



# **10-Year Comprehensive Solid Waste Management Plan (2014–2024) Wicomico County, Maryland**

*Prepared for*

Wicomico County, Maryland  
Department of Public Works, Solid Waste Division  
6948 Brick Kiln Road  
Salisbury, Maryland 21801

*Prepared by*

EA Engineering, Science, and Technology, Inc.  
11202 Racetrack Road, Unit 103  
Berlin, Maryland 21811  
(410) 641-6341

June 2015  
Updated: November 2015  
EA Project No. 1522101

**10-Year Comprehensive  
Solid Waste Management Plan (2014–2024)  
Wicomico County, Maryland**

*Prepared for*

Wicomico County, Maryland  
Department of Public Works, Solid Waste Division  
6948 Brick Kiln Road  
Salisbury, Maryland 21801

*Prepared by*

EA Engineering, Science, and Technology, Inc.  
11202 Racetrack Road, Unit 103  
Berlin, Maryland 21811  
(410) 641-6341

June 2015  
Updated: November 2015  
EA Project No. 1522101

**TABLE OF CONTENTS**

	<u>Page</u>
LIST OF FIGURES .....	iv
LIST OF TABLES .....	v
LIST OF ACRONYMS AND ABBREVIATIONS .....	vi
INTRODUCTION .....	1
1. CONFORMANCE WITH THE COUNTY LAND USE PLAN .....	1-1
1.1 GOALS AND OBJECTIVES .....	1-1
1.2 DEFINITIONS .....	1-1
1.3 STRUCTURE OF COUNTY GOVERNMENT IN RELATION TO SOLID WASTE MANAGEMENT .....	1-3
1.4 FEDERAL, STATE, AND LOCAL REGULATIONS .....	1-5
1.5 WICOMICO COUNTY’S RECYCLING RATE AND RECYCLING GOAL ..	1-5
1.6 SUBSIDIARY SOLID WASTE PLANS .....	1-5
2. COUNTY DEMOGRAPHICS .....	2-1
2.1 POPULATION INFORMATION .....	2-1
2.2 WICOMICO COUNTY BACKGROUND .....	2-1
2.3 ZONING REGULATIONS .....	2-2
2.4 COMPREHENSIVE LAND USE PLAN .....	2-3
2.4.1 Existing Land Use and Development Trends .....	2-3
2.4.2 Development Concept .....	2-4
3. EXISTING SOLID WASTE MANAGEMENT SYSTEM .....	3-1
3.1 ANNUAL GENERATION OF WASTES .....	3-1
3.2 SEPTAGE .....	3-2
3.3 PERCENT REDUCTION BY RECYCLING .....	3-2
3.3.1 Regional Recycling Efforts .....	3-2
3.3.2 Yard Waste Recycling .....	3-3
3.3.3 White Goods Recycling .....	3-3
3.3.4 Types and Quantities of Waste Imported Into the County .....	3-4
3.3.5 Types and Quantities of Waste Exported out of the County .....	3-4
3.4 SOLID WASTE COLLECTION SYSTEMS .....	3-4
3.4.1 Municipal Trash and Recycling Collection .....	3-5

3.5	SOLID WASTE ACCEPTANCE AND RECYCLING FACILITIES .....	3-5
3.5.1	Apartment Building and Condominium Recycling (ABCR) Program ....	3-9
3.5.2	Public School Recycling Program .....	3-12
3.5.3	Fluorescent and Compact Fluorescent Light Recycling Plan .....	3-16
4.	SOLID WASTE SYSTEM ASSESSMENT .....	4-1
4.1	ASSESSMENT OF COUNTY’S NEEDS/REQUIREMENTS .....	4-1
4.1.1	Solid Waste Management .....	4-1
4.1.1.1	New County Landfill .....	4-1
4.1.1.2	Regional Landfill .....	4-2
4.1.1.3	Expansion of Existing County Landfill .....	4-2
4.1.1.4	Private Approach .....	4-2
4.1.1.5	Resource Recovery/Renewable Energy Facility .....	4-3
4.1.2	Recycling Collection Systems .....	4-3
4.1.2.1	Curbside Separation Program .....	4-4
4.1.2.2	System of Drop-Off Centers .....	4-4
4.1.2.3	Combination of Curbside Separation and Drop-Off Centers....	4-4
4.1.2.4	Private Approach .....	4-4
4.1.2.5	Construction of Single Stream Facility .....	4-5
4.2	GEOGRAPHICAL CONSIDERATIONS IN LOCATING SOLID WASTE MANAGEMENT FACILITIES .....	4-5
4.2.1	Topography and Surface Water Drainage.....	4-5
4.2.2	Geology.....	4-8
4.2.3	Soils.....	4-9
4.2.4	Chesapeake Bay Critical Area Program .....	4-15
4.3	SOURCE SEPARATION AND SOURCE REDUCTION .....	4-15
4.4	PUBLIC EDUCATION PROGRAMS FOR RECYCLING AND IDENTIFYING SECONDARY RECYCLING MARKETS .....	4-16
4.4.1	Secondary Markets Defined—Waste Minimization Efforts.....	4-16
4.5	ASBESTOS DISPOSAL CAPACITY FOR DISPOSAL.....	4-18
4.6	EMERGENCY RESPONSE PROGRAMS AND PROCEDURES FOR EMERGENCY WASTE DISPOSAL.....	4-18
4.6.1	Hurricane Cleanup .....	4-19
4.7	ADEQUACY OF LOCAL ZONING AND COUNTY’S LAND USE PLAN TO AUTHORIZE AND SITE SOLID WASTE FACILITIES.....	4-19

5. PLAN OF ACTION ..... 5-1

5.1 EFFECTIVE PLANNING PERIOD..... 5-1

5.2 MANAGEMENT OF SPECIFIC WASTE STREAMS ..... 5-1

5.2.1 Municipal Solid Waste..... 5-1

5.2.2 Residential Waste..... 5-1

5.2.3 Commercial Waste..... 5-1

5.2.4 Industrial Waste ..... 5-1

5.2.5 Institutional Waste ..... 5-2

5.2.6 Controlled Hazardous substances ..... 5-2

5.2.7 Tire Disposal..... 5-2

5.2.8 Wastewater Treatment Plant Sludge Disposal ..... 5-3

5.2.9 Clearing Debris and Wood Waste..... 5-3

5.2.10 Construction and Demolition Debris ..... 5-3

5.2.11 Bulky or Special Waste..... 5-3

5.2.12 Septage..... 5-3

5.2.13 Leachate Management ..... 5-3

5.2.14 Dead Animals and Litter..... 5-4

5.3 RECYCLING COLLECTION AND PROCESSING ..... 5-4

5.4 SPECIAL RECYCLE PROGRAMS ..... 5-4

5.4.1 Special Events Recycling Plan..... 5-4

5.5 PETROLEUM SPILL DISPOSAL PLAN ..... 5-8

5.6 MANAGEMENT OF WASTE STREAMS IDENTIFIED ..... 5-8

5.7 REQUIRED SOLID WASTE FACILITIES AND FUNDING..... 5-9

5.7.1 Newland Park Landfill..... 5-9

5.8 SOLID WASTE FACILITY CLOSURE..... 5-9

5.9 SOLID WASTE PLANS CONFORMANCE WITH COUNTY’S LAND USE PLAN ..... 5-10

5.10 PROPOSED SOLID WASTE SYSTEM MODIFICATIONS ..... 5-10

6. REFERENCES ..... 6-1

**APPENDIX A WICOMICO COUNTY EXECUTIVE PUBLIC HEARING AND APPROVAL, MDE APPROVAL LETTER**

**LIST OF FIGURES**

<u>Number</u>	<u>Title</u>	<u>Page</u>
Figure 1-1:	Wicomico County Administrative Organization .....	1-3
Figure 1-2:	Solid Waste Division Organization .....	1-4
Figure 1-3:	General Location Map .....	Insert

**LIST OF TABLES**

<u>Number</u>	<u>Title</u>	<u>Page</u>
Table 2-1:	Wicomico County Population Characteristics 2000–2030.....	2-1
Table 2-2:	Municipal and Unincorporated County Population Characteristics 1970–2010 .	2-1
Table 2-3:	Wicomico County 2010 Land Use/Land Cover.....	2-4
Table 3-1:	Wicomico County Annual Generation of Wastes.....	3-2
Table 3-2:	Wicomico County Annual Recycling Tonnages*.....	3-3
Table 3-3:	Wicomico County Import Recycling Tonnages (2012).....	3-4
Table 3-4:	Wicomico County Export Recycling Tonnages (2012).....	3-4
Table 3-5:	Municipal Waste Collection in Wicomico County.....	3-5
Table 3-6:	Wicomico County Recycling Stations.....	3-7
Table 3-7:	Convenience Center Hours of Operation.....	3-7
Table 3-8:	2012 Annual Collection of Recyclables at Recycling Drop-Off Stations .....	3-8
Table 3-9:	2012 Annual Acceptance at Convenience Centers.....	3-8
Table 3-10:	Public Acceptance Facility Locations.....	3-9
Table 4-1:	Comparison of Acceptance Facility Alternatives .....	4-3
Table 4-2:	Comparison of Collection System Recycling Alternatives .....	4-5
Table 4-3:	Wicomico County Watersheds .....	4-7
Table 4-4:	Wicomico County Soil Association Distribution .....	4-10
Table 4-5:	Wicomico County Soil Characteristics.....	4-11

**LIST OF ACRONYMS AND ABBREVIATIONS**

ABCR	Apartment Building and Condominium Recycling
BTEX	Benzene, toluene, ethylbenzene, and xylenes
C&D	Construction and demolition
CFR	Code of Federal Regulations
COMAR	Code of Maryland Regulations
EPA	U.S. Environmental Protection Agency
ft	Foot (feet)
HazMat	Hazardous materials
HHW	Household Hazardous Waste
MDE	Maryland Department of the Environment
MDP	Maryland Department of Planning
mg/kg	Milligram(s) per kilogram
MRA	Maryland Recycling Act
RCRA	Resource Conservation and Recovery Act
SERP	Special Events Recycling Program
SCS	Soil Conservation Service
TPH	Total petroleum hydrocarbons
U.S.	United States
USDA	United States Department of Agriculture
WWTP	Wastewater treatment plant
WCDPW-SWD	Wicomico County Department of Public Works – Solid Waste Division
WWCC	Wor-Wic Community College



## INTRODUCTION

Wicomico County currently owns and operates the Newland Park Landfill located on Brick Kiln Road, northwest of the City of Salisbury, Maryland. This 125-acre facility processes approximately 290 tons of solid waste daily that are collected from the convenience centers, along with a regional recycling facility that processes recyclable materials for end users. In addition to the Newland Park Landfill facility, the County operates 11 convenience centers, which accept recyclables, and eight recycling drop-off stations. The convenience centers are for the use of homeowners to dispose of their household garbage and recyclables. An annual permit is required for the disposal of household waste; whereas, no permit is required to deposit recyclable materials in the recycling containers located at the convenience drop-off facilities. The Newland Park Landfill is adequate to meet projected demands for the foreseeable future; however, the County should begin to explore the possibility of expanding into adjacent areas at the Newland Park site or identify possible locations for a new facility. This plan represents the 10-Year Comprehensive Solid Waste Management Plan for the planning period 2014 - 2024. In accordance with the requirements of COMAR 26.03.03.03 (A), this plan was endorsed by the County Executive and presented and approved by the County Council on October 20, 2015. A copy of the public hearing, adoption, approval and the Maryland Department of the Environment's approval letter are included within Appendix A.

The Wicomico County 10-Year Comprehensive Solid Waste Management Plan is divided into five chapters in accordance with the Code of Maryland Regulations (COMAR) 26.03.03.

Chapter 1 consists of the County's goals and objectives; defines solid waste terms used in this document; describes the County Government Structure and responsibilities relating to solid waste management; describes County Solid Waste Department management framework; and describes the legal requirements and authority for Solid Waste Management.

Chapter 2 consists of basic background information of the County demographics, which includes population projections, transportation network description, and the location of federal facilities. Information on the Current County zoning requirements and the County's comprehensive land use plan is also provided. This text discussion is supplemented by an array of tables and figures, which portray the basic data.

Chapter 3 profiles the County's existing solid waste management system. This includes a table of existing and projected quantities of waste generated annually; solid waste import and export figures; existing solid waste collection systems; and the existing public and private waste acceptance facilities and their remaining useful life.

Chapter 4 makes an assessment of the County's solid waste disposal systems and facilities described in Chapter 3. County land use and zoning authorities are also assessed with respect to siting criteria and operations for solid waste management facilities.

Chapter 5 contains the County's plan of action with regards to all aspects of solid waste management for the succeeding 10-year period. This includes management of the various waste streams; identifying required solid waste disposal systems required; identifying required solid

waste acceptance facilities required; identifying methods of financing the solid waste program; and a discussion of any modifications that may be required as a result of the assessment.

## 1. CONFORMANCE WITH THE COUNTY LAND USE PLAN

The Wicomico County 10-Year Comprehensive Solid Waste Management Plan conforms to the 2014 Draft Wicomico County Comprehensive Plan. The current effective County Comprehensive Land Use Plan was adopted on 3 February 1998. The County recently revised the Wicomico County Comprehensive Plan and identified as the *2014 Draft Wicomico County Comprehensive Plan*. The current draft plan has been reviewed by the Maryland Department of Planning (MDP) of which the County incorporated Addendum No. 1 dated 12 May 2014.

### 1.1 GOALS AND OBJECTIVES

The goals and objectives of this Plan include the following:

- To formulate a plan for providing adequate management and disposal of all waste materials, except hazardous wastes, generated within Wicomico County in an efficient and environmentally sound manner.
- To protect the health, safety, and welfare of people in Wicomico County by maintaining and providing an adequate waste management and disposal system.
- To develop a waste disposal system in a way consistent with the Wicomico County Comprehensive Plan.
- To develop the Wicomico County Solid Waste Management Plan in a way to facilitate its use as a tool to implement the County's Waste Disposal and Management System so that:
  - The targeted materials for recycling are glass, plastics, cardboard, paper, natural wood waste, yard waste, tin and aluminum cans, tires, white goods and rubble (concrete, brick and asphalt), anti-freeze, and used oil. All these materials will be collected, processed and marketed by the County and private enterprise. The County will continue to meet the 20 percent recycling goal as mandated by the State.
  - An adequate solid waste collection system will continue to be provided, with emphasis on convenience, for both recycled materials and solid waste.
  - Waste will be adequately disposed of to minimize adverse effects on the environment, in conformance with all state, federal, and local regulations.
- To provide adequate opportunities for an active public participation in the solid waste planning and facility siting process.

### 1.2 DEFINITIONS

(1) “**County**” means Wicomico County, Maryland.

## (2) **County Plan**

(a) **“County Plan”** means a comprehensive plan for adequately providing throughout the county (including all towns, municipal corporations, and sanitary districts) the following facilities and services by public or private ownership:

- (i) Solid waste disposal systems;
- (ii) Solid waste acceptance facilities; and
- (iii) Systematic collection and disposal of solid waste including litter.

(b) “County Plan” includes all revisions to the plan.

(3) **“Department”** means the Department of the Environment.

(4) **“Governing Body”** means the Wicomico County Executive and the Wicomico County Council.

(5) **“Litter”** means any waste materials, refuse, garbage, trash, debris, dead animals, or other discarded material.

(6) **“Refuse”** means any solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, or agricultural operations, or from community activities, which: Is discarded, or is being accumulated, stored, or physically, chemically, or biologically treated before being discarded; or has served its original intended use and sometimes is discarded; or Is a manufacturing or mining by-product and sometime is discarded.

(7) **“Revision”** means either an adopted amendment to, or a periodic update to the **“County Plan.”**

(8) **“Solid Waste”** means any garbage, refuse, sludge, or liquid from industrial, commercial, mining, or agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage or in irrigation return flows.

(9) **“Solid waste acceptance facility”** means any sanitary landfill, incinerator, convenience center, or plant, whose primary purpose is to dispose of, treat, or process solid waste.

## (10) **Solid Waste Disposal System**

(a) Solid waste disposal system means any publicly or privately owned system that:

- (i) Provides a scheduled or systematic collection of solid waste;
- (ii) Transports the solid waste to a solid waste acceptance facility; and
- (iii) Treats or otherwise disposes of the solid waste at the solid waste acceptance facility

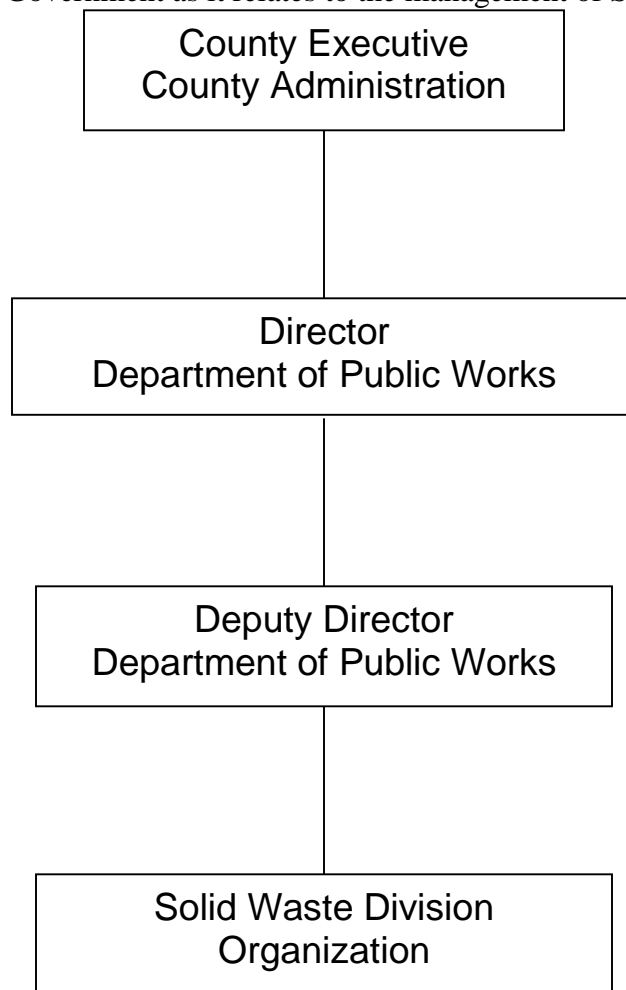
(b) A “solid waste disposal system” includes each solid waste acceptance facility that is used in connection with it.

(11) **“Recycling System”** means any publicly or privately owned system that provides a scheduled or systematic collection of materials that would otherwise become solid waste, processing them, and returning them to the marketplace.

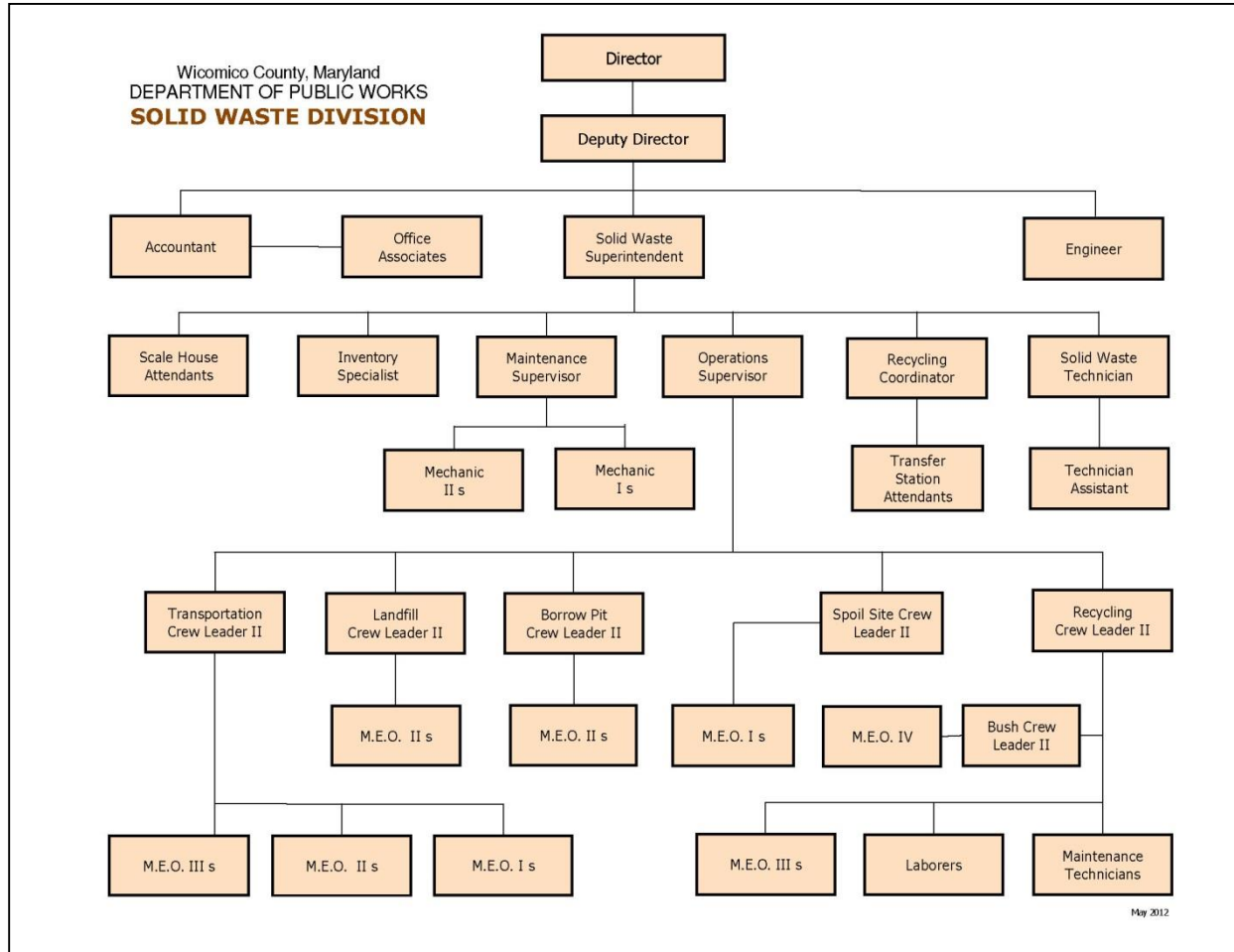
(12) **“Solid Waste Management”** means the systematic administration of activities which provide for the collection, source separation, storage, transportation, transfer, processing, treatment, re-use, or disposal of solid waste.

**1.3 STRUCTURE OF COUNTY GOVERNMENT IN RELATION TO SOLID WASTE MANAGEMENT**

The Solid Waste Division, which is a part of the Wicomico County Department of Public Works, is the County agency responsible for the handling and disposal of solid waste. The WCDPW-SWD manages and operates the County’s recycling program. Figures 1-1 and 1-2 illustrate the organization of County Government as it relates to the management of Solid Waste Disposal.



**Figure 1-1: Wicomico County Administrative Organization**



**Figure 1-2: Solid Waste Division Organization**

## **1.4 FEDERAL, STATE, AND LOCAL REGULATIONS**

The United States (U.S.) Environmental Protection Agency (EPA) is the agency responsible for enforcing solid waste regulations established under the Resource Conservation and Recovery Act (RCRA). Federal Regulations relating to Solid Waste management are found in 40 Code of Federal Regulations (CFR) Parts 256, 257, and 258. The State of Maryland's Solid Waste Regulations are required to meet the minimum standards of the Federal Government established in RCRA.

The Maryland Department of the Environment (MDE) is the State Agency responsible for permitting and regulating Solid Waste Management in Maryland, through the legal authority granted by the environment article, Annotated Code of Maryland and Code of Maryland Regulations (COMAR 26.04.07). The MDE Solid Waste Program permits and regulates solid waste acceptance facilities including landfills, incinerators, convenience centers, and processing facilities. MDE also administers the State's recycling program.

The Wicomico County Executive's Office, with technical assistance and guidance from the WCDPW-SWD, has responsibility for the County's Solid Waste Disposal Systems and Recycling Program that are not controlled by either incorporated towns or private corporations. This currently includes all Solid Waste Management, with the exception of certain public and private collection systems. These are the responsibility of the incorporated towns or private corporations having such systems. The County neither dictates priorities to these areas nor confiscates funds of one area to distribute to another area of different need.

## **1.5 WICOMICO COUNTY'S RECYCLING RATE AND RECYCLING GOAL**

In accordance with Section 9-505(a)(19) of the Environmental Article, Annotated Code of Maryland, Wicomico County is required to recycle 20 percent of its total solid waste tonnage by December 31, 2015. Wicomico County is currently recycling approximately 35 percent of its solid waste as of December 2012 (see Chapter 3 of this document for more details), exceeding the required 20 percent.

## **1.6 SUBSIDIARY SOLID WASTE PLANS**

At this time, there are no subsidiary solid waste plans for any incorporated municipalities or other entity within Wicomico County.

## 2. COUNTY DEMOGRAPHICS

### 2.1 POPULATION INFORMATION

Table 2-1 shows the present County population based on the 2010 Decennial Census prepared by the U.S. Census Bureau. Additionally, Table 2-1 includes population projections prepared by the Maryland Department of Planning. In 2010, Wicomico County's population was 98,733, which represents an increase of approximately 16.4 percent or 14,089 residents compared to the County population in 2000. Over the past 50 years the County experienced an annual growth rate of 1.0 to 1.5 percent. For planning purposes, population projects are utilized to anticipate future demand and capital programming needs to maintain the current level of service for solid waste management facilities. By 2030, the Maryland Department of Planning projects 119,200 persons will reside in Wicomico County, which represents an annual increase of roughly 1,023 persons as compared to the County population in 2010.

**Table 2-1: Wicomico County Population Characteristics 2000–2030**

Year	Population	Percentage
2000	84,644	N/A
2010	98,733	16.6
2020	109,200	10.61
2030	119,200	9.2

Source: U.S. Census Bureau 2010 Decennial Census and Maryland Department of Planning State Data Center (March 2012)

Since 2000 the residential development pattern of the County shifted from areas outside of the Metro Core to areas inside of the Metro Core. The Metro Core consists of the Cities of Fruitland and Salisbury, Town of Delmar (Maryland), and unincorporated portions of Wicomico County, which constitute a defined growth area for future development. See Table 2-2.

**Table 2-2: Municipal and Unincorporated County Population Characteristics 1970–2010**

Year	County Population	Municipal Jurisdictions Population	Percentage Population within Municipal Jurisdictions	Unincorporated Areas Population	Percentage Population within Unincorporated Areas
1970	54,236	21,450	40	32,786	60
1980	64,540	23,234	36	41,306	64
1990	74,339	24,103	32	50,236	68
2000	84,644	33,316	39	51,328	61
2010	98,733	42,669	43	56,064	57

### 2.2 WICOMICO COUNTY BACKGROUND

Wicomico County is located in the southeastern part of the State of Maryland, near the center of the Delmarva Peninsula. It is situated between the Nanticoke River, which runs along the western border of the County; the Wicomico River and Wicomico Creek, which portions of these



water courses run along the southern border of the County; and the Pocomoke River that forms the eastern boundary of the County.

Founded in 1867, Wicomico County encompasses approximately 400 square miles, of which approximately 23 square miles is water. The County contains two incorporated cities: Salisbury and Fruitland; and six incorporated towns: Delmar, Hebron, Mardela Springs, Pittsville, Sharptown, and Willards. The City of Salisbury is the county seat and urbanized population center of Wicomico County. The counties adjacent to Wicomico County are Dorchester, Somerset, and Worcester Counties in the State of Maryland, and Sussex County in the State of Delaware.

Wicomico County is in a fortunate position of being the transportation center of the three-state area known as the Delmarva Peninsula. It is located at the intersection of two major regional highways, U.S. Route 50 and U.S. Route 13, and adjacent to the main north-south rail line through the Delmarva Peninsula. The area includes the second largest river port in the state and a modern airport facility providing intra-county, inter-state, and regional movement of goods and people.

## 2.3 ZONING REGULATIONS

The current Wicomico County Zoning Code was adopted 1 April 1968, and has undergone several amendments since that date. The most recent Wicomico County Zoning Code became effective 18 September 2004. This plan shall not be used to create or enforce local land use and zoning requirements.

### Summary of County Zoning Requirements Relating to Solid Waste

- Pursuant to Section 225-25 Definition of Basic Terms of the Wicomico County Zoning Code, *Sanitary Landfill* is defined as “Any place, land area, building or structure where solid waste or refuse or other materials are stored or disposed of by alternating layers of such wastes or materials with dirt or other approved materials and then compacted on a daily basis. All such facilities shall include those as defined by Maryland law or regulation.”
- Pursuant to Section 225-25 Definition of Basic Terms of the Wicomico County Zoning Code, *Salvage Yard* is defined as “any area where waste, discarded or salvaged materials are bought, sold, exchanged, baled, packed, stored, disassembled, handled, abandoned, including the salvaging, storing, wrecking of automobiles and other vehicles, machinery or parts thereof, house wrecking yards, used lumber yards and places for storage of salvaged building or structural steel materials and equipment.
- Pursuant to Section 225-4 Jurisdiction of the Wicomico County Zoning Code, Chapter 225 “shall not apply to land, buildings or other structures owned by or leased solely to the Federal Government, State of Maryland, Wicomico County, or any municipality within Wicomico County, provided that such land, buildings, or other structures are used for a public purpose.”

- Pursuant to Section 225-67 Table of Permitted Uses - Designations of the Wicomico County Zoning Code, privately owned or maintained solid waste operations (sanitary landfills or salvage yards) are not permitted within Residential or Agricultural Districts
- Pursuant to Section 225-67 Table of Permitted Uses - Designations of the Wicomico County Zoning Code, sanitary landfills with outside storage are permitted by special exception of the Planning Commission in the Commercial Districts C-1, C-2, and C-3 Zoning Districts. Sanitary landfills without outside storage are permitted inherently in the C-2 and C-3 Zoning Districts, as well as by special exception of the Planning Commission in the C-1 Zoning District.
- Pursuant to Section 225-67 Table of Permitted Uses - Designations of the Wicomico County Zoning Code, Sanitary landfills and salvage yards in the Industrial Zoning District I-2 are permitted by special exception of the County Board of Appeals.

## **2.4 COMPREHENSIVE LAND USE PLAN**

The current effective County Comprehensive Land Use Plan was adopted on 3 February 1998. The County recently revised the Wicomico County Comprehensive Plan and identified as the *2014 Draft Wicomico County Comprehensive Plan*. The current draft plan has been reviewed by the Maryland Department of Planning (MDP) of which the County incorporated Addendum No. 1 dated 12 May 2014. Solid Waste Management is covered within Chapter 9 Solid Waste Management and Recycling of the 2014 Draft Wicomico County Comprehensive Plan.

### **2.4.1 Existing Land Use and Development Trends**

Table 2-3 represents the 2010 land uses/land cover in Wicomico County as defined and prepared by the Maryland Department of Planning. Wicomico County, which is approximately 400 square miles, is primarily undeveloped. Agriculture, forest, water, and wetlands account for 203,492 acres or approximately 85 percent of the total acres in the County. In comparison, 36,414 acres or 15 percent of the total acres in the County have been developed.

**Table 2-3: Wicomico County 2010 Land Use/Land Cover**

Maryland Department of Planning Land Use Designation	2010 Acres	2010 Percent
<b>Urban Built-Up</b>		
Low Density Residential (1)	27,038.4	11.3
Medium Density Residential	2,880.4	1.2
High Density Residential	331.6	0.1
Commercial	2,119	0.9
Industrial	868.1	0.4
Institutional	1,435.3	0.6
Transportation	729.8	0.3
Other Developed Land (1)	226.8	0.1
Open Urban Land	784.6	0.3
Low Density Residential (1)	27,038.4	11.3
<b>Resource Lands</b>		
Agricultural	75,738.7	31.6
Forest	98,528.4	41.1
Wetlands	14,155.8	5.9
Water	14,940.2	6.2
Extractive	129.5	0.05
<b>TOTAL</b>	<b>239,906</b>	<b>100%</b>
Source: 2014 Wicomico County Comprehensive Plan (DRAFT)		

### 2.4.2 Development Concept

The 2014 Wicomico County Comprehensive Plan contains the development pattern policies of three distinct concepts: Metro Core – Urban Corridor – Town Growth areas; Suburban areas; and Rural Agricultural areas.

#### The Metro Core – Urban Corridor – Town Growth Area

This Metro Core – Urban Corridor –Town Growth Area includes areas where future growth and development should be directed and the majority of the County population resides. These areas consist of the Metro Core, incorporated cities and towns, rural villages, and County-designated growth areas surrounding existing municipalities. Additionally, the growth areas contain the predominate portion of public and private capital investment in the form of dwellings, business and industrial enterprise, transportation facilities, public and private institutions, and public infrastructure such as water and sewer. The designated growth areas should receive priority consideration of public funding for capital improvements. Based on a development capacity analysis prepared by the Maryland Department of Planning, these growth areas contain sufficient acres of undeveloped and underdeveloped land to accommodate future growth to 2030.

#### Urban – Rural Transition Area

This transitional area recognizes the existing development pattern and the need to provide for residential development outside of designated growth areas. The goals of this transitional zone include avoiding the fiscal and physical problems of providing public services, respecting the

natural limitations on development (e.g., soils), and minimizing the conflict among urban, rural, and airport land uses.

### **Rural – Agricultural Area**

The intent of this area is to prevent urban densities and sprawl development requiring urban services and the consumption of valuable agricultural and forest resources from occurring in rural areas of the County. Most of the land devoted to farming, as well as public drainage associations, is located within this area. Limited development is permitted; however, the primary land use should remain agricultural and forest, as well as their supporting commercial and industrial uses.

### **3. EXISTING SOLID WASTE MANAGEMENT SYSTEM**

#### **3.1 ANNUAL GENERATION OF WASTES**

The existing and projected annual generations of waste for Wicomico County are shown in Table 3-1. The projected quantities shown in Table 3-1 are for the succeeding 10-year period.

The residential, commercial, industrial, and institutional wastes are weighed when accepted at the Newland Park Landfill. Demolition debris is classified separately when weighed and accepted at the landfill, in order to keep track of the quantity reaching the private recycling operation. Bulky or special wastes which are stockpiled at the landfill are weighed when picked up by the purchaser. Glass, tin, aluminum, plastic, and newspapers are also weighed before shipping it to the markets. Tires are collected in a designated roll-off box at the landfill, which is picked up by local tire haulers (Dirt Express), since the disposal of tires is prohibited in the landfill. Hazardous waste is prohibited in the landfill and no dead animals are accepted for disposal. The quantities of sludge generated at the municipal WWTPs are those submitted to the County by the individual municipalities. Septage quantities are those compiled in a report prepared by all the municipalities who accept septage generated in Wicomico County. All the materials removed from waste stream as recyclable are processed and marketed by the County and a report is submitted to MDE annually. Newland Park Landfill leachate is collected and stored onsite in two 1 million gallon storage containment structures. It is then hauled from the landfill site in tankers to the City of Salisbury WWTP for disposal and treatment.

**Table 3-1: Wicomico County Annual Generation of Wastes**

Waste Category	Annual Generation (Tons)			
	2012 Actual	2016 Estimates	2020 Estimates	2024 Estimates
Municipal Solid Waste Residential	11,559	13,010	14,643	16,480
Municipal Solid Waste Commercial	76,843	86,487	97,342	109,560
Industrial (solids, liquid, etc.)	0	0	0	0
Institutional (schools, hospitals etc.)	0	0	0	0
Demolition Debris (rubble)	2,824	3,178	3,577	4,026
Land Clearing	0	0	0	0
Controlled Hazardous Substance	0	0	0	0
Dead Animals	0	0	0	0
Bulky or Special Waste	0	0	0	0
Vehicle Tires	0	0	0	0
WWTP Sludges	2,740	3,084	3,471	3,907
Septage	0	0	0	0
Asbestos	106	119	134	151
Woodwaste/Wood	0	0	0	0
Special Medical Waste	1,264	0	0	0
Litter	183	206	232	261
Household Hazardous Waste	0	0	0	0
<b>Total MRA &amp; NON-MRA Waste Disposed</b>	<b>95,519</b>	<b>107,507</b>	<b>121,001</b>	<b>136,187</b>
<b>Total MRA &amp; NON MRA Recyclables</b>	<b>69,363</b>	<b>78,069</b>	<b>87,867</b>	<b>98,895</b>
<b>TOTAL WASTE GENERATED</b>	<b>164,882</b>	<b>185,576</b>	<b>208,868</b>	<b>235,082</b>
Estimates are based on an annual increase of 3% per year using 2012 as the base year.				
MRA – Maryland Recycling Act				

### 3.2 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. Septage haulers are directed to one of the WWTPs located within Wicomico County.

### 3.3 PERCENT REDUCTION BY RECYCLING

Wicomico County is currently recycling approximately 35 percent of its solid waste as of December 2012. Table 3-2 outlines the type and quantity of each material that is recycled by Wicomico County.

#### 3.3.1 Regional Recycling Efforts

Wicomico County is currently receiving recyclables from the Dorchester and Somerset Counties recycling programs in addition to recyclables from its own collection program. The County processes and markets the recyclables for which the other counties receive credit toward their recycling goals while Wicomico County receives revenues from the sale of recyclable materials.

### 3.3.2 Yard Waste Recycling

The County is not currently recycling yard waste; however, the County Landfill does accept tree limbs and other clean wood into a separate area. The wood is then chipped up in a tub grinder owned by the County and is made available to the public as mulch.

### 3.3.3 White Goods Recycling

The County Landfill currently accepts white goods, which are directed to a separate area. Periodically, the County receives bids from a qualified scrap metal contractor for the white goods stockpile.

**Table 3-2: Wicomico County Annual Recycling Tonnages\***

Recyclable Item	Residential Source (Tons)	Commercial Source (Tons)	Total (Tons)
<b>Compost/Mulch (Yard Waste)</b>			
Grass		300.00	300.00
Leaves		700.00	700.00
Mixed Yard Waste	1,491.95	5,672.93	7,164.88
<b>Compost/Mulch (Other)</b>			
Food Waste		419.55	419.55
Wood Waste		3,603.40	3,603.40
<b>Glass</b>			
Mixed Glass	263.90	16.91	280.81
<b>Metals</b>			
Aluminum Cans	20.04	118.32	138.36
Aluminum Sheets	-----	23.90	23.90
Lead Acid batteries	-----	91.44	91.44
Tin/Steel Cans	57.50	45.14	102.64
White Goods	483.25	837.57	1,320.82
<b>Other Materials</b>			
Textiles/Cloth		548.00	548.00
Tires	107.99	741.00	848.99
<b>Paper</b>			
Magazines/Newspaper	1,169.89		1,169.89
Mixed Paper		365.50	365.50
Newspaper		508.61	508.61
Office/Computer Paper		1,142.70	1,142.70
Old Corrugated Cardboard		5,304.89	5,304.89
Paper Board		92.00	92.00
<b>Plastic</b>			
Mixed Plastic	153.44	330.31	483.75
<b>TOTAL</b>	<b>3,885.88</b>	<b>20,862.17</b>	<b>24,748.05</b>
* From 2012 MRA Tonnage Report for Wicomico County			

### 3.3.4 Types and Quantities of Waste Imported Into the County

Wicomico County receives recyclable materials from Dorchester and Somerset Counties. Table 3-3 summarizes the tonnage of recyclable materials that are being imported into the County for processing.

**Table 3-3: Wicomico County Import Recycling Tonnages (2012)**

Recyclable Item	Total (Tons)
Aluminum	22.75
Bi-Metal	54.02
Cardboard	249.32
Glass	798.17
Metal	2,206.44
Newspapers/Magazines	1,698.17
Plastic	155.00

### 3.3.5 Types and Quantities of Waste Exported out of the County

Wicomico County exports recyclable materials to various recycling vendors. Table 3-4 summarizes the tonnage of recyclables that are being exported out of the County for processing:

**Table 3-4: Wicomico County Export Recycling Tonnages (2012)**

Recyclable Item	Total (Tons)
Aluminum	22.75
Bi-Metal	54.02
Cardboard	249.32
Glass	798.17
Metal	2,206.44
Newspapers/Magazines	1,698.17
Plastic	155.00
Tires	34.19
Yard Mulch (Contracted)	6,909.14
Yard Waste (cubic yards)	1,660 cubic yards

## 3.4 SOLID WASTE COLLECTION SYSTEMS

There are three means of transporting waste to Wicomico County Solid Waste Acceptance Recycling Facilities:

- Municipal
- Private
- Individual.

Municipal collection is available to the residents of the Cities of Salisbury and Fruitland, as well as the Towns of Delmar, Sharptown, Pittsville, Willards, Mardela Springs, and Hebron.



Properties not located in these municipalities must either hire a private hauler or haul their waste themselves.

### 3.4.1 Municipal Trash and Recycling Collection

Table 3-5 indicates how each municipality handles waste collection for its constituents. The City of Salisbury has a curbside pick-up program for recyclables. None of the other municipalities collect recyclables.

**Table 3-5: Municipal Waste Collection in Wicomico County**

Municipality	Collection Frequency
Salisbury	Wednesday – Special Pick-up (Public); Monday –Thursday – Separate Areas (Public) Tuesday – Friday – Separate Areas (Public)
Fruitland	Tuesday – Separate Areas (Public)
Delmar	Thursday (Public)
Pittsville	Thursday (Private)
Sharptown	Tuesday (Private)
Willards	Wednesday (Private)
Hebron	Saturday (Private)
Mardela Springs	Wednesday (Private)

## 3.5 SOLID WASTE ACCEPTANCE AND RECYCLING FACILITIES

There are 11 convenience centers that act as both solid waste and recycling drop-off centers. Eight stations serve solely as recycling drop-off centers. The locations of these convenience centers and recycling drop-off centers, as well as the landfill itself, are shown in Table 3-6. The convenience centers are operated under the supervision of an attendant. The hours of operation are provided in Table 3-7. The recycling drop-off centers are unattended but are located in areas with high public visibility and are accessible 24 hours a day. The amount of waste collected at each recycling center and convenience center is provided in Table 3-8 and Table 3-9. All of the facilities are for public use.

Several private haulers provide waste collection service throughout the County. Those residents not served by either municipal or private collection systems would haul their residential waste to any of the 11 convenience centers strategically located throughout the County to avoid lengthy trips to Newland Park Landfill.

There is one municipal solid waste landfill in operation within Wicomico County at this time entitled the Newland Park Landfill. The landfill operates under a solid waste refuse disposal permit (2010-WMF-02830). The Newland Park Landfill is located at the intersection of Brick Kiln and Owens Branch Roads about 1 mile west of the Salisbury City Limits and encompasses approximately 125 acres. The landfill is located at MD Grid Coordinates N 200,000, E 1,180,000 and identified on Figure 3-1. The landfill is owned and operated by Wicomico County and accepts the solid waste from all of Wicomico County, including the eight municipalities. All solid waste collected by the municipalities, the private haulers, and the convenience centers are

brought to this facility. In addition, all recyclables collected by the recycling drop-off centers are brought to the recycling facilities located at the landfill for processing. All the recyclables are sorted, baled, processed, and are marketed by the County. The anticipated remaining useful life of the Newland Park Landfill is approximately 23 years. Contact for the Newland Park Landfill is Solid Waste Superintendent, Mr. Mark Whitelock and can be reached at (410) 548-4935.

The Peninsula Regional Medical Center (PRMC) Processing Facility operates under a solid waste refuse disposal permit (2001-WPM-0505). The facility is located at 100 East Carroll Street, Salisbury, Maryland with MD Grid Coordinates N186, 000, E 1,201,000. Figure 3-1 depicts the location of the PRMC processing facility which encompasses approximately 22.7 acres. The PRMC is a privately operated non-profit organization with a Board of Trustees. The PRMC primarily servicing downtown Salisbury and Wicomico County is permitted to incinerate and dispose of their medical wastes. The facility accepts and processes/incinerates approximately 5 tons per year of medical wastes. The facility does not landfill incinerated medical waste onsite and thus the remaining useful life is indefinite a component of the sustainability of the hospital rather than landfill capacity. The remaining useful life of the Newland Park Landfill, discussed above, accounts for waste accepted from the PRMC facility.

Bennett Construction and Demolition Processing Facility is a construction and demolition processing facility located at 515 South Camden Avenue, Fruitland, Maryland. The location of the facility is depicted on Figure 3-1 and encompasses approximately 12.8 acres. Contact for the Bennet Construction, Inc. facility is Mr. Bruce Giordano and can be reached at (410) 749-3116. The facility accepts comingled loads of debris from all counties and all haulers. The facility mechanically sorts out all recyclable material from the waste stream thus saving valuable landfill space as well as giving material as second life that would otherwise be destined for final disposal. In addition to the material separation, the facility bales corrugated cardboard, mixed paper, carpet padding, vinyl siding and plastics for shipping to mills for reuse. Further, wood waste is processed through a grinder and reused in a variety of applications. The facility does not landfill construction and demolition debris and thus the remaining useful life is indefinite a component of the sustainability of the business rather than landfill capacity.

**Table 3-6: Wicomico County Recycling Stations**

Station	Location
1. Newland Park Landfill	Newland Park Landfill
2. Cooperative Extension Service	Brick Kiln Road
3. Wicomico Youth and Civic Center	Civic Center Parking Lot
4. WalMart North	North Salisbury Blvd
5. Avery Street	South Division Street
6. Parsonsburg	Eastbound U.S. Route 50
7. Salisbury-Wicomico Airport	Fooks Road
8. Hebron	Railroad Road
9. Delmar	Waller Road
10. Bivalve	Route 349 and Quantico Road intersection
11. Quantico	Route 349
12. Mardela Springs	Athol Road
13. Sharptown	State Street next to Town Hall
14. Allen Station	Walnut Creek Road
15. Willards	Dennis Street
16. Fruitland	Main Street
17. Delmar	Route 675 at Shorestop
18. Wango	Mt. Hermon Road
19. North Lake Park	Jersey Road

**Table 3-7: Convenience Center Hours of Operation**

Convenience Center	Weekdays		
	Daylight Savings Time Operating Hours (May- October)	Standard Time Operating Hours (November-April)	Sunday Operating Hours
Newland Park Landfill	6:00 AM – 8:00 PM	6:00 AM – 8:00 PM	6:00 AM – 8:00 PM
Parsonsburg*	8:00 AM – 6:00 PM	8:00 AM – 5:00 PM	1:00 PM – 5:00 PM
Airport*	8:00 AM – 6:00 PM	8:00 AM – 5:00 PM	1:00 PM – 5:00 PM
Hebron*	8:00 AM – 6:00 PM	8:00 AM – 5:00 PM	1:00 PM – 5:00 PM
Delmar*	8:00 AM – 6:00 PM	8:00 AM – 5:00 PM	1:00 PM – 5:00 PM
Bivalve*	8:00 AM – 6:00 PM	8:00 AM – 5:00 PM	1:00 PM – 5:00 PM
Mardela Springs*	12:00 PM- 6:00 PM	8:00 AM – 5:00 PM	1:00 PM – 5:00 PM
Wango*	8:00 AM – 6:00 PM	8:00 AM – 5:00 PM	1:00 PM – 5:00 PM
Sharptown*	12:00 PM- 6:00 PM	12:00 PM- 5:00 PM	1:00 PM – 5:00 PM
Allen*	8:00 AM – 6:00 PM	8:00 AM – 5:00 PM	1:00 PM – 5:00 PM
Quantico*	8:00 AM – 6:00 PM	8:00 AM – 5:00 PM	1:00 PM – 5:00 PM

\* Closed Tuesdays and Thursdays.

**Table 3-8: 2012 Annual Collection of Recyclables at Recycling Drop-Off Stations**

Drop-Off Stations	Recyclables				
	Aluminum Cans (tons)	Bi-Metal Cans (tons)	Glass (tons)	Plastic (tons)	Newspaper (tons)
Civic Center	1.61	5.96	19.56	17.75	191.19
Cooperative Ext. Service	0.97	2.19	9.84	9.39	85.03
Perdue	0.58	22.11	15.32	8.84	84.22
Fruitland	2.02	4.65	12.63	10.99	107.22
Sharptown	0.19	2.40	2.31	2.02	25.43
Willards	0.18	1.03	4.78	2.84	5.35
North Lake Park					18.52
Super Giant Store	6.09	5.73	33.57	14.72	175.50
Delmar	1.43	3.21	18.51	6.68	65.69
N. Salisbury Elementary	-----	-----	-----	-----	-----

**Table 3-9: 2012 Annual Acceptance at Convenience Centers**

Convenience centers	MATERIALS								
	Total Waste (Tons)	% Waste Stream	Alum. Cans (Tons)	Bi-Metal Cans (Tons)	Glass (Tons)	Plastic (Tons)	News paper (Tons)	Oil (gal)	Card Board (Tons)
Newland Park Landfill	3,317	39.3	2.24	5.61	25.32	12.62	91.88	6,425	149.2
Parsonsburg	1,138	13.5	0.99	4.64	9.40	6.48	38.09	2,400	17.28
Airport	793	9.4	0.61	6.11	5.97	4.16	45.74	1,675	0
Delmar	423	5.0	0.22	0.36	1.61	0.42	9.45	850	2.84
Hebron	394	4.7	0.25	3.46	7.22	1.90	6.56	1,310	9.54
Bivalve	575	6.8	0.31	1.42	5.99	2.84	15.52	845	12.69
Fruitland-Allen	446	5.3	-----	-----	-----	-----	7.22	1,175	.94
Mardela Springs	339	4.0	-----	-----	-----	-----	3.80	650	2.47
Sharptown	290	3.4	0.08	0.91	4.00	1.53	6.53	1,350	4.56
Quantico	230	2.7	0.24	0.54	2.87	1.39	9.70	310	4.81
Wango	490	5.8	0.51	0.74	1.39	1.56	13.39	1,480	5.2
<b>TOTAL</b>	<b>8,435</b>	<b>100.0</b>	<b>5.45</b>	<b>23.79</b>	<b>63.77</b>	<b>32.90</b>	<b>247.9</b>	<b>18,470</b>	<b>209.53</b>
----- Insignificant Quantities.									

**Table 3-10: Public Acceptance Facility Locations**

Facility	Election District	Distance to Newland Park (Miles)
<b>Convenience Centers</b>		
Newland Park	Salisbury	0.0
Parsonsborg	Pittsville	10.5
Airport	Nutters	9.8
Delmar	Delmar	6.0
Hebron	Hebron	6.3
Bivalve	Nanticoke	17.8
Allen	Trappe	12.5
Mardela Springs	Barren Creek	10.8
Sharptown	Sharptown	14.5
Quantico	Quantico	7.8
Wango	Dennis	12.0
	<b>Average</b>	<b>9.8</b>
<b>Drop-Off Recycling Centers</b>		
Civic Center	Parsons	3.8
Cooperative Ext. Service	Salisbury	1.3
Old Ocean City Road (Perdue)	Parsons	6.0
Fruitland	Fruitland	6.8
Willards	Willards	16.0
Vo-tech Center	Salisbury	3.0
South Salisbury Plaza	Camden	3.8
Delmar	Delmar	9.0
	<b>Average</b>	<b>6.6</b>

### 3.5.1 Apartment Building and Condominium Recycling (ABCR) Program

In April, 2012, the Maryland General Assembly passed House Bill 1, Environmental-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 9-1703 of the Environment Article, Annotated Code of Maryland).

Through the cooperation of the Solid Waste Division 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 11 apartment buildings and/or condominiums in the County Jurisdiction, and several within the City of Salisbury Municipality that fall under the scope of the law. The Solid Waste Division has met with the apartment and condominium officials and discussed the requirements of the law including the materials that must be recycled (i.e., plastic, metal, glass containers, and paper) at the identified locations.

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:

**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 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 Department of Public Works (WCDPW) – Responsible for overseeing the Solid Waste Division activities and ensuring that all apartment buildings and condominiums that fall under the requirements are included in the ABCR Program.
3. County Department of Public Works Solid Waste Division (WCDPW-SWD) – 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 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 1 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 record keeping and may report to the County on an annual basis.

***Participating Apartment Buildings or Condominiums (11) in ABCR Program***

1. Chestnut Manor Limited 800 Chestnut St Delmar, MD 21875—410-896-2826
2. Chestnut Manor Associates 501 Chestnut St Delmar, MD 21875—410-896-2826
3. Green Meadow Apts 7380 Gumboro Rd Pittsville , MD 21850—410-835-2768
4. Green Meadow II Apts 7240 Sixty Foot Rd Pittsville , MD 21850—410-835-3560
5. Squires Court Apts 105 Crocket Ave Fruitland, MD 21826—410-546-1450
6. State Street Station Apts 10<sup>th</sup> St Delmar, MD 21875 —410-896-9100
7. Old Meadow Apts 36405 Old Ocean City Rd Willards, MD 21874—410-835-2951
8. Sunny Meadows Apts 209 W Church St Hebron, MD 21830—410-546-8300
9. Ponds Edge Apts 8660 Barbara Ann Way Delmar , MD 21875—410-896-4444
10. Greenway Apts 8568 BiState Blvd Delmar, MD 21875—410-896-3183
11. Talbot Apts 7409 Gumboro Rd Pittsville, MD 21850—410-835-0143

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. **25 April 2014**, County will distribute MDE-approved language of the ABCR Program to the apartment and condominium officials for ABCR Program implementation.
2. **15 May 2014**, apartment and condominium officials will educate the residents about the ABCR Program and discuss the requirements of the law.
3. **1 June 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. **15 July 2014**, apartment and condominium officials finalize and secure recycling services contracts with the private contractors.
5. **On or before 1 October 2014**, residents start collecting and recycling the materials at the participating apartment buildings or condominiums.

***Program Monitoring***

The WCDPW-SWD 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 to keep the residents current on new regulations, laws, and mandates affecting recycling in the apartment buildings or condominiums.

***Program Enforcement***

The WCDPW-SWD will ensure that the recycling at apartments and condominiums will be implemented in accordance with the Sections 9.1703 and 9.1711 of the Environment Article, Annotated Code of Maryland. The County Law Office will determine if the 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.

**3.5.2 Public School Recycling Program**

In accordance with Annotated Code of Maryland, Environment Article 9-1703, the Public School Recycling Program was implemented in 2012.

**Role & Responsibility of the Stakeholders involved in the Program Development**

***Wicomico County Board of Education’s Role & Responsibility***

The Wicomico County Board of Education (WCBOE) is responsible for the implementation of the recycling program for all public schools. WCBOE will designate a Facilities Manager as the individual responsible for the coordination of the recycling program within the schools. WCBOE is providing the recycling collection bins within the schools. The table below summarizes individual roles & responsibilities for the WCBOE.

<b>DESIGNATED PERSONNEL</b>	<b>ROLE/RESPONSIBIITY</b>
WCBOE Facilities Manager Phone: 410-677-4440	Oversees the implementation of the recycling collection program within the public schools.
Public Schools Custodians	Transports the recyclables from the recycling collection bins within the schools to recycling pickup containers located outside the schools.
Selected Recycling Contractor	Vendor selected by WCBOE which collects processes and markets the recyclable materials received at the Public Schools.

***Wicomico County Department of Public Works Role & Responsibility***

The table below summarizes individual roles & responsibilities for the WCDPW-SWD :



<b>DESIGNATED PERSONNEL</b>	<b>ROLE/RESPONSIBIITY</b>
Recycling Coordinator WCDPW-SWD Phone: 410-548-4935	Receives and analyzes the reports from the WCBOE contractors and submits annual recycling report to MDE.

### **Collection & Marketing of Public School Recyclables**

The schools must collect the following recyclables - cardboard liquid containers, corrugated cardboard boxes, magazines, newspapers, plastic bottles, school papers, and textbooks. WCBOE will contract with one contractor for the collection of recyclables. The method of recycling collection will be single stream. WCBOE would contract with two or more contractors in the future for the separate collection of certain recyclable items should single stream collection for all of the school's recyclable items become unavailable. The selected contractor/s will market the materials.

WCBOE shall provide the contractor/s recycling report to WCDPW-SWD which summarizes the amounts and types of recyclable materials collected for each calendar year to by March 1 of the following calendar year. For example, the information submitted on March 1, 2016 would contain the totals for calendar year 2015.

### **List of Public Schools in Wicomico County**

All Wicomico County public schools are directed to participate in school recycling program. The Schools are listed below:

#### **ELEMENTARY SCHOOLS**

Beaver Run Elementary School 31481 Old Ocean City Road Salisbury, Maryland 21804 Phone: 410-677-5101	Chipman Elementary School 711 Lake Street Salisbury, Maryland 21801 Phone: 410-677-5814
Delmar Elementary School 811 South Second Street Delmar, Maryland 21875 Phone: 410-677-5178	East Salisbury Elementary School 1201 Old Ocean City Road Salisbury, Maryland 21802 Phone: 410-677-5803
Fruitland Intermediate School 208 West Main Street Fruitland, Maryland 21826 Phone: 410-677-5805	Fruitland Primary School 208 West Main Street Fruitland, Maryland 21826 Phone: 410-677-5805
Glen Avenue Elementary School 1615 Glen Avenue Extended Salisbury, Maryland 21804 Phone: 410-677-5806	North Salisbury Elementary School 1213 Emerson Avenue Salisbury, Maryland 21801 Phone: 410-677-5807

Northwestern Elementary School 9975 Sharptown Road Mardela Springs, Maryland 21837 Phone: 410-677-5808	Pittsville Elementary School 34404 Old Ocean City Road Pittsville, Maryland 21850 Phone: 410-677-5811
Pemberton Elementary School 1300 Pemberton Drive Salisbury, Maryland 21801 Phone: 410-677-5809	Pinehurst Elementary School 520 South Pinehurst Avenue Salisbury, Maryland 21804 Phone: 410-677-5810
Prince Street Elementary School 400 Prince Street Salisbury, Maryland 21804 Phone: 410-677-5813	Willards Elementary School 36161 Richland Road Willards, Maryland 21874 Phone: 410-677-5819
Westside Intermediate School 8000 Quantico Road Hebron, Maryland 21830 Phone: 410-677-5118	Westside Primary School 6064 Quantico Road Quantico, Maryland 21801 Phone: 410-677-5117

### MIDDLE SCHOOLS

Bennett Middle School 200 East College Avenue Salisbury, Maryland 21804 Phone: 410-677-5140	Mardela Middle School 24940 Delmar Road Mardela Springs, Maryland 21837 Phone: 410-677-5142
Salisbury Middle School 607 Morris Street Salisbury, Maryland 21801 Phone: 410-677-5149	Wicomico Middle School 635 East Main Street Salisbury, Maryland 21804 Phone: 410-677-5145

### HIGH SCHOOLS

James M. Bennett High School 300 East College Avenue Salisbury, Maryland 21804 Phone: 410-677-5141	Mardela High School 24940 Delmar Road Mardela Springs, Maryland 21837 Phone: 410-677-5142
Parkside High School 1015 Beaglin Park Drive Salisbury, Maryland 21804 Phone: 410-677-5143	Wicomico High School 201 Long Avenue Salisbury, Maryland 21804 Phone: 410-677-5146

### OTHER

Facility Services/Print Shop Building 900 Mount Hermon Road Salisbury, Maryland 21804	Infant & Toddler Services 2009 Northwood Drive Salisbury, Maryland 21801
---	--

Phone: 410-677-4505	Phone: 410-677-2550
---------------------	---------------------

**College Facilities Participating in the Collection of Recyclables:**

The college included in this plan is:

<b>NAME OF INSTITUTION &amp; ADDRESS</b>	<b>RECYCLING PROGRAM CONTACT</b>
Wor-Wic Community College 32000 Campus Drive Salisbury, Maryland 21804	Director of Plant Management Phone: 410-334-2933 Fax: 410-334-2955

Wor-Wic Community College (WWCC) currently contracts with a recycling vendor which collects aluminum cans, cardboard, paper and plastic bottles for recycling. There are recycling containers provided by the recycling vendor for aluminum cans and plastic bottles near all of the vending machines and in the cafeteria and several outside locations. There are roll-around carts for office paper located in each building. Cardboard is collected in a separate dumpster provided by the solid waste contractor and is then removed by solid waste contractor who delivers it to the vendor. All of the other materials are picked up by the vendor each week. The Director of Plant Management at WWCC is the individual responsible for the recycling collection program within the school.

Building Contractors whom are awarded capital construction projects are required to recycle their construction waste (metal, concrete, and drywall) to the greatest extent possible and to limit the waste from construction operations that has to be disposed of at the landfill. Vegetable food waste from the cafeteria food preparation operations as well as the culinary arts teaching program is composted, either on-site or by the instructors at home. Obsolete electronics are donated to non-profit organizations.

WWCC is required to provide a report to WCDPW-SWD which summarizes the amounts and types of recyclable materials collected for each calendar year by March 1 of the following calendar year. For example, the information submitted on March 1, 2016 would contain the totals for calendar year 2015.

**Implementation Schedule for the School Recycling Program**

The implementation of the school recycling program is outlined below:

<b>ACTION ITEM</b>	<b>DATE OF IMPLEMENTATION</b>
WCBOE and WCDPW-SWD to include school recycling program items in their budgets	May-June 2011
MDE approves final draft school recycling plan.	July 2011
Wicomico County Council formally adopts the school recycling plan into the County’s Ten-Year Solid Waste Management Plan.	August 2011
WCBOE to implement recycling collection for the public schools.	September 2011
WWCC continues to implement recycling collection.	September 2011

WCDPW-SWD to analyze monthly recycling totals from WCBOE and WWCC and submit annual recycling report to MDE	March 2012
---	------------

### **System for Monitoring the Effectiveness of the School Recycling Program**

WCDPW-SWD will review the monthly recycling totals on a quarterly basis for each of the public schools and based upon the totals collected for each school will recommend changes to WCBOE regarding the Public School recycling plan accordingly. WCDPW-SWD will do the same for WWCC.

The WCBOE Facilities Manager will supervise the WCBOE selected contractor and ensure that the schools participate in the recycling program. The WCBOE Facilities Manager will contact the selected contractor in writing regarding non-compliance issues within 14 days of the date of the observed non-compliance issue and will request that the contractor respond to the non-compliance issue within 14 days of the date of the letter.

### **3.5.3 Fluorescent and Compact Fluorescent Light Recycling Plan**

In accordance with Section 9-1703(b) (11) and Section 9-1703(g) of the Environment Article of the Annotated Code of Maryland, Wicomico County began collecting fluorescent lighting containing mercury in conjunction with the Household Hazardous Waste Drop-off Day starting in 2012. Wicomico County collects fluorescent lighting containing mercury in conjunction with the Household Hazardous Waste (HHW) Drop-off Day. Wicomico County has held one HHW Drop-off Day per year since 2006. The event is held at Wicomico County's Newland Park Landfill Facility. The event is free of charge to residents of Wicomico County. The HHW events are conducted by a licensed hazardous waste collection contractor. The responsibility of the collection of fluorescent lights that contain mercury is to include proper containerization, transportation and recycling of all collected material.

Wicomico County is also planning to negotiate a contract with a private vendor located here in the County for the collection, processing, & marketing of fluorescent lighting containing mercury in the near future. The collection point for fluorescent lighting containing mercury will most likely be Newland Park Landfill.

## 4. SOLID WASTE SYSTEM ASSESSMENT

### 4.1 ASSESSMENT OF COUNTY'S NEEDS/REQUIREMENTS

Currently, Newland Park Landfill is the only landfill in Wicomico County accepting residential, commercial, industrial, and institutional municipal solid waste (MSW). There are 11 convenience centers that act as both solid waste and recycling drop-off centers, and regularly transfer waste to Newland Park. In addition to Newland Park Landfill, there are six other facilities within Wicomico County accepting non-MSW for processing and disposal:

- Bennett Processing Facility – 513-515 South Camden Ave., Fruitland, MD 21826 (Construction and Demolition waste)
- Peninsula Regional Medical Center – 100 East Carroll Street, Salisbury, MD 21801 (Hazardous wastes)

To accurately assess the County's solid waste and recycling requirements, the collection, acceptance, and recycling facilities will be addressed separately. Several alternatives were chosen including both existing and proposed systems. These alternatives will be re-evaluated with each update of the Comprehensive Solid Waste Management Plan as the basis for their feasibility may change. Technological improvements, economic fluctuations, regulatory requirements, and local objectives may change from time to time.

#### 4.1.1 Solid Waste Management

According to estimates presented in Chapter 3, the landfill will be near capacity in the next 23 years. Therefore, the following alternatives have been evaluated:

- Construction of a new County landfill
- Construction of a new regional landfill
- Expansion of existing landfill
- Privatization of acceptance facilities
- Waste-to-energy disposal.

A comparison of these alternatives is provided in Table 4-1.

##### 4.1.1.1 New County Landfill

This alternative would involve phases such as site selection, land acquisition, design and construction of a new landfill, as well as closure of the existing landfill. The site selection process could be a complicated one with public involvement a necessity. Land acquisition could be extremely expensive, as landfill permitting requirements are cumbersome. The design and construction costs could be expected to exceed that of expansion considering several necessary improvements involving access, drainage, and dependent facilities that already exist. Landfill permitting and closure will require compliance with stringent state and federal regulations.

#### **4.1.1.2 Regional Landfill**

In this alternative, a regional landfill would be created in order to serve the solid waste needs of neighboring counties at one centralized location. This regional approach has been used in other parts of the state in recent years. The concept involves creation of a new landfill that would eliminate duplication of efforts while creating a more efficient solid waste operation. The alternative could lend itself well to the use of a material recovery facility. Most facets of operations could be reduced, including equipment, labor, maintenance, management, permitting, design and construction. Another major advantage would involve the recycling effort, which could become more efficient for similar reasons. Disadvantages would include the additional travel expenses, resulting from a larger service area. Another inherent problem may arise with involvement by more than one jurisdiction considering the extent of decision making required of this alternative.

#### **4.1.1.3 Expansion of Existing County Landfill**

This alternative consists of completing the active cells, as well as horizontal expansion adjacent to these cells. Maximizing use of the active cells would be the most cost effective as this operation follows less stringent regulations than those required of new cells and makes more efficient use of landfill space than horizontal expansion. Once vertical expansion is complete, horizontal expansion would be necessary. Expansion of the existing landfill would allow the entire site selection process, as well as land acquisition, to be avoided. The land acquisition phase is one of the most difficult steps due to public opposition. The existing location currently has relatively few neighbors, and is conveniently located near the County's Recycling Processing Center. In fact, several of the neighbors are actually County-related facilities, such as the Roads Division, Recreation and Parks, the Maryland Food Bank, and the Lower Shore Sheltered Workshop. Considering the large, relatively undisturbed amount of land currently owned by Wicomico County, expansion could be expected to continue for many years to come. The central and easily accessible location is a major asset to the existing landfill. Other assets associated with the existing landfill include suitable topography, soil types, and geologic condition. The relatively flat terrain, large supply of clay material, and low groundwater levels make it suitable for landfill construction and solid waste placement. The avoidance of regulatory floodplains, public drainage associations, Chesapeake Bay critical areas, and any delineated tidal or non-tidal wetlands is an important advantage in using the existing location.

#### **4.1.1.4 Private Approach**

This alternative would shift some responsibility from the public sector to the private sector, theoretically reducing the duties and therefore costs to the County, and in turn to its constituents. This private approach has been attempted in other parts of the state in recent years. The concept could involve any of the previous alternatives; therefore, to what extent the private sector could take part would depend upon the alternative chosen. Possibilities vary from a material recovery facility to subcontracting the earthwork. In any case, the County would at least oversee the process to ensure compatibility with this Comprehensive Solid Waste Management Plan. The biggest concern would involve liability and performance, which results from a hands-off

approach by the County. It is anticipated that this approach would be unpopular with the constituents of Wicomico County.

#### 4.1.1.5 Resource Recovery/Renewable Energy Facility

This alternative includes site selection, land acquisition, design and construction of a new Resource Recovery/Renewable Energy Facility. The facility could be located either adjacent to Newland Park Landfill, or at a waterfront site on Marine Road in Salisbury, identified by the County as a suitable location. The waterfront location is currently used to house gas fuel storage tanks, and is adjacent to the WWTP. The County does not currently own any portion of this site, and further discussions with owners would be necessary to determine if the site and its existing infrastructure are suitable for facility development. If constructed, this facility could eventually collect waste in surrounding counties. Involvement of surrounding counties would have many of the same advantages and disadvantages as the regional landfill alternative. Advantages of construction of this facility include economic development in the county, reduction of the generation of greenhouse gases, and a decrease in the dependence on fossil fuels. Disadvantages would include a high cost, and considerable permitting and compliance with state and federal regulations.

**Table 4-1: Comparison of Acceptance Facility Alternatives**

Alternative	Advantages	Disadvantages	Comments
<b>New County Landfill</b>		High Cost; Extensive Site Selection Process	
<b>Regional Landfill</b>	Eliminates Duplication of efforts	Cooperation between jurisdictions; Extensive Site Selection Process; Additional Travel	Material Recovery Facility Compatibility
<b>Expansion of Existing County Landfill</b>	Site Selection Process Avoided; Suitable for Expansion		
<b>Private Approach</b>	County Involvement Reduced	Liability and Performance Guarantee Needed; Probably Unpopular with Constituents	Depends on Marketability
<b>Resource Recovery/Renewable Energy Facility</b>	Economic Development, Reduction of Greenhouse Gases, Decrease in Fossil Fuel Dependence	High Cost; Extensive Site Selection Process	Possible Collaboration with Surrounding Counties in Future

#### 4.1.2 Recycling Collection Systems

The State of Maryland mandates that 20 percent of waste generated must be recycled. Wicomico County typically recycles approximately 35 percent of waste generated, and does not anticipate having issues meeting the state mandate in the future. Alternatives investigated in this section to improve recycle rates are only for the purpose of reducing the amount of solid waste the county must manage, and the associated environmental impact of reducing landfill waste. Alternatives for the collection system for recycling may include:

- Curbside separation program

- System of drop-off centers
- Combination of curbside separation and drop-off centers
- Privatizing the collection systems
- Construction of a Single Stream Recycling Facility.

A comparison of the alternatives is provided in Table 4-2.

#### **4.1.2.1 Curbside Separation Program**

This alternative would place the responsibility of separating recyclables from the waste stream with the public, which may require an extensive public education program. This type of collection system would be expected to collect recyclables at a relatively high recovery rate. For curbside separation to occur within the limits of any municipality, the individual city or town would need to make major modifications to their existing collection system, which could indeed be quite costly. As with the Regional Processing Center, involvement by more than one jurisdiction would require a great deal of cooperation between participants. This system is not being considered at this time.

#### **4.1.2.2 System of Drop-Off Centers**

The drop-off center alternative places the responsibility of separating recyclables from the waste stream with the public and requires an extensive public education program. The county currently has 19 collection centers where citizens can bring sorted recyclables. The costs associated with implementing this type of system would be less as compared to other separation systems. Implementation of a similar system would be natural considering that the majority of the county is currently served by a system of convenience centers for solid waste. Not only are the sites available and conveniently located, but they also allow for recycling when dropping off waste. This alternative is not as productive in terms of total collection of recyclables as compared to a curbside recycling program. However, it has allowed Wicomico County to meet the State's mandatory recycling rate at a cost significantly less than what a curbside recycling program would cost.

#### **4.1.2.3 Combination of Curbside Separation and Drop-Off Centers**

This alternative would combine the use of curbside separation with that of drop-off centers. The urbanized areas would be targeted for curbside separation as these areas are densely populated and produce a large amount of recyclables. The more rural areas of the County would continue to be served by drop-off centers. Considering that a majority of the urbanized portion of Wicomico County lies in the vicinity of the City of Salisbury, this type of collection system could be feasible. However, the option of implementing the curbside separation system lies with the City, as the County does not have any control over it.

#### **4.1.2.4 Private Approach**

Such an alternative would shift some responsibility of collection, as well as processing, from the public sector to the private sector, which should reduce the duties of the County, but in turn may increase the cost to its constituents. Each of the preceding collection systems could be modified



to allow for private enterprise to become involved. To what extent the private sector could take part would depend upon the collection system chosen.

Private enterprise could operate a curbside collection system similar to those currently in use, while a private firm could operate drop-off centers. The County would oversee the system to ensure compatibility with this Comprehensive Solid Waste Management Plan. Liability and performance are a major concern with this type of hands-off approach, considering the ramifications of environmental hazards and dependency on this type of facility. It is anticipated that this approach would be unpopular with the constituents of Wicomico County.

**4.1.2.5 Construction of Single Stream Facility**

The current recycling process requires citizens to sort recyclables at the recycling drop-off locations in containers that have compartments for each type. This model requires staff to pull bins even if some compartments are not full so that transportation costs are considerably higher than if the containers could be left onsite until full. This change would also mean that the County would get out of the business of selling processed commodities and sell the unprocessed recyclables to a vendor that has the capabilities to handle single stream recyclables

**Table 4-2: Comparison of Collection System Recycling Alternatives**

Alternative	Advantages	Disadvantages	Comments
Curbside Separation Program	High Recovery Rate of Recyclables	Inefficient in Rural Areas; Cooperation between Jurisdictions Required	Education Program Necessary
System of Drop-Off Stations	Low Cost	Recycling Goal Questionable	Site Maintenance Important
Combination of Curbside Separation and Drop-off Stations	Efficient in Urban and Rural Areas	Cooperation between Jurisdictions Required	Education Program Necessary
Private Approach	County Involvement Reduced	Liability and Performance Guarantee Needed Probably Unpopular with Constituents	Depends on Marketability
Construction of Single Stream Facility	Convenience	High Cost	Risky Conversion
* Mandated recycling goals at present have already been achieved and any new mandated goals will also be achieved by expanding the recycling program as necessary.			

**4.2 GEOGRAPHICAL CONSIDERATIONS IN LOCATING SOLID WASTE MANAGEMENT FACILITIES**

**4.2.1 Topography and Surface Water Drainage**

Wicomico County topography consists of level to gently rolling terrain. The Nanticoke, Wicomico, and Pocomoke Rivers drain the land creating essentially two areas of high elevation, east and west of Salisbury.

Along the drainage divide near Parsonsburg, elevations range between 60 and 85 feet (ft) above sea level. An elevation of 60 ft appears to prevail over much of the eastern county grading to elevation 20 ft along the Pocomoke River and near sea level along the Wicomico River.

West of Salisbury, in the general vicinity of U.S. Highway Route 50, and in the northern portion of the County near Sharptown, elevations range between 40 and 60 ft above sea level. Since the land tends to drain toward the south and west, the lower portions of the County range from sea level to elevation 40 ft. In general, low-lying areas and marshland are prevalent throughout the southern regions.

The U. S. Natural Resource Conservation Service has identified sub-drainage areas within the three major watersheds. These are listed in Table 4-3 including the acreage of each. Wicomico County lies within sub-basin 02-13-03 called the Nanticoke River Area, which also includes a large portion of Dorchester County.

COMAR 10.50.01, entitled “Water Quality & Water Pollution Control,” designates the level of protection required for each surface water body in the State. The four classes are described below:

- a. **Class I Waters:** All waters of the State shall be protected for use as water contact recreation, for fish, other aquatic life, and wildlife.
- b. **Class II Waters:** Waters of the State which shall be additionally protected for shellfish harvesting.
- c. **Class III Waters:** Waters of the State which shall be additionally protected for “Natural Trout Waters” (those waters capable of supporting natural trout populations including propagation, and their associated food organisms).
- d. **Class IV Waters:** Waters of the State which shall be additionally protected for “Recreational Trout Waters” (those cold or warm waters capable of holding or supporting adult trout for put-and-take fishing, usually seasonal).

In Wicomico County two water classes are designated. **Class I Waters**, by definition, apply to all the surface water bodies. **Class II Waters** are delineated as the estuarine portions of the Nanticoke River and its tributaries below a line from Runaway Point to Long Point, and the estuarine portions of the Wicomico River and its tributaries below the ferry crossing at White Haven.

**Table 4-3: Wicomico County Watersheds**

<b>Watershed</b>	<b>Drainage Area</b>
<b>A. Wicomico River</b>	
1. Johnson Lake	25,639
2. Beaver Dam	16,384
3. Pemberton	10,515
4. Tony Tank	12,090
5. Siloam	13,810
6. Passerdyke Creek	7,373
7. Upper Wicomico	17,577
8. Lower Wicomico	34,411
<b>B. Pocomoke River</b>	
1. Upper Pocomoke *	-----
2. Green Run	9,157
3. Pocomoke	92,537
4. Aydelotte	12,470
5. Franklin Branch	3,162
6. Powellville	14,410
7. Timmonstown	8,655
8. Ninepin	6,300
9. Coonfoot	4,000
10. Nassawango	46,410
11. Dividing Creek	36,900
12. Blackdam	9,152
13. Pocomoke	37,181
14. Rehoboth Branch	5,000
<b>C. Nanticoke River</b>	
1. Middle Nanticoke *	-----
2. Broad Creek	-----
3. Sharptown	19,970
4. Marshyhope *	-----
5. Lower Marshyhope	41,064
6. Lower Marshyhope	28,772
7. Barren Creek	22,536
8. Rewastico Creek	19,540
9. Quantico Creek	16,665
10. Wetipquin Creek	7,480
* Drainage area in Delaware.	

## 4.2.2 Geology

The geologic structure underlying Wicomico County is characteristic of the Atlantic Coastal Plain sedimentary deposits which developed through geologic time. The sediments overlie the crystalline bedrock and range from 4,000 to 6,000 ft thick. A stratigraphic section delineating the various formations resembles a wedge-shaped mass, which begins along the Fall Line and gradually increases in depth toward the Atlantic Ocean. The age and characteristics of the formations correspond to the periodic fluctuation of sea level over time plus change in the marine environment. The Maryland Geological Survey, in cooperation with the U.S. Geological Survey, has compiled extensive data on the lithology and hydrogeology of Wicomico County in conjunction with their studies of Maryland's lower eastern shore. This plan includes the basic detailed information, identified in Tables 4-4 and 4-5 (Rasmussen and Slaughter 1955).

The Salisbury Paleochannel is considered a significant sub-formation located within the Pleistocene Deposits. It is a prolific source of groundwater, which can be easily developed to serve the future demands of Wicomico County. COMAR 26.08.02.09, Ground Water Quality Standards, provides for the protection of the underground waters of the state. This regulation requires approval from MDE prior to the discharge or disposal of any waters or wastewater into underground waters. The regulation stipulates the following requirements:

- 1) A State Discharge Permit shall be required for:
  - a) Wastewater effluent disposed of by means of spray or other land irrigation systems;
  - b) Groundwater recharge systems;
  - c) Discharge of leachate from a sanitary landfill to surface or ground water; and
  - d) Other subsurface sewage disposal systems not specifically exempted in this regulation.
  
- 2) A State Discharge Permit shall not be required for:
  - a) Landfills designed to achieve natural attenuation of leachate and permitted under Environment Article, §9-204 or 9-224, unless there is a discharge of leachate to surface waters of the State;
  - b) Subsurface sewage disposal systems utilizing soil absorption and regulated by the State Department of the Environment;
  - c) Sewage sludge composting or disposal operations permitted by the Department under Environment Article, Title 9, Subtitle 2, Part III, Annotated Code of Maryland, unless there is a direct discharge of wastewater to surface waters of the State; and
  - d) Other subsurface disposal systems permitted by the Department under the provisions of COMAR 26.08.04.08.

In addition, MDE has identified three aquifer types for the purpose of controlling the pollution of groundwater. The characteristics of each aquifer type have been determined; however, specific

designations are determined individually after detailed investigation by the Department of Natural Resources and MDE. The following aquifer types are specified in COMAR 26.08.02.09.

- 1) **Type I Aquifer:** means an aquifer having a transmissivity greater than 1,000 gallons per day per foot and permeability greater than 100 gallons per day per square foot. In addition, the total dissolved solids concentration for natural water in each aquifer shall be less than 500 milligrams per liter.
- 2) **Type II Aquifer:** means an aquifer having either:
  - a. A transmissivity greater than 10,000 gallons per day per foot, a permeability greater than 100 gallons per day per square foot and natural water with a total dissolved solids concentration of between 500 and 6,000 milligrams per liter; or
  - b. A transmissivity between 1,000 and 10,000 gallons per day per foot, a permeability greater than 100 gallons per day per square foot and natural water with a total dissolved solids concentration of between 500 and 1,500 milligrams per liter.
- 3) **Type III Aquifer:** means all aquifers other than Type I and Type II Aquifers.

### 4.2.3 Soils

The percentage of the major soils within each soil association and the total occupied acreage are presented in Table 4-4. The Maryland Department of Planning, in cooperation with the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service, developed a new classification system for Maryland soils. This system, Natural Soil Groupings, arranges or associates soils having similar major properties and features related to specific land uses. Six characteristics were selected for the classification basis: agricultural productivity, erosion susceptibility, permeability, depth to bedrock, depth to water table, and stability. Natural Soil Group maps are prepared over the detailed soil survey maps. These groupings are similar to the original soil associations in that they force generalizations on specific soil types. The Maryland Department of Planning emphasizes that the Natural Soil Groupings system must be used in conjunction with the more detailed USDA Soil Survey delineation. Table 4-5 presents specific information relative to the Comprehensive Solid Waste Management Plan. This information can be correlated to the detailed Soil Survey Maps and the more general Natural Soil Group Maps, which are available from the District Natural Resources Conservation Service. Since the initial work of USDA, soil types have been evaluated to determine their suitability for specific land and engineering uses. Much of this information is included in revised editions of later soil surveys and is keyed to specific mapping units (Fa, Ek, etc.).

**Table 4-4: Wicomico County Soil Association Distribution**

<b>Association</b>	<b>Proportional Distribution Within Each Association (%)</b>	<b>Acres</b>	<b>Proportion of County (%)</b>
Fallsington – Woodstown – Sassafras	45 25 20 (10 % minor soils)	41,000	17
Matapeake – Mattapex – Othello	30 30 30 (10% minor soils)	7,200	3
Othello – Fallsington – Portsmouth	70 15 10 (5% minor soils)	12,000	5
Evesboro – Klej	35 30 (35% minor soils)	34,000	14
Elkton – Matawan – Bayboro	55 20 10 (15% minor soils)	27,000	11
Pocomoke – Fallsington	45 40 (15% minor soils)	56,000	23
Muck	95 (5% minor soils)	5,500	2
Tidal Marsh	95 (5% minor soils & beaches)	16,500	7
Matawan – Norfolk	50 35 (15% minor soils)	44,000	18

**Table 4-5: Wicomico County Soil Characteristics**

Soil Conservation Service (SCS) and State Planning Soil Typology Inventory					State Planning Soil Limitations and Suitabilities For Selected Uses		
SCS Map Symbol	SCS Mapping Unit	Capability Group	Acres	Natural Soil Group	Septic Tank Absorption Field	Liquid Waste Disposal	Sewage Sludge Land Disposal
Ba	Bayboro loam	IIIw-9	2,295	F3	severe 3,5	severe 3,5,10,19	severe 3,10,24,25
Bb	Bayboro silt loam	IIIw-9	320	F3	severe 3,5,10,19	severe 3,5,10,19	severe 3,5,24,25
Be	Beaches	VIIIIs-2	199	A2	severe 1,3,11,18,20	unsuitable 11,12,18,20,22	not suitable 20,22,24
Bo	Borrow Pits	VIIIIs-4	130	Bp	-----	-----	-----
DoA	Downer loamy sand, 0-2 %	IIs-4	2,151	Ala	slight 11,20	severe/moderate 11,12,20,22	severe
DoB2	Downer loamy sand, 2-5% slopes, moderately eroded	IIs-4	3,134	Ala	slight 11,20	severe/moderate 11,12,20,22	severe
DoC	Downer loamy sand, 5-10% slopes, severely eroded	IIIe-33	237	Ala	slight 11,20	severe/moderate 11,12,20,22	severe
Ea	Elkton loam	IIIw-9	3,585	F3	severe 3,5	severe 3,5,10,19	severe 3,10,24,25
Ek	Elkton sandy loam	IIIw-11	10,581	F3	severe 3,5	severe 3,5,10,19	severe 3,10,24,25
Em	Elkton silt loam	IIIw-9	697	F3	severe 3,5	severe 3,5,10,19	severe 3,10,24,25
En	Elkton silty clay loam	IIIw-11	52	F3	severe 3,5	severe 3,5,10,19	severe 3,10,24,25
EoD	Evesboro loamy sand, 5-15% slopes	VIIIs-1	2,069	Alb	moderate 1,10,20	severe/moderate 11,12,20,22	severe 20,22,24
EpB	Evesboro loamy sand, clayey substratum 0-5% slopes	IIIIs-1	8,800	Ala	slight 11,20	severe/moderate 11,12,20,22	severe 20,22,24
ErD	Evesboro sand, 5-15% slopes	VIIIs-1	1,824	Alb	moderate 1,10,20	severe/moderate 11,12,20,22	severe 20,22,24
ErD	Evesboro sand, 5-15% slopes	VIIIs-1	1,824	Alb	moderate 1,10,20	severe/moderate 11,12,20,22	severe 20,22,24
EsB	Evesboro loamy sand, clayey substratum 0-5% slopes	IVs-1	4,629	Ala	slight 11,20	severe/moderate 11,12,20,22	severe 20,22,24

Soil Conservation Service (SCS) and State Planning Soil Typology Inventory					State Planning Soil Limitations and Suitabilities For Selected Uses		
SCS Map Symbol	SCS Mapping Unit	Capability Group	Acres	Natural Soil Group	Septic Tank Absorption Field	Liquid Waste Disposal	Sewage Sludge Land Disposal
EtF	Evesboro soils, 15-40% slopes	VIIIs-1	238	Alc	severe 1,11,20	severe 1,11,12,20,22	severe 20,22,24
EvD	Evesboro-Galestown sands, 5-15% slopes	VIIIs-1	2,392	Alb	moderate 1,10,20	severe 3,5,10,19	severe 20,22,24
EwB	Evesboro-Galestown sands, 5-15% slopes	IVs-1	1,882	Ala	slight 11,20	severe 3,5,10,19	severe 20,22,24
EyC	Evesboro – Galestown-Downer loamy sands, 0-10%	IIIIs-1	933	Ala	slight 11,20	severe 3,5,10,19	severe 22,25
Fg	Fallsington loam	IIIw-7	2,339	F2	severe 3,20	severe 3	severe 22,25
Fs	Fallsington fine sandy loam	IIIw-6	20,886	F2	severe 3,20	severe 3	severe 22,25
GaD	Galestown loamy sand, 5-15% slopes	VIIIs-1	592	Alb	moderate 1,10,20	severe/moderate 11,12,20,22	severe 20,22,24
GcB	Galestown loamy sand, clayey substratum, 0-5% slopes	IIIIs-1	6,401	Ala	slight 11,20	severe/moderate 11,12,20,22	severe 20,22,24
KeA	Keyport silt loam, 0-2% slopes	IIw-8	269	E2a	severe 4,5	severe 2,4,5,19	moderate 4,8,25
KeA	Keyport silt loam, 2-5% slopes	IIe-13	93	E2a	severe 4,5	severe 2,4,5,19	moderate 4,8,25
KsA	Klej loamy sand, 0-2% slopes	IIIw-10	11,424	E1	moderate 3,20	moderate 2,3	severe 3,20,22
KsB	Klej loamy sand, 2-5% slopes	IIIw-10	2,856	E1	moderate 3,20	moderate 2,3	severe 3,20,22
Le	Leon loamy sand	Vw-5	1,080	F1	severe 3,7,11,20	severe 3,7,11,22	severe 20,22,24
Ma	Made land	-----	687	Ma	-----	-----	-----
MdA	Matapeake fine sandy loam, 0-2% slopes	I-5	244	Bla	slight, none	slight, none	moderate/ slight 22
MdB2	Matapeake fine sandy loam, 0-2% slopes	IIe-5	240	Bla	slight, none	slight, none	moderate/ slight 22
MeA	Matapeake silt loam, 0-2% slopes	I-4	1,153	Bla	slight, none	slight, none	moderate/ slight 22
MeB2	Matapeake silt loam, 2-5% slopes	IIe-4	874	Bla	slight, none	slight, none	moderate/ slight 22
MeC	Matapeake silt loam, 5-10% slopes	IIIe-4	219	Bla	slight, none	slight, none	moderate/ slight 22



Soil Conservation Service (SCS) and State Planning Soil Typology Inventory					State Planning Soil Limitations and Suitabilities For Selected Uses		
SCS Map Symbol	SCS Mapping Unit	Capability Group	Acres	Natural Soil Group	Septic Tank Absorption Field	Liquid Waste Disposal	Sewage Sludge Land Disposal
MfA	Matawan fine sandy loam, 0-2% slopes	IIw-10	2,209	E2a	severe 4,5	severe 2,4,5,19	moderate 4,8,25
MfB	Matawan fine sandy loam, 2-5% slopes	Ile-36	233	E2a	severe 4,5	severe 2,4,5,19	moderate 4,8,25
MmA	Matawan loamy sand, 0-2% slopes	IIw-10	10,297	E2a	severe 4,5	severe 2,4,5,19	moderate 4,8,25
MmB	Matawan loamy sand, 2-5% slopes	Ile-36	2,335	E2a	severe 4,5	severe 3,4,5,19	moderate 4,8,25
MmC	Matawan loamy sand, 5-10% slopes	Ile-36	315	E2a	severe 4,5	severe 3,4,5,19	moderate 4,8,25
MmE	Matawan loamy sand, 10-30% slopes	Ile-36	173	E2b	severe 1,4,5	severe 3,4,5,19	moderate 4,8,25
MnA	Matawan sandy loam, 0-2% slopes	IIw-10	9,491	E2a	severe 4,5	Severe 3,4,5,19	moderate 4,8,25
MnB	Matawan sandy loam, 2-5% slopes	Iie-36	1,256	E2a	severe 4,5	severe 3,4,5,19	moderate 4,8,25
MpA	Mattapex loam, 0-2% slopes	IIw-1	428	E3a	severe 3,6	moderate 3,6	severe 3,20,22
MpB	Mattapex loam, 2-5% slopes	Iie-16	140	E3a	severe 3,6	moderate 3,6	severe 3,20,22
MtA	Mattapex silt loam, 0-2% slopes	IIw-1	2,045	E3a	severe 3,6	moderate 3,6	severe 3,20,22
MtB	Mattapex silt loam, 0-2% slopes	IIw-1	386	E3a	severe 3,6	moderate 3,6	severe 3,20,22
Mu	Muck	IVw-7	5,476	G2	severe 3,6,7,20	severe 3,7,20	severe 3,7,20,22
Mv	Mixed Alluvial Land	VIw-1	4,483	G2	severe 3,6,7,20	severe 3,7,20	severe 3,7,20,22
NoA	Norfolk loamy sand, 0-2% slopes	IIs-4	11,033	Bla	slight/none	slight/none	slight/moderate 22
NoB	Norfolk loamy sand, 2-5% slopes	IIs-4	3,101	Bla	slight/none	slight/none	slight/moderate 22
NoC	Norfolk loamy sand, 5-10% slopes	IIIe-3	503	Bla	slight/none	slight/none	slight/moderate 22
NsD	Norfolk & Sassafras soils, 10-15% slopes	IVe-5	463	Blb	moderate 1	slight/none	slight/moderate 22
NsE	Norfolk & Sassafras soils, 15-30% slopes	VIe-2	345	Blc	severe 1	moderate 1	moderate/severe 1,22

Soil Conservation Service (SCS) and State Planning Soil Typology Inventory					State Planning Soil Limitations and Suitabilities For Selected Uses		
SCS Map Symbol	SCS Mapping Unit	Capability Group	Acres	Natural Soil Group	Septic Tank Absorption Field	Liquid Waste Disposal	Sewage Sludge Land Disposal
Ot	Othello silt loam	IIIw-7	17,232	F3	severe 3,5	severe 3,5,10,19	severe 3,10,24,25
Ow	Othello silt loam, low	Vw-1	551	F3	severe 3,5	severe 3,5,10,19	severe 3,10,24,25
Pe	Plummer loamy sand	IVw-6	6,004	F1	severe 3,7,11,20	severe 3,7,11,22	severe 20,22,24
Pk	Pocomoke loam	IIIw-7	12,275	F2	severe 3,20	severe 3	severe 22,25
Po	Pocomoke sandy loam	IIIw-6	14,939	F2	severe 3,20	severe 3	severe 22,25
Pr	Portsmouth sandy loam	IIIw-6	1,622	F3	severe 3,5	severe 3,5,10,19	severe 3,10,24,25
Pr	Portsmouth silt loam	IIIw-7	941	F3	severe 3,5	severe 3,5,10,19	severe 3,10,24,25
Ru	Rutlege loamy sand	IVw-6	2,580	F1	severe 3,7,11,20	severe 3,7,11,22	severe 20,22,24
SaA	Sassafras fine sandy loam, 0-2%	I-5	614	Bla	slight/none	slight/none	slight/moderate 22
SaB	Sassafras fine sandy loam, 2-5% slopes	Iie-5	512	Bla	slight/none	slight/none	slight/moderate 22
SsA	Sassafras sandy loam, 0-2% slopes	I-5	2,741	Bla	slight/none	slight/none	slight/moderate 22
SsB2	Sassafras sandy loam, 2-5% slopes, moderately eroded	Iie-5	1,919	Bla	slight/none	slight/none	slight/moderate 22
SsC2	Sassafras sandy loam, 5-10% slopes, moderately eroded	IIIe-5	181	Bla	slight/none	slight/none	slight/moderate 22
Sw	Swamp	VIIw-1	90	F1	severe 3,7,20	not suitable	not suitable 3,7
Tm	Tidal Marsh	VIIIw	14,184	G3	severe 3,7,20	not suitable	not suitable 3,7
WfA	Woodstown fine sandy loam, 0-2% slopes	IIw-5	1,619	E1	moderate 3,20	moderate 2,3	moderate 3,20,22
WfB	Woodstown fine sandy loam, 2-5% slopes	IIc-36	498	E1	moderate 3,20	moderate 2,3	moderate 3,20,22
WoA	Woodstown loam, 0-2% slopes	IIw-1	262	E1	moderate 3,20	moderate 2,3	moderate 3,20,22
WsA	Woodstown sandy loam, 0-2% slopes	IIw-5	6,290	E1	moderate 3,20	moderate 2,3	moderate 3,20,22

Soil Conservation Service (SCS) and State Planning Soil Typology Inventory					State Planning Soil Limitations and Suitabilities For Selected Uses		
SCS Map Symbol	SCS Mapping Unit	Capability Group	Acres	Natural Soil Group	Septic Tank Absorption Field	Liquid Waste Disposal	Sewage Sludge Land Disposal
WsB	Woodstown sandy loam, 2-5% slopes	IIC-36	1,095	E1	moderate 3,20	moderate 2,3	moderate 3,20,22
<b>KEY TO PRINCIPAL SOIL LIMITATIONS</b> 1. Moderate to moderately slow permeability 2. Flooding or ponding hazard 3. Seepage problems in cuts 4. Engineering classification of material 5. Clayey, plastic material 6. Very Sandy 7. Inadequate moisture supply 8. Sandy Substratum 9. Slope, erosion and runoff hazard 10. Seasonal or fluctuating high water table 11. Seasonal perched water table 12. Slow permeability 13. Mostly rippable bedrock at depths of less than 20 in. 14. Stony 15. Rocky 16. Poor Stability 17. Slow infiltration 18. Pollution hazard 19. High potential frost action 20. Excessive seepage hazard 21. Coarse fragments 22. Poor trafficability 23. Slow to dry							

#### 4.2.4 Chesapeake Bay Critical Area Program

Development along the shorelines is regulated by the Wicomico County Chesapeake Bay Critical Area Program, except for the incorporated municipalities which are in the midst of adopting their own programs. These programs have established criteria for use of land within 1,000 ft of the bay, any tributary, or wetlands. The land use management areas have been classified as follows:

- **Intensely Developed Areas** are areas where residential, commercial, institutional, and/or industrial/developed land uses predominate, and where relatively little natural habitat occurs.
- **Limited Development Areas** are areas that are currently developed in low or moderate intensity uses. They also contain areas of natural plant and animal habitats. The quality of runoff from these areas has not been substantially altered or impaired.
- **Resource Conservation Areas** are areas characterized by nature (Example – agriculture, forestry, fishery activities, aquaculture).

Only four of the eight incorporated municipalities in Wicomico County lie within the Critical Areas and include Salisbury, Fruitland, Sharptown, and Mardela Springs. See Figure X for a map of critical areas in Wicomico County, each of which anticipate implementing their programs once approved by the Chesapeake Bay Critical Area Commission. The Wicomico County Chesapeake Bay Critical Area Program was adopted on 13 October 1989, and is administered by the Wicomico County Planning and Zoning Office.

#### 4.3 SOURCE SEPARATION AND SOURCE REDUCTION

Source separation is defined as the setting aside of recyclable waste materials at the point of generation by the generator. This separation is followed by transportation of recyclable materials

from their point of generation to a central collection point. As previously discussed, emphasis has been placed on recycling efforts.

As markets are found, recyclable materials are collected. Wicomico County currently recycles glass, plastic, motor oil, aluminum cans, bi-metal cans, white goods, anti-freeze, cardboard, and newspaper. These items are separated at homes, offices and other places of business, and transported to the acceptance facilities and/or Recycling Processing Center, located at the Newland Park Landfill. These materials eventually reach markets, which can use this material. Source reduction refers to reducing and/or eliminating waste materials at their point of generation by the generator. The County has encouraged source reduction through education by discussing the importance of using both recycled and recyclable materials in order to reduce the amount of waste reaching the landfill. One method often suggested is composting, which could be accomplished at the individual level. The County already turns the natural wood waste into mulch by means of a tub grinder. Both wood and yard wastes are being collected separately at this time for that purpose. Another method used by the County involves the use of recycled and/or recyclable materials in County projects including such items as picnic tables and bulkhead materials made from recyclables.

The County maintains the infrastructure at the Newland Park Landfill what could make solid waste composting feasible. The County currently process natural wood waste into mulch as described above. The area utilized for natural wood waste processing could be used to establish and operate a small scale solid waste composting facility. Prior to the establishment of a solid waste compost facility, the County would notify the MDE in writing to request authorization.

#### **4.4 PUBLIC EDUCATION PROGRAMS FOR RECYCLING AND IDENTIFYING SECONDARY RECYCLING MARKETS**

Consumer education is essential to the effectiveness of recycling. Wicomico County distributes handouts at its convenience centers that outline the drop-off program in terms of what is recycled and how to do it. Each convenience center has descriptive signs that inform the residents and provide direction on how to recycle the various items accepted and which items are not accepted in the recycling containers. Chapter 5 provides further detail regarding recycling programs within public schools, community college, apartments, and condominiums. With the implementation of recycling efforts, County personnel provide letters to the impacted owners or owners' representatives.

##### **4.4.1 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 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 convenience centers 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
- Convenience center 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.

### **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.

#### **4.5 ASBESTOS DISPOSAL CAPACITY FOR DISPOSAL**

Asbestos may be disposed of at the Newland Park Landfill site only. There is a designated area in the landfill for the disposal of asbestos. Asbestos disposed of at the landfill must be packaged and labeled in accordance with COMAR 26.11.15.04. Procedures for disposal of friable asbestos are as specified in COMAR 02.04.07.13 and are as follows:

- 1) A minimum 24-hour notice to the landfill supervisor to provide the following information: delivery, source, and quantity.
- 2) Personnel handling the asbestos must wear disposal-protective clothing and respirators.
- 3) The asbestos is to be handled with care to reduce the emission of fibers into the air. Asbestos is then to be placed in the designated asbestos disposal area of the landfill.
- 4) The asbestos shall be placed in a trench and completely covered with cover soil.

#### **4.6 EMERGENCY RESPONSE PROGRAMS AND PROCEDURES FOR EMERGENCY WASTE DISPOSAL**

All emergency responses in the County are coordinated by the County's Emergency Management Agency.

This agency has plans written on 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 the County's Emergency Management Agency 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 Wicomico County Emergency Management Agency who will in-turn contact the Wicomico County Health Department and MDE.

MDE has primary responsibility for further responding to the incident. In addition, MDE has a trained Hazardous Materials (HazMat) team and has authority to call on the EPA 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.

#### **4.6.1 Hurricane Cleanup**

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

1. The Wicomico County Executive and Council has the ability to waive the regular tipping fee for construction and demolition (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 Newland Park Landfill Facility for proper disposal.

#### **4.7 ADEQUACY OF LOCAL ZONING AND COUNTY'S LAND USE PLAN TO AUTHORIZE AND SITE SOLID WASTE FACILITIES**

The current public landfill site at Newland Park is not expected to near capacity within the 10-year planning period. Therefore, the Wicomico County Comprehensive Plan 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 Wicomico County 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 EFFECTIVE PLANNING PERIOD**

The effective planning period for this document is 2014–2024.

### **5.2 MANAGEMENT OF SPECIFIC WASTE STREAMS**

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 convenience centers and is weighed before being disposed of in the landfill.

All recyclable material is weighed as it leaves the Newland Park 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 Municipal Solid Waste**

MSW is currently being disposed of in the Newland Park Municipal Landfill from in-county sources only. The transfer of MSW to a solid waste acceptance facility outside Wicomico County is not an option or being considered as an option at this time.

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

#### **5.2.3 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.

#### **5.2.4 Industrial Waste**

Management methods for industrial waste are the same as those for commercial waste. No industrial liquids or septage 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.



### 5.2.5 Institutional Waste

County facilities accept institutional waste from the following sources:

**Schools**—The County facilities accept waste from the Board of Education. Waste collection is contracted out and managed similar to the services detailed under the commercial section above.

**Hospitals**—Peninsula Regional Medical Center located in the City of Salisbury 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 Newland Park Landfill Facility.

**Government**—Refuse that is generated by County and State governments located within Wicomico County.

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.

### 5.2.6 Controlled Hazardous substances

The Wicomico County Newland Park Landfill Facility is not permitted to accept any hazardous waste as defined in the COMAR regulations. The businesses producing hazardous waste within Wicomico 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 Maryland Environmental Service under contract to the WCDPW-SWD.

Wicomico 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 Newland Park Landfill Facility or any of the convenience 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 Tire Disposal

Tires received from residents are stockpiled at the Wicomico County Solid Waste Division Facility and are disposed of through a private tire contractor (Dirt Express, Inc.). The current scrap tire facility license allows Wicomico County Solid Waste Division to stockpile up to 1,500 tires.

### **5.2.8 Wastewater Treatment Plant Sludge Disposal**

Municipal sludge is currently reused for agricultural use and accepted at permitted farmlands and accepted at the County's Newland Park Municipal Landfill. There are currently proposed bills in the Maryland House of Delegates and Senate that may restrict the application of sludge onto farmland.

### **5.2.9 Clearing Debris and Wood Waste**

The County owns its own tub grinder and is grinding natural wood waste (tree limbs, small stumps, etc.) and wood pallets coming from residents and commercial landscapers and tree services. The wood waste recycling area is a separate area within the Solid Waste Division Facility. The public and landscaping and tree service businesses may purchase wood chips/mulch.

### **5.2.10 Construction and Demolition Debris**

C&D debris, such as concrete, bricks, and asphalt, is accepted at Newland Park Municipal Landfill. C&D debris is also accepted by a private recycler called Stonetech, which is located near the landfill on property owned by the County. This material is recycled and sent back to the market place by private enterprise. Stonetech leases a piece of land at the landfill to run this operation. This practice is expected to continue for at least another 2 years. The remainder of the rubble, which is not recyclable, will be accepted at the County landfill. No out-of-county waste rubble is accepted at the Newland Park Landfill. C&D debris can also be disposed of at a private facility, Bennett Processing Facility.

### **5.2.11 Bulky or Special Waste**

This type of waste is collected at the Newland Park Landfill and stockpiled for a 3-month period, at which time bids are received from various scrap metal recyclers for these items, which are compacted into cubes and then carried by tractor trailer to the market source. The selected vendor is responsible for removing refrigerant gases from refrigerators, freezers, and air conditioners in the scrap metal pile.

### **5.2.12 Septage**

Septage generated within Wicomico County is taken to various sewage treatment plants outside of Wicomico County. Refer to Chapter 3 for further information.

### **5.2.13 Leachate Management**

The Newland Park Landfill is currently producing approximately 1.4 million gallons of leachate per year. The leachate storage system consists of two tanks, each having a capacity of 1 million gallons, and these tanks are contained within a secondary containment structure. Leachate is removed from the landfill by means of a transmission piping network to the leachate storage area and from there is hauled to the City of Salisbury WWTP for treatment and disposal. The County

is investigating the possibility of constructing a sewer line connection between the leachate tank facility and a City of Salisbury sewer connection point at the Business Park Complex.

#### **5.2.14 Dead Animals and Litter**

**Dead Animals**—The Newland Park 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 roadside 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.

### **5.3 RECYCLING COLLECTION AND PROCESSING**

Currently there are 11 convenience centers and 8 recycling drop-off centers in Wicomico County where sorted recycling is accepted. Recycling can be transported via municipal curbside pick-up, private collection, or individual collection. Currently the City of Salisbury has the only municipal curbside pick-up program for recyclables. These centers accept aluminum cans, bi-metal cans, cardboard, glass, anti-freeze, oil, plastic, newspaper, magazines, and yard waste, depending on the facility. White goods and electronic waste are only accepted at the Newland Park Landfill station.

### **5.4 SPECIAL RECYCLE PROGRAMS**

Five special recycling programs have been implemented since the most recent Solid Waste Management Plan. These programs are in response to Annotated Code of Maryland, Environment Article 9-1703

#### **5.4.1 Special Events Recycling Plan**

##### **Special Events Subject to the Recycling Program**

Environment Article, §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 persons 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

<u>Salisbury Zoological Park</u> <u>755 South Park Drive</u> <u>P.O. Box 2979</u> <u>Salisbury, MD 21801-2979</u> <u>Phone (410) 548-3188</u>	<u>City Park</u> <u>City of Salisbury Department of Public Works</u> <u>125 N. Division Street, Room 202</u> <u>Salisbury, MD 21801</u> <u>Phone (410) 548-3170</u>
<u>Salisbury Main Street</u> <u>125 N. Division Street</u> <u>Salisbury, MD 21801</u> <u>Phone (410) 677-1915</u>	<u>Fruitland Recreational Park</u> <u>200 Brown Street</u> <u>Fruitland, Maryland 21826</u> <u>Phone (410) 548-4870</u>

### COUNTY OWNED SITES

<u>Billy Gene Jackson</u> <u>420 N. Lake Park Dr.</u> <u>Salisbury, MD 21801</u>	<u>Cedar Hill</u> <u>Cedar Hill Parkway</u> <u>Bivalve, MD 21814</u>
<u>East Wicomico Little League</u> <u>31620 Winterplace Parkway</u> <u>Salisbury, MD 21801</u>	<u>Eastside Youth Sports Complex</u> <u>7391 W. Adkins Ave</u> <u>Willards, MD 21874</u>
<u>Harmon Field</u> <u>409 Church Hill Ave</u> <u>Salisbury, MD 21804</u>	<u>Hebron Park</u> <u>212 W Church Street</u> <u>Hebron, MD 21830</u>
<u>Henry Parker AC</u> <u>711 Naylor Mill Road</u> <u>Salisbury, MD 21801</u>	<u>Leonards Mill</u> <u>2848 Leonards Mill Pond Pk</u> <u>Salisbury, MD 21801</u>
<u>Schumaker</u> <u>1019 South Schumaker Dr.</u> <u>Salisbury, MD 21804</u>	<u>Sharptown (Gene Lowe)</u> <u>714 State Street</u> <u>Sharptown, MD 21861</u>
<u>Willards Park</u> <u>W Adkins Ave</u> <u>Willards, MD 21874</u>	<u>Winter Place Community Park</u> <u>6737 Blue Ribbon Road</u> <u>Salisbury, MD 21804</u>
<u>Wicomico County Youth and Civic</u>	<u>Wicomico County Board of Education*</u>

<u>500 Glen Avenue</u> <u>Salisbury, MD 21804</u> <u>Phone (410) 548-4900</u>	<u>101 Long Ave</u> <u>Salisbury, MD 21804</u> <u>Phone (410) 677-4400</u>
---	--

\* Wicomico County Board of Education recycling program requirements are discussed further in Section 5.4.2

With the exception of the county-owned facilities that have an identified contact phone number, the contact and phone number for the County-Owned sites is the Wicomico County Department of Recreation and Parks (410) 548-4870.

There are no state or federally owned parks within Wicomico County.

### **Materials and Obligations**

Special events organizers are responsible for:

1. Providing and placing recycling 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 drop-off site;
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. While the County currently does not recycle food scraps, if services become available, the special events organizer must provide for food scraps recycling, including provision of 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 program 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.

### **Stakeholders**

The following stakeholders will be involved in the SERP:

1. WCDPW-SWD: Responsible for overseeing recycling activities and assuring that all properties that potentially host events falling under the recycling mandate in §9-1712 are included in the SERP. Responsible for communicating the requirements of the law to prospective special events organizers and owners/operators of publicly-owned sites in the County. This office will also 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.
2. Special Events Organizer: Responsible for providing recycling bins and ensuring collection for recycling in accordance with the requirements in §B, beginning October 1, 2015.

### **Program Monitoring**

The Wicomico County Solid Waste Division and special events organizers will monitor progress and performance of the SERP.

Recycling at events subject to the SERP will be ensured as follows:

1. Special events permits issued for use of county sites will include a statement on the permit application that recycling is required for events subject to the SERP. The application form will require a certification that the special events organizer will provide for recycling in accordance with the requirements of the SERP.
2. Special events permits issued by the county will include provisions for compliance with the SERP.
3. A fact sheet or other informational document outlining the requirements of the SERP will be distributed with each special event permit issued by the county.

The special event 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 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.

A special event organizer is responsible for maintaining the following records:

1. Any contracts for recycling service;
2. A list of the types of recyclables accepted for recycling;
3. The quantity of recyclables collected for recycling at the event;

No later than 30 calendar days after the final day of the special event, the special event organizer must complete and submit to the WCDPW-SWD and the Special Event Recycling Report on a form provided by the County.

## **Program Enforcement**

The Wicomico County Public Works Solid Waste Division 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 of the SERP is detected, the County or municipality may pursue an enforcement action against the special event organizer. A person that violates the SERP is subject to a civil penalty not exceeding \$50 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.

### **5.5 PETROLEUM SPILL DISPOSAL PLAN**

Petroleum spill cleanup materials from spills that have occurred in Wicomico County may only be disposed of in Newland Park Landfill.

Wicomico County will only accept petroleum-contaminated soil or absorbent from sources within Wicomico County. The following information is required before the contaminated material may be disposed of in Newland Park Landfill:

1. A statement from the generator certifying that the soil is non-hazardous waste as defined by EPA Regulations under Subtitle C, RCRA.
2. The amount of petroleum-contaminated material to be disposed of.
3. A description of the sampling protocol and a copy of the laboratory analysis.
  - a. A minimum of 1 sample per 10 truckloads of material or 3 samples, whichever is the greater number, shall be done. The following test methods should be used to test petroleum-contaminated soil or absorbent:
4. Paint Filter Liquids Test (EPA SW-846, Method 905)
5. Total petroleum hydrocarbons (TPH) concentrations (EPA Method 418.1)
6. Benzene, toluene, ethylbenzene, and xylenes (BTEX) concentrations (EPA SW-846, Method 5030/8020)
7. TOX concentrations (EPA SW-846)
8. EP toxicity (EPA SW-846, Method 1310).

Petroleum-contaminated soils must have BTEX concentrations less than 10 milligrams per kilogram (mg/kg) and TPH concentrations less than 500 mg/kg.

### **5.6 MANAGEMENT OF WASTE STREAMS IDENTIFIED**

Users of the solid waste facilities are subject to the Wicomico 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 Wicomico County Executive and Council are assigned the responsibility of establishing license fees, rules, regulations, and any other requirements necessary to control the collection of refuse in Wicomico County.

Wicomico 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.

Wicomico County is in an excellent position to manage its solid waste well into the 21st Century. The addition of infrastructure and personnel may be necessary to handle additional recycling in the future.

The Wicomico County Executive and Council are committed to providing the most cost-effective method for disposal of the County's solid waste. WCDPW-SWD is continually evaluating the latest technology to assist them in this goal and is responsible for the daily operation of the landfill.

## **5.7 REQUIRED SOLID WASTE FACILITIES AND FUNDING**

### **5.7.1 Newland Park Landfill**

The life expectancy of Newland Park Landfill is approximately 23 years. It has a total design capacity of 7.2 million cubic yards. It will handle Residential, Commercial, Institutional and Industrial Waste with the exception of Liquids and Industrial Hazardous Waste. Tipping fees for solid waste coming into the facility finances the operation of the landfill. The County has built six lined cells of approximately 4.5 acres each (Cells 5 and 6 were completed in 2007) and are expected to reach intermediate capacity in 2016. The landfill has currently been filled to 77 percent of its total capacity.

## **5.8 SOLID WASTE FACILITY CLOSURE**

The original permitted area of the Newland Park Landfill had its closure cap placement completed in spring 2000 according to COMAR 26.04.07 standards. Some additional monitoring wells were installed at the perimeter of the old landfill in order to provide better groundwater information for post-closure monitoring. The methane gas wells installed as a part of the closure cap construction are tied to a methane gas flare. Once the landfill cells are built and filled to final permitted elevations, these areas will be capped according to EPA and MDE requirements.



## **5.9 SOLID WASTE PLANS CONFORMANCE WITH COUNTY'S LAND USE PLAN**

The County's 10-year Comprehensive Solid Waste conforms to the County's Land Use Plan.

## **5.10 PROPOSED SOLID WASTE SYSTEM MODIFICATIONS**

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**

- Finalize the design and permitting of Cell 7
- Construct and initiate landfill activities within Cell 7
- Finalize permitting for solar power energy generation field
- Construct and implement solar power energy generation field
- 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 to meet or exceed a 20 percent recycling rate by December 31, 2015.
- Continue with compost facility operations. Evaluate compost activities on top of landfill. Implement a small scale pilot program for composting within the landfill footprint
- Continue to lease Wicomico County Solid Waste Division owned parcel for concrete demolition and reuse
- Evaluate the capacity of the borrow area and the need for permitting the expansion of borrow area

### **Mid-Term Planning: 6-10 Years**

- Design, permit and construction Cell 8
- Evaluate the implementation of a regional waste-to-energy facility with neighboring Somerset, Dorchester and Worcester Counties
- Evaluate new/innovative technologies for solid waste processing, recycling efforts, leachate recirculation, management and treatment, etc.

### **Long-Term Planning: 10+ Years**

- Design, permit and construction Cell 9
- Continue with pursuing the purchase of property adjacent to the Newland Park Landfill Facility
- Continue to evaluate new/innovative technologies for solid waste processing, recycling efforts, leachate recirculation, management and treatment, etc.
- Evaluate alternatives for solid waste disposal, i.e. incineration

## 5.11 PROPOSED SOLID WASTE DISPOSAL SYSTEMS AND ACCEPTANCE FACILITIES

There are currently three proposed solid waste disposal systems and acceptance facilities in the county.

Curtis Bay Medical Waste Services Transfer Facility is located at 300 Moss Hill Lane, Salisbury, MD, 21801. The location of the facility is depicted on Figure 3-1 and encompasses approximately 0.25 acres on a 54.78 acre site. Sharps and medical waste is brought to this privately owned, privately financed facility from off-site generators by licensed Medical Waste Transporters. The medical waste is off-loaded from trucks and transferred off-site to an approved processor. It is estimated that the facility will handle 5,000 tons of waste in the first year and 25,000 in the fifth year. Contact for the facility is Mr. Charlie Leonard, COO, and can be reached at (443) 681-5403. The remaining useful life is indefinite.

Clark's Environmental Services, LLC – Connelly Mill Processing and Transfer Facility is located at 29790 Connelly Mill Road, Delmar, MD 21875. The location of the facility is depicted on Figure 3-1 and encompasses approximately 14.9 acres. Agricultural byproducts are accepted that are semi solid and requiring solidification. It is estimated that the privately owned, privately financed facility will handle 625 tons of waste in the first year and 1,250 in the fifth year. Contact for the facility is David Banks, and can be reached at (443) 497-2704. The remaining useful life is indefinite.

Clark's Environmental Services, LLC – Foskey Lane Transfer Facility is located at 29631 Foskey Lane, Delmar, MD 21875. The location of the facility is depicted on Figure 3-1 and encompasses approximately 3.66 acres. The privately owned, privately financed facility will provide temporary storage of agricultural byproducts such as grains, feed additives, soapstock, fats, and chicken byproducts. It is estimated that the facility will handle 625 tons of waste in the first year and 1,250 in the fifth year. Contact for the facility is David Banks, and can be reached at (443) 497-2704. The remaining useful life is indefinite.

## 6. REFERENCES

Maryland Department of Planning (MDP). 2013. *Maryland Department of Planning Review Comments, Draft 2010 Wicomico County Comprehensive Plan* . 1 November.

Rasmussen, William C. and Turbit H. Slaughter. 1955. *The Water Resources of Somerset, Wicomico and Worcester Counties: The Ground-Water Resources*. Maryland Department of Geology, Mines, and Water Resources.

Wicomico County. 1998. *Comprehensive Plan, Wicomico County, Maryland*. 3 February.

Wicomico County. 2014a. *2014 Wicomico County Comprehensive Plan*.

Wicomico County. 2014b. *2014 Draft Wicomico County Comprehensive Plan Addendum #1*. 12 May.

## APPENDIX A

WICOMICO COUNTY EXECUTIVE PUBLIC HEARING AND APPROVAL,  
MDE APPROVAL LETTER