocean. Most of the County is in the Pocomoke River Basin. This river crosses the County in a southerly direction and flows into the Chesapeake Bay. The Pocomoke River falls about 16 ft in its course throughout the County, and its flow is sluggish. Its tributaries have already reached base level and are even more sluggish.

Drainage is impeded in almost 75 percent of the acreage of soils of the County. About 6 percent of the soils in the County are tidal marsh, about 4 percent are muck, and nearly 2 percent are coastal beaches. About 20 percent of the soils in the County can be farmed without artificial drainage.

4.2.4 Aquifers

Worcester County has abundant groundwater available for development. Generally depth to the water table is less than 25 ft and is within the limit of lift by suction pumps. It is estimated that 360 million gallons of water per day is available from water-bearing beds within the uppermost 500 ft in Worcester, Somerset, and Wicomico counties. This is almost 30 times as much as the current use, which is estimated at 12.4 million gallons a day. Many more gallons of mineralized water are available for restricted use or for general purposes after treatment.

Most of the wells in the County are shallow. The water in the wells is obtained from sediment of the Pleistocene and Pliocene series, though water for towns comes mainly from the Pocomoke and Manokin aquifers. The intake belt for the Pocomoke aquifer runs in a northeasterly direction from Crisfield through Westover to Pittsville. The intake belt for the Manokin aquifer is in a wide area that begins below Nanticoke and runs north-northeast under Hebron and into Delaware. Records of one of the cells that supplies water for Snow Hill show that the Pocomoke aquifer is 15 ft thick and located at a depth of 143 ft. The Manokin aquifer, from which Snow Hill pumps its water, is 33 ft thick and is at a depth of 372 ft.

By far the most commonly used aquifer in the County is the (Beaverdam Sands) Salisbury aquifer. This aquifer is generally considered to be unconfined, although in many areas it is partially confined by a shallow, somewhat leaky silt and silty clay layer. Water is recharged to this aquifer by local precipitation. Groundwater in the Salisbury aquifer generally moves laterally fairly short distances to nearby perennial streams or marshes. In contrast, groundwater in the deeper confined (artesian) aquifers, such as the Manokin aquifer or Pocomoke aquifer, flows laterally for miles.

The quality of groundwater in the County varies according to the composition of the formations through which it moves and the conditions in the recharge area. In most areas of the County, adequate quantities of good quality groundwater can be obtained within the upper 100 ft from the land surface. Few bacteria contaminate the artesian water, but the amount of dissolved mineral matter is high in places. A few areas have some problems with high nitrate concentration, but these areas are not extensive. Most of the shallow wells in the County provide soft acid water that tastes of iron. However, the iron concentrations present no health hazard. Water in the well that supplies Snow Hill, however, is alkaline, and it is moderately soft and contains little iron.

The Town of Ocean City has experienced some saltwater intrusion in the municipal supply. According to U.S. Geological Survey Water Resources Investigations Report 87-422, these aquifers are susceptible to saltwater intrusion from downward leakage from the ocean and bays, upward leakage from the underlying St. Mary's Formation, and inland movement of offshore waters.

Relief, through its effect on runoff, influences the amount of moisture that soaks into the ground and is held in the soil and the discharge of groundwater by evapotranspiration. Most of the groundwater comes from rain that filters through the soil or seeps in from streams, lakes, or ponds that recharge the groundwater reservoirs. The percentage of precipitation that recharges the groundwater is highest in winter and lowest late in summer and early in fall. During the growing season, much of the rainfall is used by plants and is returned to the atmosphere through evapotranspiration. In winter, most plants are dormant, and any rain that falls runs off or soaks into the ground. About 51 percent of the total rainfall enters the soils and the rest drains away. About half of the annual rainfall, which amounts to about 23 inches in Snow Hill, is lost through evapotranspiration.

On the Coastal Plain, the presence of numerous highly permeable sand and gravel units interbedded with poorly permeable clay units, and the overall low relief, greatly favor the

infiltration, storage, and recovery of groundwater at shallow depths. Most of the wells in this section of the Coastal Plain, located southeast of the Elk River, are less than 100 ft in depth and tap aquifers in the Pleistocene deposit.

4.2.5 Wetlands

Worcester County has extensive tidal and non-tidal wetlands throughout the County.

4.2.6 Surface Water Sources and Their Floodplains and Watersheds

There are no surface water sources that are used to supply drinking water in the County.

4.2.7 Existing Water Quality

Under COMAR 26.08.02 the waters of the State of Maryland are managed and regulated to protect the following water uses:

- Use I—Water Contact Recreation, Aquatic Life and Water Supply
- Use II—Shellfish Harvesting Waters
- Use III—Natural Trout Waters
- Use IV—Recreational Trout Waters.

All waters of the State are required to meet at least the criteria for Use I waters in order to provide protection for water contact recreation and aquatic life. More restrictive criteria are applied for waters designated Use II, III, and IV.

There are no Use III or Use IV waters in Worcester County. The Use II waters have rigid bacteriological standards for water quality. All water quality standards such as bacteriological standards, dissolved oxygen, temperature, pH, and turbidity criteria must be met within each designation.

At this time, there are no known aquifers that are contaminated and being used as drinking water sources. The groundwater contained in the aquifers was analyzed and found to be within the normal range for the following water quality standards: chemical oxygen demand, alkalinity, chloride, hardness, and nitrate. Also consistent with hydrology of the area, high iron content has been detected. The iron content varies throughout the County, with concentrations increasing northward to levels of 9 parts per million or more.

Depending on the quality of the water, three different types of treatment facilities are operated throughout the County to treat the groundwater in order to bring it to acceptable water quality standards. The treatment methods range from simple treatment methods that raise the pH to acceptable levels and chlorinate the water to more complex methods that use green sand filters to reduce the heavy iron concentrations.

4.2.8 Incompatible Land Use

Worcester County's Central Landfill Facility, as mentioned previously, is surrounded on three sides by a lumber company forest. In fact, only one short section of the site's circumference borders land owned by individuals. In addition, the land other than the forest land bordering the site is utilized as a farm and is not likely to be developed in the future.

The landfill site is also sufficient for both long-term growth of the County and long-term expansion of its own operations. It is in conformance with applicable federal, state, and local laws and regulations.

4.2.9 Planned Long-Term Growth

For environmental, conservational, and economic reasons, the County is investigating and implementing, where feasible, alternatives to permanent landfilling as the primary means of disposal. These alternatives include waste reduction, reuse, recycling, leachate recirculation, and landfill mining. The proposed Central Landfill Facility Cell 5 construction and associated connection to the leachate tank for recirculation and ongoing recycling efforts will serve for the next 5 or 6 years until permitting for Cell 6 is initiated.

4.2.10 Defined Critical Areas

Worcester County is affected by the State's Critical Areas Law. The County Zoning Ordinance and Subdivision Regulations address the Critical Area District. The Comprehensive Plan addresses the Chesapeake Bay Critical Area Program.

4.3 SOURCE SEPARATION AND REDUCTION PROGRAMS EVALUATED

4.3.1 Source Separation

A Recycling Program was adopted by the Board of County Commissioners in 1991. The State's Recycling Rates and Waste Diversion Act (2012) mandated that counties with populations of 150,000 or less must divert 20 percent of the municipal waste from the solid waste stream by December 31, 2015. Currently, the waste stream is being reduced by 27 percent through recycling efforts; therefore, the recycling goal is being exceeded consistently. An increase in population is not expected to significantly change the recycling rate. Although the population is increasing, the demographics, as they affect recycling efforts, are not expected to change substantially. New programs designed to divert more of the waste stream (including building additional recycling centers and/or separate recyclables collection) continue to be researched, developed, and implemented as economically feasible. However, budget constraints, the rural nature of the County, and the lack of solid markets for recyclable materials remain the limiting factors with regard to expansion of recycling programs.

4.3.2 Reduction Programs Evaluated

The need for waste reduction programs cannot be stressed enough. Worcester County will promote waste reduction and reuse as alternatives to recycling or disposal.

The following approaches are being used or will be used to promote waste reduction:

- Education through (a) teachers in school, (b) service learning opportunities, (c) brochures and pamphlets for the public, (d) field trips of the facilities, and (e) presentations by solid waste personnel
- Promotion of conservation through habit change
- Promotion of change in attitude with regard to disposable items and packaging
- Promotion of consumer awareness to increase consumer demand for changes in marketing techniques to advocate the “less is more” attitude
- Promotion of the purchase of durable and repairable goods
- Promotion of efforts to reduce the use of toxic substances.

Consumers benefit through source reduction because less waste means more efficient use of resources and manufacturing processes, increasing competitiveness. The environment benefits through source reduction because, as resources are used more efficiently, fewer resources are needed to do the same job. The need to manage less solid and hazardous waste decreases the need for waste disposal. This also decreases pressure on the environment.

4.4 RESOURCE RECOVERY OPTIONS EVALUATED

The drop-off centers (at the landfill and transfer station) and convenience centers and private sector collection are the primary means of recycling available in the County.

Worcester County government has taken measures to support the recycling market and close the loop. The County currently purchases recycled copier paper, computer paper, toilet paper, paper towels, and office supplies whenever it is possible and economically feasible.

Since the Central Landfill Facility’s capacity is not endangered, it is not economically feasible to compost mixed solid waste. However, alternatives to landfilling will continue to be assessed as conditions change.

4.5 PUBLIC EDUCATION PROGRAMS

A populace thoroughly informed on all aspects of the challenges of handling solid waste may participate in a solid waste management program established to serve the best interest of the

citizens of Worcester County. Following a carefully planned program of public education, opponents perhaps would be less critical of the costs to finance solid waste programs. In an effort to keep abreast of solid waste management issues, the County Commissioners make regular visits to the various management facilities. In addition, the Director of Public Works makes frequent presentations to the County Commissioners regarding solid waste matters. These presentations include an annual presentation by the County's solid waste consultant regarding the state of the County's solid waste facilities.

4.5.1 Secondary Markets Defined—Waste Minimization Efforts

In order to promote public interest and assistance, citizens should be informed of the involved operations required for and costs of proper solid waste management. By becoming aware of the whole concept of solid waste disposal, citizens can begin to look for ways to achieve waste reduction measures. For example, visualizing that the use of one or two cloth bags per week for shopping purposes can save 52 to 104 plastic shopping bags per year, citizens can realize a savings of resources.

Waste minimization efforts and recycling can be promoted through various means. Press releases to the news media, meetings with community and civic organizations, and the distribution of pamphlets have all proven useful educational tools. Through joint efforts with the Board of Education in the development and implementation of service learning activities, young citizens can be encouraged at an early age to foster proper solid waste reduction, recycling, and disposal habits.

County-sponsored field trips to refuse transfer and disposal facilities are also useful. They help bring the community face-to-face with problems encountered in solid waste management.

To ensure a well-informed public, a program should be instituted for scheduled periodic publication of the following, when applicable:

- Recycling center hours of operation
- Disposal site hours of operation
- Transfer station and drop-off center hours of operation
- Maps showing disposal areas and recycling centers
- Separation of refuse if required
- Assessment of penalties for illegal practice
- Telephone number and hours of business office operation

- Regulations governing solid waste, including storage at points of generation, collection, transportation, and final disposition, be it either disposal or recycling
- Public education field trips and seminars.

Anti-Litter Campaign

County plans include managing the collection and disposal of litter. The public should be thoroughly informed of the litter problem, the fines that may be incurred for littering, and the programs that have been initiated to discourage its continuation. Several local community groups take advantage of the State Highway Administration Adopt-A-Highway Program and transport collected litter to the Central Landfill Facility. Further, the Eastern Correctional Institute (ECI) utilizes inmates for the collection of litter as a part of their community service requirements. ECI then contracts with a commercial hauler to transport the collected litter to the Central Landfill Facility.

Yearly Briefing of Commissioners

A yearly meeting with the County Commissioners occurs regarding the current status of the solid waste facilities and the upcoming agenda. Issues discussed include the following: the current and projected status of the facilities, the capacity remaining of the facilities, new technology being investigated, the funding status for projects, recycling issues, and any new initiatives.

Public Involvement Projects

Public involvement is directly demonstrated in such projects as litter cleanup programs, the initiation of resource recovery centers, and school contests where prizes are given to young students producing advertising posters and slogans depicting proper solid waste management practices.

Most important is the fact that solid waste problems are publicly oriented, and continual communication with the community and monitoring of public opinion is necessary to ensure efficient functioning of the solid waste management plan.

In addition to County programs of purchasing materials from recycled items, the public needs to be encouraged to consume recycled products.

4.6 ASBESTOS DISPOSAL CAPACITY

Asbestos wastes generated in Worcester County are accepted at the Worcester County Central Landfill Facility under regulations established by the Board of County Commissioners and MDE. The current capacity for asbestos waste is adequate to handle the current and foreseeable disposal needs.

The guidelines are intended to provide a coordinated enforcement of applicable regulations, and are incorporated into other documents dealing with asbestos wastes. Asbestos waste

is accepted provided the material that is received is packaged and labeled as specified in COMAR 26.11.15.04. (Appendix D contains asbestos handling and disposal procedures for the Central Landfill Facility.)

4.7 EMERGENCY RESPONSE PROGRAMS AND PROCEDURES DEFINED

4.7.1 Hazardous Material (HazMat) Release

All emergency responses in the County are coordinated by Emergency Services.

This agency has written plans detailing how to respond to any type of emergency in the County. Drills are conducted regularly throughout the year in conjunction with state and federal emergency response agencies.

A response to an emergency starts when it is reported to Emergency Services by dialing 911. The commander on the scene will assess the emergency, and in the event of hazardous chemicals, will isolate the area, deny entry, and report to the dispatch center. The dispatch center will then contact the Director of the Worcester County Emergency Management Agency who will in-turn contact the Worcester County Health Department and MDE.

MDE has primary responsibility for further responding to the incident. In addition, MDE has a trained HazMat team and has authority to call on the U.S. Environmental Protection Agency HazMat teams or those of private contractors. MDE is responsible for management and proper disposal of waste. Methods of disposal, such as a designated hazardous waste landfill, are specific to the type of hazardous waste involved.

4.7.2 Hurricane Cleanup

In the event of damage resulting from a hurricane or similar storm, the Central Landfill Facility will be used to manage the waste generated by cleanup efforts. The following guidelines should be followed:

1. The Worcester County Commissioners has the ability to waive the regular tipping fee for C&D debris and yard waste. Tipping fees for MSW should remain in effect.
2. MSW should continue to be landfilled by normal methods.
3. C&D debris should be temporarily stockpiled on the permitted footprints of landfill cells for future reclamation or disposal. Additional sites include the closed landfills and school athletic fields.
4. Land clearing debris should be temporarily stockpiled in a readily accessible location for future disposal.
5. Mixed loads of waste are rejected until they are separated.

6. Hazardous materials should be accepted at the Central Landfill Facility for proper disposal.

4.8 ADEQUACY OF LOCAL ZONING AND MASTER PLAN

4.8.1 Authorization and Siting of Facilities

The Worcester County Zoning Ordinances and Subdivision Regulations (Appendix III) adequately address the authorization and siting of solid waste facilities (COMAR 26.04.07.06B) as the primary guideline for the siting of waste facilities within the County.

The Comprehensive Plan recognizes that the currently authorized and sited solid waste facilities are adequate to handle the solid waste generated in the County in excess of the 10-year solid waste planning period. There are dynamic changes in markets for recyclable materials that increase the problems of managing any program.

5. PLAN OF ACTION

5.1 PLANNING PERIOD

The Solid Waste Management Plan is for a 10-year planning period, 2017 through 2026.

5.2 CURRENT MANAGEMENT PRACTICES

The solid waste that is collected by commercial haulers is weighed upon entering the solid waste facility. The data from each hauler are tabulated monthly and bills are sent out. From these data, statistics are kept and are used to manage the solid waste program.

The solid waste collected from the homeowners at the transfer station and drop-off centers is weighed before being disposed of in the landfill.

All recyclable material is weighed as it leaves the Central Landfill Facility. Commingled recyclables and scrap tires received from commercial haulers are also weighed as they are received. The following summarizes the management methods currently used for each waste stream.

5.2.1 Residential Waste

Residential waste is brought into the solid waste facilities by commercial haulers or by County residents. At the landfill, a private hauler's load is weighed and then the hauler is directed to the appropriate disposal area. Residents are directed to the appropriate Homeowner Area to unload. The current management methods are adequate for current and projected needs; therefore, there are no plans to modify existing practices.

5.2.2 Commercial Waste

Commercial waste, like residential waste brought in by commercial haulers, is weighed and directed to the appropriate disposal area. The current management methods are adequate for current and projected needs; therefore, there are no plans to modify existing practices.

5.2.3 Industrial Waste

Management methods for industrial waste are the same as those for commercial waste. No industrial liquids or industrial sludge are accepted at the County solid waste facilities. The current management methods are adequate for current and projected needs; therefore, there are no plans to modify existing practices.

5.2.4 Institutional Waste

County facilities accept institutional waste from the following sources:

Schools—The County facilities accept waste from the Board of Education. One contractor currently handles all of the schools. The contractor provides services similar to the services detailed under the commercial section above.

Hospitals—Atlantic General in Berlin operates an incinerator to dispose of their contaminated and hazardous (red bag) hospital waste. Hospital personnel or commercial haulers haul the remainder of the solid waste to the Central Landfill Facility.

Government—Includes refuse that is generated by County and State governments located within Worcester County.

With the exception of contaminated and hazardous hospital waste at the Atlantic Hospital in Berlin, which disposes of such wastes onsite in medical waste incinerators, other non-hazardous institutional waste is delivered to the landfill by commercial haulers or institution employees for disposal similar to commercial waste. The current management methods are adequate for current and projected needs; therefore, there are no plans to modify existing practices.

5.2.5 Land Clearing and Demolition Debris

Material which can be used at the landfill site for projects is diverted at the scale house. Since Worcester County has a ban against landfilling yard waste, branches are chipped and leaves and grass clippings are composted at the Central Landfill Facility. The remainder of the material is ground to provide volume reduction and accelerate decomposition. The transfer station and Pocomoke drop-off center accept yard waste, which is moved to the Central Landfill Facility. The current management methods are adequate for current and projected needs; therefore, there are no plans to modify existing practices.

5.2.6 Controlled Hazardous Substances

The Worcester County Central Landfill Facility is not permitted to accept any hazardous waste as defined in COMAR. The businesses producing hazardous waste within Worcester County are required by law to transport and dispose of the hazardous waste by approved transporters and disposers. Hazardous waste manifests are required on all shipments of material. Household hazardous wastes are disposed of by the Maryland Environmental Service under contract to DPW.

Worcester County does not have within its boundaries any commercial or public facilities that can dispose of hazardous waste generated in the County.

Used motor oil can be brought to the Central Landfill Facility, the Town of Ocean City transfer station, or any of the drop-off centers. Each oil recycling station is clearly identified with signs and directives for the users. The current management methods are adequate for current and projected needs; therefore, there are no plans to significantly modify existing practices.

5.2.7 Dead Animals and Litter

Dead Animals—The Central Landfill Facility is not permitted to accept animal carcasses resulting from medical research activities or destruction of diseased animals harboring diseases transmittable to humans, unless acceptance of the carcasses is ordered by the local County Health Officer, and the carcasses are covered with soil immediately upon deposition at the working face of the landfill. An occasional road-side animal carcass is landfilled within the working face of the landfill.

Litter—Neither the County nor the State Highway Administration budgets funds for the removal of litter from State roads. During slack periods, State maintenance forces clean up the rights-of-way of State and County roadways. Roadside picnic areas are also serviced by the State Highway Administration.

There is no reliable rationale for estimating quantities of litter. However the volume of dead animals and litter do not constitute a significant portion of the waste stream. The current management methods are adequate for current and projected needs; therefore, there are no plans to modify existing practices.

5.2.8 Bulky Objects

Automobiles—The Central Landfill Facility does not accept abandoned vehicles.

White Goods (Appliances)—White goods, which include appliances, are accepted at the Central Landfill Facility for recycling. The Solid Waste Division has a contract in place for the recycling of appliances. Refrigerants from appliances are removed by the County for disposal elsewhere.

Other Bulky Items—Items such as furniture, mattresses, and carpeting are accepted at the Central Landfill Facility for disposal.

The current management methods are adequate for current and projected needs; therefore, there are no plans to modify existing practices.

5.2.9 Scrap Tires

Scrap tires are accepted at each of the County facilities. In compliance with 9-228, Environment Article, Annotated Code of Maryland, which states that no tires will be landfilled after 1 January 1994, all tires received are processed by methods other than landfilling (see Chapter 3). The current management methods are adequate for current and projected needs; therefore, there are no plans to modify existing practices.

5.2.10 Wastewater Treatment Plant Sewage Sludge

Sewage sludge from WWTPs located in the County is accepted at the Central Landfill Facility, from the Towns of Berlin, Snow Hill, and Ocean City, and from the County for treatment plants in unincorporated areas.

In 2014 The Town of Berlin hauled 136 wet tons and Snow Hill hauled 419 wet tons of sewage sludge to the Central Landfill Facility. The Town of Ocean City hauled 895 wet tons of sewage sludge and 180 wet tons of grit to the Central Landfill Facility. The community of Ocean Pines hauled 1631 wet tons of sewage sludge to the Central Landfill Facility. Further, The Town of Ocean City currently treats their sewage sludge to Class A standards, and markets the treated sewage sludge to local businesses.

Central Landfill Facility—The sewage sludge is mixed with trash and disposed of in the working face of the landfill.

Further site-specific details and general conditions applicable to the transportation, spill control, recordkeeping, and other issues concerning sewage sludge management are described in each of the sewage sludge utilization permits for the County and the Towns of Berlin, Snow Hill, and Ocean City.

The current management methods are adequate for current and projected needs; therefore, there are no plans to modify existing practices.

Provisions have been made to allow for septage to be discharged into the Snow Hill and Berlin WWTPs. The average amount of septage being discharged into the WWTPs is 70,000 gallons per month. The current management methods are adequate for current and projected needs; therefore, there are no plans to modify existing practices.

5.2.11 Other Wastes

Agriculture Wastes and Crop Residues—The residue from these crops is generally left on the soil surface through the winter to protect it from erosion. Tillage in the spring mixes the residue with the soil, adding organic matter needed for conditioning.

Other—Water treatment plant sewage sludge, mining wastes, dusts (e.g., bag house), grease, and oil-contaminated soils are generated in insignificant amounts.

The current management methods are adequate for current and projected needs; therefore, there are no plans to modify existing practices.

5.2.12 Proposed Management Practices

The current management practices are adequate to meet the goals of Worcester County. Therefore, no changes are currently planned for the management of the County's solid waste.

However, new methods and technologies are constantly being reviewed and assessed to evaluate the need for change.

5.2.13 Recycling Methods to Meet 20 Percent Goal

The existing recycling methods used to meet the 20 percent goal are described in Chapter 3. Since the goal is now consistently being met, there are no alternative methods planned at this time. However, the County is keeping abreast of recyclable markets and current trends, and will pursue other recycling efforts as appropriate. Recently, the County began a trial project to determine the feasibility of curbside recycling in selected neighborhoods. Currently, the County does not plan to implement curbside recycling.

5.3 PETROLEUM SPILL CLEANUP

Petroleum spill cleanups are handled by the individual or agency responsible for the spill. The Worcester County Central Landfill Facility is permitted to receive products used in the cleanup of petroleum spills. The material must be dry or in a semi-solid form.

5.4 WASTE DISPOSAL SYSTEMS IDENTIFIED

5.4.1 Public

Disposal areas are provided by the County in that it owns and operates the Central Landfill Facility and three drop-off centers. The Town of Ocean City owns their transfer station. As stated in the previous chapter, the Central Landfill Facility services the entire County. The drop-off centers serve each of the incorporated towns.

5.4.2 Private

With the exception of the special medical waste incinerator mentioned previously in this chapter there are no known private solid waste facilities within the County.

5.4.3 Proposed

There are no anticipated new facilities for refuse disposal being proposed during the 10-year planning period. Alternative disposal systems are continuously being researched and studied.

5.5 WASTE ACCEPTANCE FACILITIES IDENTIFIED

5.5.1 Public

The Worcester County Central Landfill Facility is completely described in the Central Landfill Facility's Operation and Maintenance (O&M) Manual latest edition. A copy of this document is available for public review at the Central Landfill Facility.

The Ocean City transfer station is owned and operated by the Town of Ocean City. The Ocean City transfer station is completely described in their Operations and Maintenance Manual. A copy of this document is available for public review at the Ocean City transfer station.

5.5.2 Private

There are no private facilities for the acceptance of solid waste in Worcester County.

5.5.3 Proposed

There are no new proposed acceptance facilities for refuse or recyclables anticipated during this planning period.

5.6 MANAGEMENT OF WASTE STREAMS IDENTIFIED

Users of the solid waste facilities are subject to the Worcester County Solid Waste Rules and Regulations of the facility. The disposal sites are open to all County residents and a nominal fee is assessed to individual households for disposal privileges. Commercial refuse haulers, businesses, and industries are charged for using County disposal sites in accordance with a fee schedule based upon weight. Maintenance and operating costs for the sites are paid solely from the user revenues.

The Board of County Commissioners of Worcester County is assigned the responsibility of establishing license fees, rules, regulations, and any other requirements necessary to control the collection of refuse in Worcester County.

Worcester County is required by MDE to construct landfill cells which conform to COMAR and RCRA Subtitle D regulations. The landfill shall consist of a liner system that is designed, constructed, and installed to facilitate collection of leachate generated by the landfill to prevent migration of pollutants out of the landfill to the adjacent subsurface soil, groundwater, or surface water. In addition, a leachate collection system and removal system, located immediately above the liner, will be present to collect and remove leachate from the landfill. The liner and leachate collection and removal system shall conform to all design, construction, maintenance, and operation regulations as stated in COMAR 26.04.07.07 to ensure that there is no reasonable probability of adverse effects on health or the environment from the disposal of solid waste at such facility as stated in RCRA Subtitle D regulations.

Worcester County is in an excellent position to manage its solid waste well into the 21st Century. The present Central Landfill Facility located off Route 113 near Newark, Maryland has 725 acres. The addition of infrastructure and personnel may be necessary to handle additional recycling in the future.

The Board of County Commissioners of Worcester County is committed to providing the most cost-effective method for disposal of the County's solid waste. Worcester County DPW is continually evaluating the latest technology to assist in this goal and is responsible for the daily operation of the landfill.

5.7 FACILITIES, CAPACITIES, AND FINANCING

5.7.1 Facilities Described

The County's solid waste transfer station and drop-off centers are designed to receive any waste except C&D waste, scrap tires, and hazardous waste which can be disposed of at the landfill. Refuse is deposited in roll-off containers from elevated drive areas. After the containers are loaded, they are transported to the landfill. Bins are also provided to receive recyclables, which are regularly taken to the Central Landfill Facility for ultimate transfer to the recycling markets. The equipment and buildings have capacity to manage the projected growth in the 10-year planning period, 2017 through 2026, based upon population projections.

The transfer station and drop-off centers are manned by an attendant who keeps the facilities neat and clean, and performs routine maintenance of the equipment.

The Central Landfill Facility is constructed and permitted by MDE as a Subtitle D, leachate recirculation landfill with a capacity to last beyond the 10-year planning period. With the construction of Cell 4 in 2006 and construction of cell 5 to begin in the spring of 2017, the County is well situated for the planning period. County equipment and employees operate this facility from 8:00 a.m. to 4:00 p.m., 6 days a week during October through April, 7 days a week during May through September. Residents are directed to the residential drop-off area.

Additional information regarding the specific operation of the Central Landfill Facility can be found in the Central Landfill Facilities Operations and Maintenance Manual. This manual is maintained onsite at the scale house of the Central Landfill Facility.

5.7.2 Required Facilities

Adequate facilities exist for the disposal of refuse and recycling for the planning period. Neither the anticipated increase in population nor the anticipated increase in tourism will significantly impact this acceptance rate. What increase there is will likely be concentrated in the north end of the County. However, C&D rates have been decreasing dramatically. This waste stream is managed solely at the Central Landfill Facility, and has no impact on any other facility. This decrease has led to deceleration in the planned construction schedule for the Central Landfill Facility. Planning for Cell 5 began 2009 and the construction of Cell is anticipated to start in the spring of 2017.

5.7.3 Financing Methods

The Worcester County Solid Waste Division includes the Solid Waste Department and the Recycling Department. The Solid Waste Division is operated as an Enterprise Fund which is self-supporting to the extent of the Central Landfill Facility, but General Fund Grants cover the Convenience Centers and the Recycling Department.

Projected revenues are based upon anticipated waste to be received at the Central Landfill Facility. The projected expenses for the operation match the revenue projection for that period. O&M and capital improvements are all paid from this fund. The construction of the Berlin Rubble Fill Closure and Cap is underway and the costs are not being paid from the Enterprise Fund; they are being paid out of the General Fund.

Budget constraints will limit the proposed financing to funds which include monies to purchase equipment, to cover construction, and to cover planning and design costs. Because the facility is enterprise fund based, it is necessary to control debt services. Daily maintenance and operating costs consume much of the revenue generated.

Financial assurance for the closure and post-closure costs of the Central Landfill Facility, Central Site were demonstrated through the financial test specified in Subpart G of 40 Code of Federal Regulations (CFR) Part 258. In addition, in its financial statements, Worcester County has also recognized the costs associated with closure and post-closure of landfills that stopped accepting waste in 1991.

5.8 CLOSURE OF FACILITIES

5.8.1 Facilities Identified

- Berlin
- Snow Hill
- Pocomoke
- Central Landfill Facility.

The projected closure date of the Central Landfill Facility is well beyond the 10-year planning period. The following is a summary of the basis of funds being saved and an explanation of how the funds required were determined.

5.8.1.1 Financial Assurance for Closure

- **Cost to Close and Cap Berlin Rubble Fill**—Berlin Rubble Fill is under construction and is expected to be completed by July 2017, at a cost of approximately \$3.1 million.
- **Cost to Close and Cap Berlin Landfill**—Berlin Landfill was closed in 1996 at a cost of \$3.0 million.
- **Cost to Close and Cap Pocomoke Landfill**—Pocomoke Landfill is a 15-acre landfill that was closed in FY03. The cost to cap this landfill was \$2.0 million.
- **Cost to Close and Cap Snow Hill Landfill**—Snow Hill Landfill is an 11-acre landfill that was closed in FY06. The cost to cap this landfill was \$1.7 million.

The County is providing cost estimates in future dollars (adjusted 4 percent for inflation) for a third party to close the largest area open as of 30 June of the past fiscal year. The cost estimates reflect the cost of closure using today's technology and reflect any physical changes in the cells being closed. The closure cost estimates include providing for a working bench over the waste, an infiltration layer which includes a liner system, an erosion layer, and planting. Possible additional costs may be required to address methane emissions, but are not considered at this time. Monitoring and testing is now in progress but has not yet provided results to indicate what may be required to address emissions from the cells.

The inactive landfill cells reaching capacity as of the date of this document include 18 acres of Cell 1, 18 acres of Cell 2, and 23 acres of Cell 3. Based upon an engineer's construction cost estimate, the cost to close these 59 acres in FY15 would be \$11.37 million. The landfill enterprise fund is accruing liability for these costs in accordance with the Government Accounting Standards Board. An enterprise fund is a financing system for a department such that it receives minimum funding from the County's general fund, and survives solely on income it generates itself.

5.8.1.2 Financial Assurance for Post-Closure Care

The County provides for ongoing post-closure care for all closed facilities in its annual operating budget. No distinction is made for costs to maintain the active and closed sites.

Regular review of closure and post-closure costs is done and changes are made to the operating budget as legislation and technologies dictate.

5.8.2 Site Use After Closure

Many options for site use after closure are available. With a closure date well in excess of 10 years, no specific plans have been made at this time.

5.9 COMPLIANCE WITH LAND USE PLAN

The landfill site is currently in compliance with the County Land Use Plan. Every measure will be taken to ensure that it remains in compliance.

5.10 DISCUSSION OF MODIFICATION AS A RESULT OF ASSESSMENT

Ongoing changes in this interpretation of federal and state regulations may affect waste disposal within the County. At this time, the effect of these changes is unknown. If the waste volume is significantly reduced, this may alter the current planning.

Short-Term Planning: 0–5 Years

- Complete construction of Cell 5 as an MSW landfill.
- Continue reclamation/mining activities within Cell 1.

- Complete the relocation of rubble waste and complete the closure cap of the Berlin Rubble Fill.
- Evaluate acceptance of yard waste at the Berlin Drop-Off Facility
- Evaluate the economic impacts and feasibility of converting the Central Landfill Facility from an active landfill operation to a transfer station.
- Evaluate current and existing recycling efforts and develop a plan to increase collection and processing of recyclables. Initiate recycling education program with local contractors. Consider mandatory curbside recycling program.
- Evaluate the purchase of property adjacent to the Central Landfill Facility.
- Re-initiate the Landfill Gas to Energy facility located at the Central Landfill Facility to generate income.
- Initiate design and permitting of new a citizen-convenient homeowner drop-off center in the Showell/Bishopville area. Initiate construction of the new homeowner drop-off area no later than October 2017.
- Continue current leachate recirculation processes and potential for onsite pretreatment.
- Plan and develop a reclamation/mining schedule for Central Landfill Facility Cells 2 and 3.

Mid-Term Planning: 6–10 Years

- Complete reclamation/mining activities within Cell 1.
- Initiate design and construction of the re-lining of Cell 1 to meet federal (RCRA Subtitle D) and state (COMAR) regulations.
- Initiate the reclamation/mining activities within Cells 2 and 3.
- Evaluate the southern portion of the Central Landfill Facility for expansion and development of the permitted MSW landfill Cells 6 through 8.
- Design and permit MSW landfill Cell 6.
- Evaluate new/innovative technologies for solid waste processing, landfill gas to energy, recycling efforts, leachate recirculation, management and treatment, etc.

Long-Term Planning: 10+ Years

- Complete reclamation/mining activities in cells and continue with reclamation/mining activities of Cell 3 which reached capacity (permitted elevation) and construct new MSW landfill cells within permitted footprint.
- Start construction of Central Landfill Facility Cell 6.
- Continue pursuing the purchase of property adjacent to the Central Landfill Facility.
- Continue to evaluate new/innovative technologies for solid waste processing, landfill gas to energy, recycling efforts, leachate recirculation, management and treatment, etc.
- Evaluate alternatives for solid waste disposal, i.e., incineration.

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Appendix A

Worcester County Resolution, Public Hearings, Department Approvals and Transmittal Notifications

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RESOLUTION NO. 17 - 1

**RESOLUTION ADOPTING
COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN
FOR WORCESTER COUNTY, MARYLAND,
2017 – 2026**

WHEREAS, in accordance with the provisions of Sections 9-503, 9-505 and 9-1703 of the Environment Article of the Annotated Code of Maryland and Code of Maryland Regulations (COMAR) 26.03.03, as from time to time amended, the County Commissioners of Worcester County, Maryland are required to adopt a Comprehensive Solid Waste Management Plan for Worcester County, Maryland; and

WHEREAS, Worcester County developed and adopted a Solid Waste Management Plan in 1990 which was comprehensively updated and re-adopted in 1999 and 2009 and amended in 2010, 2011 and 2014 to comply with revised State regulations; and

WHEREAS, the County's consulting engineer, EA Engineering, Science, and Technology, Inc., PBC has prepared a revised Comprehensive Solid Waste Management Plan for Worcester County, Maryland (the "Plan") in accordance with the current State laws and regulations which includes new data from the latest period, incorporates changes in operation, and addresses the Maryland Department of the Environment (MDE) comments on the last update of the plan, and will serve as the County's solid waste disposal guideline throughout the 10-year planning period, 2017 through 2026; and

WHEREAS, the overall goal of the Plan is to provide for a system of solid waste management and resource recovery that will handle the County's current and anticipated future volume of solid waste as economically as possible, while protecting environmental quality, safeguarding public health and safety, and preserving quality of life in the County. The Plan addresses existing and projected solid waste management, including solid waste collection systems and recyclable materials collection, assessment of County needs, and a plan of action to address those needs; and

WHEREAS, the County Commissioners held a public hearing on January 3, 2017 to receive public comment on the proposed Comprehensive Solid Waste Management Plan for Worcester County, Maryland; and

WHEREAS, the County Commissioners have determined to adopt the Comprehensive Solid Waste Management Plan for Worcester County, Maryland as submitted.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that the Comprehensive Solid Waste Management Plan for Worcester County, Maryland, 2017-2026, prepared for Worcester County Department of Public Works, prepared by EA Engineering, Science, and Technology, Inc., PBC, and dated December 2016 is hereby adopted.

AND, BE IT FURTHER RESOLVED that this Resolution shall take effect upon its passage.

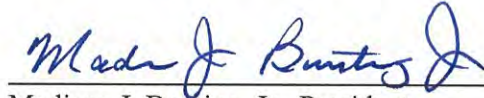
PASSED AND ADOPTED this 3rd day of January 2017.

ATTEST:

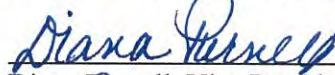


Harold L. Higgins
Chief Administrative Officer

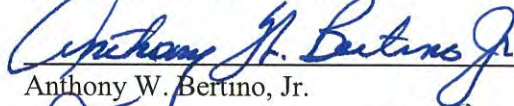
WORCESTER COUNTY COMMISSIONERS



Madison J. Bunting, Jr., President




Diana Purnell, Vice President



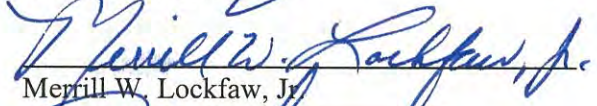
Anthony W. Bertino, Jr.



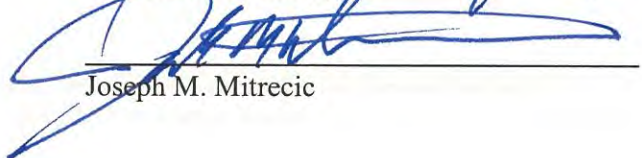
James C. Church



Theodore J. Elder



Merrill W. Lockfaw, Jr.



Joseph M. Mitrecic

Notification of Transmittals

Town of Ocean City

Town of Berlin

Town of Snow Hill

Town of Pocomoke

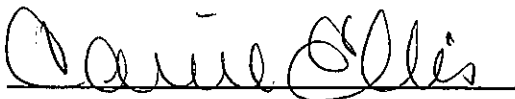
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WORCESTER COUNTY COMMISSIONERS
WORCESTER COUNTY COMMISSIONERS
1 W MARKET ST
SNOW HILL, MD 21863
ATTN: Kelly Shannahan

Certificate of Publication

This is to certify that the attached notice has been published in
THE DAILY TIMES, a daily paper of general circulation, published in Salisbury, MD on:

12/15/16, 12/22/16,



Legals Representative

Ad Number: 0001788164

Description: NOTICE OF PUBLIC HEARING ADOPTION OF COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN 2016 2026 WORCES

Ocean Pines Independent
11021 Nicholas Lane, Suite 10,
Ocean Pines, Maryland 21811

Worcester County Times
11021 Nicholas Lane, Suite 10,
Ocean Pines, Maryland 21811

Chincoteague Beacon
23079 Courthouse Avenue,

Delaware Wave
33000 Coastal Highway,
Bethany Beach, Delaware 19930

Somerset Herald
618 Beam Street
Salisbury, MD 21801

Wicomico Weekly
618 Beam Street

Eastern Shore News
23079 Courthouse Avenue,
Accomac, VA 23301

Delaware Coast Press
33000 Coastal Highway,
Bethany Beach, Delaware 19930

The Daily Times
618 Beam Street

**NOTICE OF PUBLIC HEARING
ADOPTION OF COMPREHENSIVE SOLID WASTE
MANAGEMENT PLAN, 2016-2026
WORCESTER COUNTY, MARYLAND**

The Worcester County Commissioners will hold a public hearing on the adoption of the 10-Year Comprehensive Solid Waste Management Plan for Worcester County, Maryland, 2017-2026 (the Plan) as prepared by EA Engineering, Science, and Technology, Inc., PBC. The Plan has been prepared in accordance with the Code of Maryland Regulations (COMAR) 26.03.03 and required by Section 9-503 and Section 9-1703 of the Environment Article of the Annotated Code of Maryland. The overall goal of the Plan is to provide for a system of solid waste management and resource recovery that will handle the County's current and anticipated future volume of solid waste as economically as possible, while protecting environmental quality and preserving public health and safety, and thus maintaining a better quality of life within the County. The Plan addresses existing and projected solid waste management, including solid waste collections systems and recyclable materials collection, assessment of County needs, and a plan of action to address those needs. The Plan was originally developed in 1990 and was updated by EA Engineering in 1999 and 2010. The current update includes new data from the latest period, incorporates changes in operations, and addresses the Maryland Department of the Environment (MDE) comments on the latest update of the Plan. Once adopted, the Plan will serve as the County's solid waste disposal guideline throughout the 10-year planning period, 2017 through 2026. The County Commissioners have scheduled the

**PUBLIC HEARING
on
TUESDAY, JANUARY 3, 2017
AT 10:30 A.M. in the
COUNTY COMMISSIONERS MEETING ROOM
Room 1101-Government Center
One West Market Street, Snow Hill, MD 21863**

at which the Plan will be considered for adoption. All interested citizens are encouraged to attend the hearing and express their views on this matter. Both written and oral testimony will be accepted.

**WORCESTER COUNTY COMMISSIONERS
12/15,22 '16**

WORCESTER COUNTY COMMISSIONERS
WORCESTER COUNTY COMMISSIONERS
1 W MARKET ST
SNOW HILL, MD 21863
ATTN: Kelly

Certificate of Publication

This is to certify that the attached notice has been published in
OCEAN PINES INDEPENDENT, a weekly paper of general circulation in Worcester County,
published in Ocean Pines, MD on:

12/14/16, 12/21/16,

THE DAILY TIMES, a daily paper of general circulation, published in Salisbury, MD on:

12/15/16, 12/22/16,

WORCESTER COUNTY TIMES, a weekly paper of general circulation in Worcester County,
published in Ocean Pines, MD on:

12/15/16, 12/22/16,



Legals Representative

Ad Number: 0001789938

Description: NOTICE OF PUBLIC HEARING ADOPTION OF COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN 20172026 WORCES

Ocean Pines Independent
11021 Nicholas Lane, Suite 10,
Ocean Pines, Maryland 21811

Worcester County Times
11021 Nicholas Lane, Suite 10,
Ocean Pines, Maryland 21811

Chincoteague Beacon
23079 Courthouse Avenue,

Delaware Wave
33000 Coastal Highway,
Bethany Beach, Delaware 19930

Somerset Herald
618 Beam Street
Salisbury, MD 21801

Wicomico Weekly
618 Beam Street

Eastern Shore News
23079 Courthouse Avenue,
Accomac, VA 23301

Delaware Coast Press
33000 Coastal Highway,
Bethany Beach, Delaware 19930

The Daily Times
618 Beam Street

**NOTICE OF PUBLIC HEARING
ADOPTION OF COMPREHENSIVE SOLID WASTE
MANAGEMENT PLAN, 2017-2026
WORCESTER COUNTY, MARYLAND**

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WORCESTER COUNTY COMMISSIONERS

12/14, 15, 21, 22 ' 16

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Worcester County
DEPARTMENT OF PUBLIC WORKS
6113 TIMMONS ROAD
SNOW HILL, MARYLAND 21863

JOHN H. TUSTIN, P.E.
DIRECTOR

JOHN S. ROSS, P.E.
DEPUTY DIRECTOR

TEL: 410-632-5623
FAX: 410-632-1753

DIVISIONS

MAINTENANCE
TEL: 410-632-3766
FAX: 410-632-1753

ROADS
TEL: 410-632-2244
FAX: 410-632-0020

SOLID WASTE
TEL: 410-632-3177
FAX: 410-632-3000

**FLEET
MANAGEMENT**
TEL: 410-632-5675
FAX: 410-632-1753

**WATER AND
WASTEWATER**
TEL: 410-641-3251
FAX: 410-641-5185

December 13, 2016

Mayor Bruce Morrison
101 Clarke Avenue
P.O. Box 29
Pocomoke City, MD 21851

Dear Mayor Morrison:

I have enclosed for your review the draft 10-year Comprehensive Solid Waste Management Plan for Worcester County, 2017 – 2026. The overall goal of the Plan is to provide for a system of solid waste management and resource recovery that will handle the County's current and anticipated future volume of solid waste as economically as possible, while protecting environmental quality and preserving public health and safety, and thus maintaining a better quality of life within the County. This document has been reviewed and approved by the Worcester County Solid Waste Advisory Committee, on which you are represented.

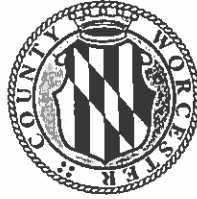
The required Public Hearing will be held on January 3rd, 2017 at 10:30 am in the County Commissioner's meeting room located at the Government Office Center, 1 West Market Street, Snow Hill, MD 21863. Should you have any comments relative to the plan, they can be made either to myself in writing or at the Public Hearing. Your attendance is certainly welcomed.

Should you have concerns in the meantime, please feel free to contact me directly. I look forward to discussing any issues you may have.

Sincerely,

John H. Tustin, P.E.
Director,
Worcester County Public Works

cc: Harold L. Higgins, Chief Administrative Officer
Darl Kolar P.E., EA Engineering



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December 13, 2016

Mayor Richard Meehan
301 N. Baltimore Avenue
P.O. Box 158
Ocean City, MD 21843

Dear Mayor Meehan:

I have enclosed for your review the draft 10-year Comprehensive Solid Waste Management Plan for Worcester County, 2017 – 2026. The overall goal of the Plan is to provide for a system of solid waste management and resource recovery that will handle the County's current and anticipated future volume of solid waste as economically as possible, while protecting environmental quality and preserving public health and safety, and thus maintaining a better quality of life within the County. This document has been reviewed and approved by the Worcester County Solid Waste Advisory Committee, on which you are represented.

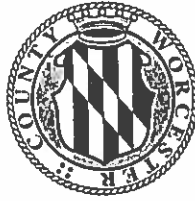
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Worcester County Public Works

cc: Harold L. Higgins, Chief Administrative Officer
Darl Kolar P.E., EA Engineering



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December 13, 2016

Mayor Gee Williams
10 Williams Street
Berlin, MD 21811

Dear Mayor Williams:

I have enclosed for your review the draft 10-year Comprehensive Solid Waste Management Plan for Worcester County, 2017 – 2026. The overall goal of the Plan is to provide for a system of solid waste management and resource recovery that will handle the County's current and anticipated future volume of solid waste as economically as possible, while protecting environmental quality and preserving public health and safety, and thus maintaining a better quality of life within the County. This document has been reviewed and approved by the Worcester County Solid Waste Advisory Committee, on which you are represented.

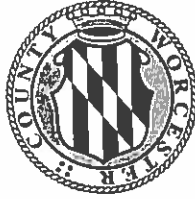
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Sincerely,

John H. Tustin, P.E.
Director,
Worcester County Public Works

cc: Harold L. Higgins, Chief Administrative Officer
Darl Kolar P.E., EA Engineering



Worcester County
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DIRECTOR

JOHN S. ROSS, P.E.
DEPUTY DIRECTOR

TEL: 410-632-5623
FAX: 410-632-1753

December 13, 2016

Mayor John Dorman
103 Bank Street
Snow Hill, MD 21863

Dear Mayor Dorman:

I have enclosed for your review the draft 10-year Comprehensive Solid Waste Management Plan for Worcester County, 2017 – 2026. The overall goal of the Plan is to provide for a system of solid waste management and resource recovery that will handle the County's current and anticipated future volume of solid waste as economically as possible, while protecting environmental quality and preserving public health and safety, and thus maintaining a better quality of life within the County. This document has been reviewed and approved by the Worcester County Solid Waste Advisory Committee, on which you are represented.

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Appendix B

MDE Approval Letter

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Appendix C

County Regulations Governing the Siting of Solid Waste Disposal Facilities

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**APPENDIX C
WORCESTER COUNTY CODE**

§ZS 1-316. Solid waste disposal sites.

- (a) Conformance with title. No site shall be developed as a solid waste disposal site and no existing solid waste disposal site shall be enlarged, altered, or changed in use except in conformity with the provisions of this Title.
- (b) Additional conditions. In addition to the provisions contained in other parts of this Title, the following shall apply to such sites:
- (1) Disposal areas on every such site shall be set back from every public road right-of-way and every perimeter line at least one hundred feet.
 - (2) The solid waste disposal area shall be effectively screened from public view by dense foliage, topography or fencing prior to use of the area as a solid waste disposal site. In addition, a security fence and a gate at least six feet in height and of such length and construction to effectively control vehicular entrance to the disposal operation shall be constructed prior to the operation of the site. Such fence shall be visually screened along the outside by landscaping in accordance with the provisions of § ZS 1-334.
 - (3) The burning of refuse or other waste material shall not be permitted at such site, except by permission of the Department of the Environment and the Deputy State Fire Marshal.
 - (4) The solid waste disposal area shall not accept hazardous or toxic waste.
 - (5) All solid waste disposal sites shall be subject to the provisions of § ZS 1-116.
 - (6) The solid waste disposal area shall not be located over any aquifer.
[Added 6-10-1997 by Bill No. 97-10]

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Appendix D

Asbestos Handling/Disposal Procedures for the Central Landfill Facility

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APPENDIX D

HANDLING/DISPOSAL PROCEDURES FOR THE CENTRAL LANDFILL FACILITY

1. Notification in writing to the Department of Public Works, Solid Waste Division, 7091 Central Site Lane, Newark, Maryland 21841 indicating the amount of asbestos to be disposed of, where it is coming from within the County, and when it will be delivered to the Central Landfill Facility. Request a telephone call to Public Works at least 2 days in advance to confirm that the load is acceptable. (410-632-3177)
2. To ensure proper control, any person disposing of asbestos from demolition or renovation shall notify the Asbestos and Industrial Hygiene Program, Air and Radiation Management Administration at least 2 working days prior to taking waste asbestos material to the landfill.
3. One day notification to the landfill supervisor is required by the generator or hauler that the incoming waste contains asbestos. A copy of the letter notifying Public Works above will be required to be given to the weigh master upon entering the Central Landfill Facility.
4. The waste shall be unloaded carefully, so as to prevent emissions of asbestos fibers into the air.
5. The area used for burial of asbestos material shall be restricted to the working face or designated area of the landfill.
6. At no time shall a piece of equipment be permitted to operate directly on the bagged asbestos. Enough cover must be placed over the asbestos to ensure that if a bag were to break upon compaction, the asbestos would be contained.
7. Operators at the landfill shall wear respiratory protection approved by the National Institute for Occupational Safety and Health (NIOSH) for protection against asbestos fibers, and protective clothing where deemed necessary.

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