

**AN ORDINANCE PERTAINING TO THE ADOPTION OF THE 2019-2028 CALVERT COUNTY COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN**

**WHEREAS**, the Board of County Commissioners of Calvert County has the authority pursuant to Title 9, Subtitle 5 of the *Environmental Article* of the Maryland Annotated Code to adopt and amend a County plan dealing with water supply systems, sewerage systems, solid waste disposal systems, solid waste acceptance facilities and the systematic collection and disposal of solid waste, including litter;

**WHEREAS**, the Board of County Commissioners of Calvert County adopted a Comprehensive Solid Waste Management Plan by Resolution 49-10 on December 14, 2010;

**WHEREAS**, Title 9, Subtitle 5 of the *Environment Article* of the Maryland Annotated Code requires that the Board of County Commissioners of Calvert County adopt a Comprehensive Solid Waste Management Plan every ten years;

**WHEREAS**, the Department of Public Works obtained comments and recommendations from the Calvert County Health Department, Planning Commission, Zoning Board of Appeals and Environmental Commission, which were incorporated into the proposed 2019-2028 Comprehensive Solid Waste Management Plan;

**WHEREAS**, the Calvert County Planning Commission found the 2019-2028 Comprehensive Solid Waste Management Plan attached hereto as Exhibit A is consistent with the Calvert County Comprehensive Plan, the Dunkirk Master Plan, the Huntingtown Master Plan, the Lusby Master Plan, the Owings Town Center Master Plan, the Prince Frederick Town Center Master Plan, the Solomons Town Center Master Plan and St. Leonard Master Plan by Resolution 18-07 adopted on August 15, 2018;

**WHEREAS**, a public hearing regarding this adoption was duly advertised in two newspapers of general circulation in Calvert County for two consecutive weeks before the public hearing, as required by Section 5-103(d) of the Code, and held on September 25, 2018, at which time the Board of County Commissioners received public comment; and

**WHEREAS**, upon due consideration of the comments of the public and staff and in furtherance of the public health, safety and welfare, the Board of County Commissioners finds that it is in the best interest of the public health, safety and welfare of the citizens of Calvert County, Maryland to adopt as set forth in Exhibit "A," attached hereto and made a part hereof.

**NOW, THEREFORE, BE IT ORDAINED**, that the Board of County Commissioners of Calvert County, Maryland, hereby approves, adopts and enacts the 2019-2028 Comprehensive Solid Waste Management Plan, a copy of which is attached hereto as Exhibit A and made a part hereof.

**BE IT FURTHER ORDAINED**, by the Board of County Commissioners of Calvert County, Maryland that the Comprehensive Solid Waste Management Plan (2006-2018) is hereby repealed;

**BE IT FURTHER ORDAINED**, by the Board of County Commissioners of Calvert County, Maryland, that, in the event any portion of this Resolution is found to be unconstitutional, illegal, null or void, by a court of competent jurisdiction, it is the intent of the Board of County Commissioners to sever only the invalid portion or provision, and that the remainder of the Resolution shall be enforceable and valid, unless deletion of the invalid portion would defeat the clear purpose of the Resolution, or unless deletion of the valid portion would produce a result inconsistent with the purpose and intent of the Board of County Commissioners in enacting this Resolution;

**BE IT FURTHER ORDAINED**, by the Board of County Commissioners of Calvert County, Maryland that the foregoing recitals are adopted as if fully rewritten herein; and

**BE IT FURTHER ORDAINED**, by the Board of County Commissioners of Calvert County, Maryland that this Resolution shall be effective upon recordation and publication of a fair summary.

**DONE**, this 23<sup>rd</sup> day of October 2018, by the Board of County Commissioners of Calvert County, Maryland, sitting in regular session.

Aye: 5

Nay: 0

Absent/Abstain: 0

**ATTEST:**

**BOARD OF COUNTY COMMISSIONERS  
OF CALVERT COUNTY, MARYLAND**

Maureen L. Frederick  
Maureen L. Frederick, Clerk

Evan K. Slaughenhaupt Jr.  
Evan K. Slaughenhaupt Jr, President

Tom Hejl  
Tom Hejl, Vice President

Approved for form and legal sufficiency  
by:

Mike Hart  
Mike Hart

John B. Norris  
John B. Norris, County Attorney

Pat Nutter  
Pat Nutter

Steven R. Weems  
Steven R. Weems

Received for Record.....10/24....., 2018  
at 9:47 o'clock..... A.M. Same day  
recorded in Liber KPS No. 56  
Folio 281.....**COUNTY COMMISSIONERS  
ORDINANCES AND RESOLUTION.**

Garry P. Smith

**Calvert County, Maryland**  
**Ten-Year Comprehensive Solid Waste Management Plan**  
**2019 - 2028**

**Calvert County Department of Public Works**  
**Solid Waste Division**



*September 2018*

**Prepared By:**

**Barton & Loguidice, D.P.C.**  
**4601 Presidents Drive, Suite 220**  
**Lanham, MD 20706**



**(This Page Intentionally Left Blank)**



## TABLE OF CONTENTS

<b>GLOSSARY OF TERMS</b> .....	GOT-1
<b>ACRONYM LIST</b> .....	GOT-9
<b>INTRODUCTION</b> .....	INT-1
<b>CHAPTER 1 – GOALS, OBJECTIVES AND POLICIES</b> .....	1-1
1.1 SOLID WASTE MANAGEMENT VISIONS, GOALS AND OBJECTIVES .....	1-2
1.2 ORGANIZATION OF CALVERT COUNTY GOVERNMENT .....	1-3
1.3 COUNTY ADMINISTRATION OF PLAN .....	1-5
1.4 LEGISLATION AND REGULATIONS AFFECTING SOLID WASTE MANAGEMENT PLANNING IN THE COUNTY .....	1-5
1.4.1 Federal Legislation .....	1-6
1.4.2 State Legislation .....	1-9
1.4.3 Calvert County Legislation .....	1-17
1.4.4 Incorporated Towns and Federal Facilities .....	1-21
1.5 AMENDMENT OF THE PLAN .....	1-21
1.6 ADVISORY BOARDS AND COMMISSIONS .....	1-22
<b>CHAPTER 2 – COUNTY BACKGROUND</b> .....	2-1
2.1 POPULATION .....	2-2
2.2 ZONING .....	2-3
2.3 COMPREHENSIVE PLAN .....	2-3
<b>CHAPTER 3 – DESCRIPTION OF EXISTING COLLECTION, RECYCLING, PROCESSING AND DISPOSAL SYSTEMS</b> .....	3-1
3.1 SUMMARY OF WASTE STREAM QUANTITIES (EXISTING AND PROJECTED) .....	3-2
3.1.1 Residential Waste .....	3-3
3.1.2 Commercial Waste .....	3-5
3.1.3 Industrial Waste .....	3-5
3.1.4 Institutional Waste .....	3-5
3.1.5 Special Events Recycling Program .....	3-9
3.1.6 Land-clearing Debris .....	3-10
3.1.7 Controlled Hazardous Substances .....	3-12
3.1.8 Dead Animals .....	3-13
3.1.9 Bulky or Special Wastes .....	3-14
3.1.10 Vehicle Tires .....	3-15
3.1.11 Wastewater Treatment Plant Sewage Sludge .....	3-16

3.1.11.1 Chesapeake Beach WWTP..... 3-16

3.1.11.2 Prince Frederick WWTP I and II..... 3-17

3.1.11.8 Marley Run WWTP ..... 3-19

3.1.12 Septage..... 3-19

3.1.13 Other Wastes ..... 3-20

    3.1.13.1 Asbestos ..... 3-20

    3.1.13.2 Medical/Infectious Waste..... 3-21

    3.1.13.3 Agricultural Wastes ..... 3-22

    3.1.13.4 Recreational Facility Waste..... 3-22

    3.1.13.5 Used Motor Oil, Antifreeze, and Oil Filters..... 3-23

    3.1.13.6 Petroleum-Contaminated Soil ..... 3-23

    3.1.13.7 Special Event/Other Waste..... 3-24

3.1.14 Types and Quantities of Materials to be Separated or Recycled ..... 3-24

3.2 BASIS FOR WASTE RECYCLING RATE ..... 3-28

    3.2.1 Diversion Rate for MRA Recyclables..... 3-28

    3.2.2 Statement that the Recycling Goal Stated in Chapter 1 Has Been Achieved..... 3-29

3.3 IMPORT/EXPORT WASTE QUANTITIES ..... 3-29

3.4 EXISTING SOLID WASTE COLLECTION AND RECYCLING SYSTEMS ..... 3-30

3.5 EXISTING SOLID WASTE ACCEPTANCE FACILITIES ..... 3-31

    3.5.1 Public Facilities..... 3-32

        3.5.1.1 Sanitary Landfills..... 3-32

        3.5.1.2 Convenience Centers..... 3-33

        3.5.1.3 Mulching Sites ..... 3-33

    3.5.2 Private Facilities..... 3-34

        3.5.2.1 Transfer Station ..... 3-34

        3.5.2.2 Land-Clearing Debris Landfills ..... 3-34

        3.5.2.3 Natural Wood Waste Recycling Facility ..... 3-35

        3.5.2.4 Mulching Sites ..... 3-36

        3.5.2.5 Processing Facility ..... 3-36

**CHAPTER 4 – ASSESSMENT OF SOLID WASTE MANAGEMENT SYSTEMS ..... 4-1**

4.1 COLLECTION AND RECYCLING SYSTEMS ..... 4-2

    4.1.1 Residential Collection and Recycling ..... 4-2

    4.1.2 Commercial, Institutional, and Industrial Collection and Recycling..... 4-3

4.2 PROCESSING/DISPOSAL SYSTEMS..... 4-4

4.3	ESTABLISHMENT OF SOLID WASTE FACILITIES .....	4-5
4.3.1	Topography .....	4-5
4.3.2	Soils .....	4-6
4.3.3	Geology .....	4-7
4.3.4	Location .....	4-8
4.3.5	Aquifers and Ground Water Quality .....	4-8
4.3.5.1	Magothy Aquifer .....	4-9
4.3.5.2	Piney Point Aquifer .....	4-9
4.3.5.3	Aquia Aquifer .....	4-9
4.3.5.4	Lower Pataspcu .....	4-10
4.3.6	Wetlands .....	4-10
4.3.7	Surface Water Sources, Flood Plains, Watersheds and Water Quality .....	4-10
4.3.8	Land Uses and Planning .....	4-11
4.3.9	Planned Long-term Growth Patterns .....	4-11
4.3.10	Areas of Critical State Concern .....	4-12
4.4	ESTABLISHMENT OF RECYCLING AND/OR PROCESSING FACILITIES .....	4-12
4.5	ASSESSMENT OF SPECIAL CONCERNS .....	4-12
4.5.1	Source Separation and Waste Reduction .....	4-13
4.5.2	Feasibility of Resource Recovery .....	4-14
4.5.3	Public Education .....	4-15
4.5.4	Asbestos .....	4-16
4.5.5	Emergency Spillage or Leakage of Hazardous or Radioactive Waste .....	4-17
4.5.5.1	Hazardous Waste .....	4-17
4.5.5.2	Radioactive Waste .....	4-18
4.5.6	Adequacy of Local Zoning Plan .....	4-19
<b>CHAPTER 5 – PLAN OF ACTION .....</b>		<b>5-1</b>
5.0	INTRODUCTION .....	5-2
5.1	GOAL OF THE COUNTY SOLID WASTE MANAGEMENT PLAN .....	5-2
5.1.1	Protect public health and safety and preserve the natural environment .....	5-2
5.1.2	Implement and maintain programs that promote source reduction, material reuse, and recycling over disposal .....	5-2
5.1.3	Ensure cost effective and sustainable material management services for residential and commercial MSW and recyclables .....	5-3
5.1.4	Ensure adequate infrastructure to accommodate residential and commercial MSW and recyclables .....	5-4

5.1.5 Collectively plan future initiatives, to the greatest extent possible, with internal County Departments and regional County jurisdictions, councils, and other potential partnerships. . 5-4

5.2 PRIORITY ACTIONS OVER THE TEN-YEAR PLANNING PERIOD..... 5-5

5.3 TEN-YEAR PRIORITY ACTION 1..... 5-5

5.3.1 Public Health and Environmental Protection ..... 5-5

5.3.2 Management of Commercial, Industrial and Institutional Wastes ..... 5-8

5.3.3 Management of Controlled Hazardous Substances ..... 5-9

5.3.4 Management of Other Wastes and Recyclables ..... 5-9

5.4 TEN-YEAR PRIORITY ACTION 2..... 5-11

5.4.1 Feasibility Study for a New Transfer Station ..... 5-11

5.5 TEN-YEAR PRIORITY ACTION 3..... 5-14

5.5.1 Research PAYT Programs and Other Means of Waste Diversion..... 5-14

5.5.1.1 Revisit and Modify Existing Sticker Program..... 5-14

5.5.1.2 Pay-As-You-Throw (PAYT) ..... 5-15

5.5.1.3 Other Means of Waste Diversion..... 5-15

5.6 TEN-YEAR PRIORITY ACTION 4..... 5-17

5.6.1 Explore the Management of Stormwater BMP Waste and Other Hard to Manage Waste ..... 5-17

5.7 TEN-YEAR PRIORITY ACTION 5..... 5-17

5.7.1 Maintain a Budget Structure that Provides the Framework to Support the Solid Waste and Recycling Program as a Self-Sustaining Enterprise ..... 5-17

---

**LIST OF APPENDICES**

---

A. SUPPLEMENTAL INFORMATION

B. LETTER OF CONSISTENCY FROM CALVERT COUNTY PLANNING COMMISSION

C. RESOLUTION OF ADOPTION BY CALVERT COUNTY BOARD OF COMMISSIONERS

D. LETTER OF APPROVAL FROM MDE .....

---

**LIST OF SUPPLEMENTAL INFORMATION**

---

SPECIAL EVENTS RECYCLING PROGRAM  
 CALVERT COUNTY PUBLIC SCHOOL RECYCLING PLAN  
 COMMUNITY COLLEGE OF SOUTHERN MARYLAND RECYCLING  
 PLAN  
 APARTMENT BUILDING AND CONDOMINIUM RECYCLING (ABCR)  
 PROGRAM  
 CALVERT COUNTY RECYCLING PLAN REGULATION SUMMARY

---

**LIST OF TABLES**

---

- 1-1 RESOLUTION INFORMATION
- 2-1 POPULATION PROJECTIONS
- 2-2 SOLID WASTE LAND USES BY ZONING DISTRICT
- 2-3 SOLID WASTE LAND USES BY TOWN CENTER DISTRICT
- 3-1 2016 MRA RECYCLING QUANTITIES
- 3-2 2016 NON-MRA RECYCLING QUANTITIES
- 3-3 ESTIMATED WASTE PROJECTIONS FOR 2016
- 3-4 REPORTED LAND CLEARING DEBRIS (LCD) MATERIAL
- 3-5 SOLID WASTE RECEIVED AT CONVENIENCE CENTERS IN 2016
- 3-6 RESIDENTIAL WASTE QUANTITIES
- 3-7 INCORPORATED MUNICIPALITY INFORMATION
- 3-8(a) LIST OF PARTICIPATING APARTMENT BUILDINGS IN THE ABCR PROGRAM
- 3-8(b) LIST OF PARTICIPATING CONDOMINIUMS IN THE ABCR PROGRAM
- 3-9 SCHOOLS AND STUDENT ENROLLMENT
- 3-10 HAZARDOUS WASTE GENERATION
- 3-11 WWTP SLUDGE GENERATION ESTIMATES IN 2016
- 3-12 ESTIMATED QUANTITIES OF SEPTAGE COLLECTED BY SEPTAGE  
HAULERS
- 3-13 LICENSED MEDICAL TRANSPORTERS WITHIN THE STATE OF  
MARYLAND
- 3-14 SCHOOL FACILITIES PARTICIPATING IN THE COLLECTION OF  
RECYCLABLES
- 3-15 PUBLIC SITES THAT HOST OR MAY HOST SPECIAL EVENTS

- 3-16 COUNTY GENERATED SOLID WASTE MATERIALS ACCEPTED AT PERMITTED FACILITIES
- 3-17 SOLID WASTE AND RECYCLING MATERIALS ACCEPTED BY PERMITTED SOLID WASTE FACILITIES
- 3-18 MARINAS WITH PUMP-OUT FACILITIES IN PLACE
- 3-19 NWWRF, ANNUAL TONNAGE REPORT FOR 2016
- 3-20 MAJOR WASTE HAULERS

---

#### LIST OF FIGURES

---

- 1-1 CALVERT COUNTY, MARYLAND, GOVERNMENT STRUCTURE
- 1-2 CALVERT COUNTY, MARYLAND, SWD STRUCTURE
- 1-3 ADMINISTRATION OF THE COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN
- 2-1 CALVERT COUNTY, MARYLAND, CENSUS DESIGNATED PLACES
- 2-2 CALVERT COUNTY, MARYLAND, LOCATION OF MUNICIPALITIES AND FEDERAL FACILITIES
- 3-1 CALVERT COUNTY, MARYLAND, CURRENT CONVENIENCE CENTERS
- 3-2 CALVERT COUNTY, MARYLAND, PERMITTED SOLID WASTE PROCESSING & DISPOSAL FACILITIES

## GLOSSARY OF TERMS

### - A -

**Agricultural Wastes** – Domestic animal manure or residuals in liquid or solid form generated in the production of poultry, livestock, fur-bearing animals, and their products. Agricultural waste includes residuals generated in the production and harvesting but not of subsequent processing of all agricultural, horticultural, or aqua-cultural commodities. Agricultural waste does not include land clearing debris unless the cleared land is intended solely for agricultural purposes.

**Ash** – Residue from the burning of wood, solid waste, coal, and other combustible materials (also referenced as combustion ash).

### - B -

**Biosolids** – A nutrient rich solid or semi-solid organic material obtained from treated wastewater, often used as a fertilizer or soil amendment.

**Bulky Item** – Items whose large size or weight precludes or complicates their handling by normal collection, processing, or disposal methods. The County's curbside program handles many bulky items such as furniture, mattresses, box-springs and similar items.

### - C -

**Closure** – The cessation of operation of a solid waste management facility and the act of securing such a facility so that it will pose no significant threat to human health or environment.

**Code of Federal Regulations (CFR)** – Document containing the rules established in the Federal Register (FR) by the Executive Departments of the Federal Government.

**Code of Maryland Regulations (COMAR)** – The State regulations containing regulations for the processing and disposal of solid waste.

**Compost** – The product of composting.

**Composting** – The controlled aerobic and anaerobic organic decomposition of organic waste material.

**C&D Debris (includes Rubble)** – Materials generally considered to be non-hazardous as a part of a construction or demolition project or from the renovation of a structure. Construction debris is structural building material including cement, concrete, bricks (excluding refractory type), lumber, plaster and pasteboard, insulation, shingles, floor, wall and ceiling tile, steel pipes, glass, wires, carpet, wallpaper, roofing materials, felt, or other structural fabrics. Demolition debris is debris associated with the deconstruction of buildings, roads, bridges, and other structures includes structural steel, concrete, bricks (excluding refractory type), lumber, plaster and plasterboard, gypsum wallboard, insulation, cement, shingles and roofing material, floor and wall tile, asphalt, pipes, wires, and other items physically attached to the structure, including appliances if they have been or will be compacted to their smallest practical volume.

**Convenience Center** – A County owned facility that accepts solid waste and recyclables.

**Controlled Hazardous Substance (CHS)** – Means a hazardous waste as defined in COMAR 26.13.02, except as provided in COMAR 26.13.02.06.

**County** – Calvert County, Maryland

**County Health Department** – Calvert County, Maryland, Calvert County Environmental Health Department.

- D -

**Department of Public Works (DPW)** – Responsible to the County Commissioners for the development, direction and administration of services and projects related to County-owned facilities. Public Works oversees the development and operation of solid waste collection and disposal. The Public Works Director is responsible to the County Commissioners for supervision and administration of the Department Divisions and for the projects assigned directly to it by the County Commissioners. The SWD is responsible for the design, technical review, and the operation of the Landfill and the Convenience Center collection system (except for private collection by commercial haulers in the open market for residential and commercial waste collection), development and administration of the County SWMP, and administration of the County's recycling program (including, developing and updating the County Recycling Plan).

- E -

**Enterprise Fund** – The County's solid waste enterprise fund is a self-sustaining cost center that is used to account for all of the recycling and solid waste management system activities, revenues

and expenditures including long-term commitments. All system revenues are deposited in the enterprise fund and pledged to the payment of system obligations, including administration, debt service, operations, maintenance, development, renewal and replacement of system components, and funding for closure and post-closure activities. For purposes of accountability and sustainability, this enterprise fund is segregated from all other public service obligations and operations, including the General Fund.

**Environmental Protection Agency (EPA)** – Federal agency responsible for providing regulations, guidance, and enforcement of solid waste management activities.

- G -

**Ground Water** – Water beneath the surface of the ground, within a zone of saturation.

- H -

**Hazardous Waste** – Solid waste, or a combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, and increase in mortality, or an increase in serious irreversible or incapacitating reversible illness, or may pose a substantial present or potential hazard to human health or the environment when improperly transported, disposed of, stored, treated, or otherwise managed.

**Household Hazardous Waste (HHW)** – Hazardous substances for use in the home in small quantities which, when discarded, may contribute to the contamination of natural resources and water supplies and which may be hazardous to public health. HHW includes, but is not limited to, oil-based paints, pesticides, herbicides, disinfectants, and drain and oven cleaners.

- I -

**Industrial Solid Waste** – Means any liquid, gaseous, solid, or other waste substance, or combination thereof, resulting from any process of industry, manufacturing, trade or business; or the development of any natural resource, including agriculture.

- L -

**Landfill** – An engineered solid waste disposal facility, which is an area of land or an excavation where wastes are placed in a manner that minimizes public health and environmental hazards and is designed, installed, and operated according to the provisions of EPA (under CFR) and MDE (under COMAR) regulations; a solid waste disposal facility, which is an area of land or an

excavation where wastes are or have been placed for disposal, for which a permit other than a general permit is required.

**Land-Clearing Debris** – Waste generated through land-clearing operations, which includes: earthen materials (clays, sand, gravels and silts), topsoil, tree stumps, root mats, brush and limbs, logs, vegetation, and rock. Land clearing debris does not include yard waste which has been collected at the curbside.

**Land-Clearing Debris Landfill** – A landfill permitted under State law and regulation as a land-clearing debris landfill for the acceptance of land-clearing debris.

- M -

**Material Recovery Facility (MRF)** – Also known as a Material Recycling Facility. A facility that accepts mixed materials for separation into their individual material streams for recycling.

**Maryland Department of the Environment (MDE)** – The State regulatory service agency responsible for the protection and restoration of Maryland's air, water and land resources through the enforcement of Federal (delegated) and State environmental regulations. MDE is the primary regulatory authority in the State of Maryland for solid waste management programs and activities. MDE creates regulations, issues permits, performs inspections and provides technical assistance to businesses and jurisdictions with pollution control, growth issues, and environmental emergencies. MDE also provides public education and outreach to citizens as well as institutes enforcement actions for noncompliance.

**Municipal Landfill (also known as Sanitary Landfill)** – a solid waste acceptance facility permitted under COMAR that is designed, installed, and operated so that all types of waste generated by a community, except waste specifically prohibited by the regulations or a permit issued under the regulations, can be accepted.

**Municipal Solid Waste (MSW)** - More commonly known as trash or garbage – consisting of everyday items residents use and throw away, such as product packaging, grass clippings, furniture, clothing, bottles, food scraps, newspapers, appliances, paint, and batteries. This material commonly comes from homes, schools (institutional), hospitals, industries, and businesses (commercial).

- N -

**Natural Wood Waste** – NWW includes tree stumps, brush and limbs, root mats, logs, leaves, grass clippings, and unadulterated wood wastes that are generated when land is cleared for construction purposes. NWW does not include pallets, crates, lumber, wood chips, firewood, or other products that may be made from NWW, but have subsequently been processed. NWW also does not include food waste.

**Natural Wood Waste Recycling Facility** – Must obtain a permit to operate and are regulated under COMAR 26.04.09. This type of facility does not include a collection or processing facility operated by a nonprofit or governmental organization located in the State, or a single individual or business that provides recycling services solely for its employees or for its own recyclable materials generated on its own premises. The facilities produce a variety of products that may be sold to consumers. Facilities that only accept processed wood are not required to obtain a NWW Facility Permit from MDE.

- P -

**Post-Closure Care** – Regulations under EPA (CFR) and MDE (COMAR) that establish the minimum requirements for MSW landfills for compliance by owners and operators once the landfill stops receiving waste and completes closure activities. Post-closure care activities consist of monitoring and maintaining the waste containment and monitoring systems of the landfill to ensure protection of public health and to prevent any releases of contaminants to the environment. Specific post-closure care requirements consist of maintaining the integrity and effectiveness of the: final cover (cap) system; leachate collection system; groundwater monitoring system; and methane gas monitoring system. The owner and operator of a closed MSW landfill must prepare a written post-closure care plan that provides for continued monitoring and maintenance of the landfill closure systems. The required post-closure care period is thirty (30) years from site closure, but can be modified with approval of an approved State program as necessary to ensure protection of human health and the environment.

**Processing Facility** – A facility where solid waste or recycling materials are processed

- R -

**Recycling** – Any process in which recyclable materials that would otherwise become solid waste, are collected, separated, reused or processed and returned to the market place to use in the form of raw materials or products.

**Recycling Center** – A facility or location primarily for residents to drop off recyclables and yard waste. Quantities of recyclables are also accepted from business customers at Recycling Centers.

**Refuse** – Synonymous with solid waste.

**Residential Waste** – Mixed household wastes, including yard wastes, generated by the general population.

**Resource Conservation and Recovery Act (RCRA)** – The Federal Law that provides guidelines and standards for the management of both hazardous (RCRA Subtitle C) and non-hazardous (RCRA Subtitle D) waste. More specifically for Subtitle C, RCRA gives EPA the authority to control hazardous waste from “cradle-to-grave.” This includes the generation, transportation, treatment, storage and disposal of hazardous waste. With respect to Subtitle D, RCRA sets forth a framework for the management of non-hazardous solid wastes (such as the disposal of MSW in landfills). For Subtitle D, EPA developed detailed technical criteria for solid waste disposal facilities, which includes specific provisions on location, operation, design, ground water and gas monitoring, corrective action, closure and post-closure care and financial assurance. These regulations are contained in the 40CFR, Parts 257 and 258. EPA delegates authority for oversight of Local and State-level solid waste programs to authorized State agencies such as MDE.

**Rubble** – Wastes acceptable for disposal in a permitted rubble (C&D) landfill that is restricted to waste derived from building construction, demolition, or remodeling, such as: wood, metal, bricks (excluding refractory type) and masonry, cement and concrete, glass, shingles and roofing material, plaster and plasterboard, carpets, floor and wall tile, asphalt, insulation material, pipes, wires, and appliances; and debris derived from land clearing operations, such as: tree stumps, root mats, brush and limbs, logs, topsoil, vegetation, and rock. (MDE definition). The County classifies “Rubble” as brick, block, stone, etc. that fits the definition of clean fill for materials received at County facilities.

- S -

**Sanitary Landfill** – (also refer to Municipal Landfill) – an engineered method of disposing of solid wastes on land in a manner that minimizes public health and environmental hazards, and is designed, installed, and operated according to the provisions of COMAR.

**Site** – The area of land within the property boundaries of a solid waste management facility where one or more solid waste processing, resource recovery, recycling, storage, or disposal areas are located.

**Sludge** – Normally a term applied to residual solids resulting from the treatment of wastewater; consisting of: organic solids, grit, inorganic solids, and chemical precipitates. Sludge can also be referred as biosolids.

**Solid Waste** – Recyclables, white goods, yard waste and other materials that would be discarded if not separated for recycling as garbage, trash, refuse, C&D debris, special waste, ashes, sludge, or other discarded material, including solid, liquid semisolid, or contained gaseous material resulting from domestic, industrial, commercial, mining, agricultural, or governmental operations.

**Solid Waste Acceptance Facility** – Any landfill, incinerator, transfer station, or processing facility whose primary purpose is to dispose of, treat, consolidate, transport, or process solid waste.

**Solid or Medical Waste Processing Facility** – A facility where a combination of structures, machinery, or devices are used to reduce or alter the volume, chemical characteristics, or physical characteristics of solid waste. This can include sorting for diversion of recyclables. In general, processes are performed either to remove recyclables or to reduce the volume that the waste occupies during transport or at final disposal (e.g., shredding). A wide variety of solid waste can be processed at these facilities. A typical solid waste processing facility accepts MSW, C&D, metals, wood waste, etc.

**Special Medical Waste (SMW)** – Solid Waste that is composed of anatomical material, blood, blood-soiled articles, contaminated material, microbiological laboratory wastes or sharps.

**Special Wastes** – Waste having special characteristics or require special handling.

**Subtitle D** – Subtitle of RCRA which establishes a framework for Federal, State, and Local government cooperation in controlling the management of non-hazardous solid waste. Rules implementing Subtitle D are found at 40 CFR, Parts 257-258.

- T -

**Transfer Station** – A place or facility where waste materials are taken from one collection vehicle (for example, compactor trucks) and placed in another transportation unit (for example, over-the-

road tractor-trailers, railroad gondola cars, barges or ships) for movement to other solid waste acceptance facilities.

- W -

**White Goods** – Discarded refrigerators, ranges, washers, water heaters, freezers, and other similar domestic and commercial appliances.

- Y -

**Yard Waste** – Vegetative matter from landscape maintenance or land clearing operations such as tree and shrub trimmings, grass clippings, leaves, trees brush and stumps.

## ACRONYM LIST

ABCR	Apartment Building and Condominium Recycling
BMP	Best Management Practice
BOCC	Board of County Commissioners
B&L	Barton & Loguidice, DPC
CCBOE	Calvert County Board of Education
CCHMRT	Calvert County Hazardous Material Response Team
CCPS	Calvert County Public Schools
CCSMBOT	Community College of Southern Maryland Board of Trustees
CCSMPFB	Community College of Southern Maryland Prince Frederick Branch
CDC	Center for Disease Control
CDL	Commercial Driver's License
CFL	Compact Fluorescent Lamp
CFR	Code of Federal Regulations
CHS	Controlled Hazardous Substance
COMAR	Code of Maryland Regulations
CY	Cubic Yard
Cyr	Calendar Year (January 1 <sup>st</sup> – December 31 <sup>st</sup> )
C&D	Construction and Demolition
DHMH	Department of Health and Mental Hygiene
DNR	Department of Natural Resources
DPW	Department of Public Works
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FY	Fiscal Year (July 1 <sup>st</sup> – June 30 <sup>th</sup> )
GPM	Gallons per Minute
HHW	Household Hazardous Waste
JCAHO	Joint Commission on Accreditation of Health Care Organizations
LCD	Land Clearing Debris
LLC	Limited Liability Company
LNG	Liquefied Natural Gas
MAC	Mid-Atlantic Clothing
MDE	Maryland Department of the Environment

MES	Maryland Environmental Service
MGC	Maryland Grid Coordinates
MGD	Million Gallons per Day
MRA	Maryland Recycling Act
MRF	Materials Recycling Facility
MSRC	Marine Oil Spill Response Contractors
MSW	Municipal Solid Waste
NAAQS	National Ambient Air Quality Standards
NAS	Naval Air Station
NDW	Naval District Washington Recreation Center
NPDES	National Pollutant Discharge Elimination System
NRL	Naval Research Laboratory
NWW	Natural Wood Waste
NWWRF	Natural Wood Waste Recycling Facility
ORP	Oyster Recycling Partnership
OSHA	Occupational Safety and Health Administration
PAYT	Pay-as-you-Throw
RCRA	Resource Conservation and Recovery Act
RMW	Regulated Medical Waste
SERP	Special Event Recycling Program
SIP	State Implementation Plan
SMW	Special Medical Waste
SOP	Standard Operating Procedures
SWD	Solid Waste Division
SWMP	Solid Waste Management Plan
WM	Waste Management of Maryland dba Waste Management, Inc.
WTE	Waste-to-Energy
WWTP	Wastewater Treatment Plant

## INTRODUCTION

Calvert County is required to prepare and adopt a SWMP that covers a ten-year minimum planning period. Section 9-503 of the Environment Article, Annotated Code of Maryland, requires that the SWMP be reviewed every three years by the County. Section 9-506 (b) of the Environment Article, Annotated Code of Maryland, requires the County to submit a progress report to MDE every two years. Upon adoption by the BOCC, the SWMP is then submitted to the MDE for approval. The content of the SWMP is defined in Title 9, Subtitle 5 of Environment Article, Annotated Code of Maryland and by COMAR 26.03.03.

The BOCC last approved and adopted the SWMP and subsequent amendment as stipulated in Resolution 49-10 on December 14, 2010. Since that time, revisions were made to the SWMP in 2014/2015 to include information on CFL recycling, the ABCR program, school recycling programs, and increasing the minimum recycling rate from 15% to 20%. Additionally, the County's DPW, SWD prepared a 3-year Plan Amendment in 2016/2017 to include information on the SERP. This Comprehensive SWMP addresses the succeeding ten year planning period from 2019-2028.

The governing authority in the County is the BOCC. Additional stakeholders are the Calvert County Planning Commission, Town of North Beach, Town of Chesapeake Beach, Environmental Commission, and Zoning Board. The Calvert County Planning Commission provided a letter of consistency in August 2018, as provided in Appendix B. The County 2019-2028 Comprehensive SWMP was approved and adopted by the Board of County Commissioners following a formal public hearing in accordance with the resolution provided in Appendix C. The letter approving the SWMP Update from the MDE is provided in Appendix D. In addition, COMAR 26.03.03.05 C requires a written discussion and summary of the substantive issues that were raised at the Public Hearing be submitted to the MDE along with the SWMP.

Although there are two incorporated municipalities in Calvert County, both municipalities have chosen to follow the County SWMP, rather than enact their own SWMP. The DPW presented the County SWMP to members of both the Town of North Beach and the Town of Chesapeake Beach, prior to its adoption, to allow both incorporated municipalities to provide comments, which were incorporated, as needed.

## LETTER OF CONSISTENCY FROM CALVERT COUNTY PLANNING COMMISSION

Calvert County DPW presented the Comprehensive SWMP to the Calvert County Planning Commission in April 2018. The Planning Commission reviewed the SWMP and issued a letter of consistency on XXXXXX. A copy of the consistency letter is included in **Appendix B**.

## RESOLUTION OF ADOPTION BY CALVERT COUNTY BOARD OF COMMISSIONERS

The Calvert County Board of Commissioners adopted by form of Resolution the 2019 – 2028 County SWMP, Resolution No. XX - 18. A copy of this Resolution is included in **Appendix C**.

## LETTER APPROVAL FROM MDE

The MDE is responsible for approving the 2019 – 2028 County SWMP. MDE reviewed the SWMP and issued a letter of approval on XXXXXX. As stated in the letter of approval, Calvert County's first progress report must be submitted to the Department on or before XXXXXX. A copy of the approval letter is included in **Appendix D**.

## STATE REGULATORY REQUIREMENTS

Solid waste management regulations and policies exist at the Federal, State and local government levels. A summary of pertinent legislation and recent changes relating to solid waste management has been included as a part of the SWMP. Traditionally, the Federal government has provided the overall regulatory direction and set the minimum standards for protecting human health and environment. The implementation of these regulations is the responsibility of State and local governments. The State of Maryland established MDE to enforce and implement Federal and State solid waste management regulations.

## ACKNOWLEDGEMENT OF CITIZEN INPUT

A written discussion and summary of the substantive issues that were raised at the Public Hearing were forwarded to the MDE for their use and permanent record.

**Regulatory Topic Summary  
COMAR Title 26.03.03.03(B)**

**Chapter 1 – Goals, Objectives and Policies**

*“Chapter 1 shall contain:*

- 1. Statement of county's goals regarding solid waste management, the objectives and policies necessary to achieve these goals, and a discussion of the conformance of these objectives and policies with those of State, regional, and local comprehensive land use plans and programs;*
- 2. Brief discussion, with charts, of the structure of the county government as it relates to solid waste management; and*
- 3. Brief discussion of State, Federal and local agencies, laws, and regulations which affect the planning, establishment, and operation by the county of solid waste disposal systems.”*

## CHAPTER ONE

### COUNTY VISIONS, GOALS AND OBJECTIVES

The SWMP for Calvert County is intended to provide goals and priority actions that form a consistent framework for solid waste planning during a ten-year period. The objectives and actions are intended to be revised and/or supplemented during each triennial SWMP review to reflect the dynamics of solid waste management within the County. The essence of the planning process centers on developing practical objectives and actions that will help with solid waste decision-making now and in the future. The planning process shall also accurately identify the current regulatory requirements and set forth recommendations for the SWMP's implementation. The objectives represent the fundamental desires and visions for the management of solid waste within Calvert County. The objectives established are attainable by accomplishing specific priority actions.

#### 1.1 SOLID WASTE MANAGEMENT VISIONS, GOALS AND OBJECTIVES

The vision of the Calvert County DPW is to maintain and/or improve the overall quality of life for all its residents and commercial businesses by:

- Promoting sustainable development,
- Encouraging a stable and enduring economic base,
- Providing safety, health, and education, and,
- Preserving the natural, cultural and historic assets.

This vision is expressed through a series of goals and objectives throughout Calvert County government. As part of the SWMP, the following overarching goal was established for solid waste management within the County:

Goal            Maintain well-managed and effective solid waste and recyclable materials management systems in Calvert County.

In order to reach that goal, the following five objectives were established:

- Objective 1    Protect public health and safety and preserve the natural environment.
- Objective 2    Implement and maintain programs that promote source reduction, material reuse, and recycling over disposal.

- Objective 3 Ensure cost effective and sustainable MSW and recyclables management services for residential and commercial customers.
- Objective 4 Ensure adequate facilities and infrastructure to accommodate current and future residential and commercial MSW and recyclables.
- Objective 5 Collectively plan future initiatives, to the greatest extent possible, with internal County Departments and regional County jurisdictions, councils, and other potential partnerships.

As part of the SWMP Update, Calvert County DPW, in coordination with B&L, developed actions and priority actions for each objective listed above. The actions are those ideas and programs that may be considered over the succeeding ten-year planning period, if financial support is available and/or residents express a need for these services within the County. Those actions that are to be implemented or further evaluated over the succeeding ten-year planning period due to previous determinations that they are needed and the financial support is available were deemed priority actions and will be the main framework for the succeeding ten-year planning period. Both the actions and priority actions are further discussed in Chapter 5.

Implementation of the adopted objectives/actions for solid waste management is provided through specific programs, policies, and recommendations in this SWMP, as identified in later chapters.

All applicable State, Federal and local plans, programs and regulations, which may impact or be impacted by the objectives, actions and philosophies of the SWMP, have been considered, to the best of our knowledge, in formulation of this document. Section 1.4 provides a discussion of applicable Federal, State, and local legislation considered during the development of this SWMP Update.

## 1.2 ORGANIZATION OF CALVERT COUNTY GOVERNMENT

The BOCC is responsible for the operation of governmental activities in Calvert County, other than those controlled by the Federal government, State of Maryland, municipalities, the judicial system, and quasi-state agencies, such as the public schools. The structure of the County Government is given in **Figure 1-1**. The structure of the SWD within the DPW, SWD, is given in **Figure 1-2**.

The Commissioners' staff support consists of a County Administrator and Deputy County Administrator who collectively supervise the daily business of the County and oversees the

operation of the 11 departments into which the government is divided. Planning & Zoning, Finance and Budget, and Public Works, play a role in developing and implementing the SWMP in Calvert County. A detailed breakdown of the structure of the County government as it relates to solid waste management is as follows:

1. County Administrator: Supervises County business in the Commissioners' office and directly oversees the operation of six departments of the County Government.
2. Deputy County Administrator: Supervises County business in the Commissioner's office and directly oversees the operation of five departments of the County Government.
3. Department of Public Works: Responsible to the County Commissioners for the development, direction and administration of services and projects related to County-owned infrastructure.
  - a. Responsibility within the DPW include Engineering, Grading Inspections, Construction Project Supervision, Highway Maintenance, Fleet Maintenance, Road Construction PWA, and Enterprise Funds.
  - b. The Enterprise Funds encompasses Solid Waste, Recycling, Public Water & Sewerage.

DPW oversees the strategic development and policies of solid waste collection, disposal, and recycling. Specifically, the SWD is responsible for the design, technical review, and the operation of the Landfill and the Convenience Center collection system (except for private collection by commercial haulers in the open market for residential and commercial waste collection), development and administration of the County SWMP, and administration of the County's recycling program (including, developing and updating the County Recycling Plan).

4. Department of Planning & Zoning: The Department is responsible for all planning and zoning activities in the County, including subdivision review, site plan review, rezoning cases and special planning projects including the County SWMP.
  - a. Participation in the review and update of the County SWMP. The County SWMP involves all aspects of living influenced by the County government, and includes Health, Land Use, Public Safety, etc. It is a policy statement, describing the objectives for the future, providing recommendations for attaining these objectives, and

- procedures for review and adoption by the County Commissioners. The approved County SWMP then becomes the County's guiding plan for future actions.
- b. **Participation in the review and update of the SWMP and Recycling Plan.** These Plans further outline methods to implement the overall goals and objectives in the County SWMP relating to solid waste and recycling. The objective of the SWMP is to guide the development of the solid waste collection and disposal systems in a manner consistent with County, State and Federal laws relating to air and water pollution and land use. The objective of the Recycling Plan is to guide the implementation of a recycling system that will reduce the amount of waste requiring disposal in the County and meet the recycling goals established by the MRA.
5. **The Department of Finance and Budget:** The Department is responsible for recommending an annual County operating budget and the County capital improvements program for BOCC review. All funding for solid waste operations and long-term improvements is approved through this process.

### 1.3 COUNTY ADMINISTRATION OF PLAN

Figure 1-3 depicts the organization of Calvert County government relative to administration of the adopted SWMP.

### 1.4 LEGISLATION AND REGULATIONS AFFECTING SOLID WASTE MANAGEMENT PLANNING IN THE COUNTY

Solid waste management laws and regulations exist at the Federal, State, and county levels. Overall, regulatory direction and minimum nationwide standards for protecting human health and the environment are established at the Federal level. State regulations meet or exceed those mandated by Federal regulations. State regulations specify minimum design criteria and the permitting, construction, operation, maintenance, and monitoring requirements for many solid waste management facilities. County regulations must be compatible with Federal and State laws and regulations, but may augment Federal and State laws and regulations. The more specific issues of land use, zoning, procurement, financing, and operation related to solid waste management facilities are left entirely to the County to regulate.

Descriptions of responsible agencies, responsibilities, and the applicable Federal, State, and county laws and regulations are discussed in the following paragraphs.

### 1.4.1 Federal Legislation

The following summary identifies the applicable Federal laws, judged to be most significant, regulating solid waste. Foremost among those laws is the RCRA of 1976, amended in 1980 and 1984, that provides federal guidelines and standards for the environmentally sound reuse, handling, and disposal of solid waste. The act requires that States incorporate these guidelines into their solid waste management programs. Under RCRA provisions, Subtitle D provides federal standards for municipal sanitary landfills. These standards include the location, design, operation, groundwater monitoring, corrective action, closure, post-closure, and financial assurance criteria for all municipal sanitary landfills.

#### Summary of Federal Laws Affecting Solid Waste Management:

- a. *Clean Water Act (1972)*: Section 402 of this act establishes the NPDES program which regulates effluent limitations for the discharge of wastewater and runoff from solid waste management facilities into bodies of water. The construction of facilities which may impact rivers, lakes, marshes, swamps, or wetlands is regulated by Section 404 which is administered by the Army Corps of Engineers. Section 405 addresses the disposal of wastewater treatment sludge.
- b. *Clean Air Act (1973)*: Regulates emissions from landfill gas management systems and resource recovery facilities. Landfill operators must comply with requirements of the SIP established under Section 110.
- c. *Endangered Species Act (1973)*: Prohibits construction or operation of facilities that would result in the "taking" of an endangered or threatened wildlife species, or in the destruction of their critical habitat.
- d. *Safe Drinking Water Act (1974)*: Establishes maximum contaminant levels for parameters included in groundwater monitoring programs.
- e. *Resource Conservation and Recovery Act (RCRA) (1976)*: A primary objective of this act is to promote recycling and reuse of recoverable materials. The act also provides guidelines for environmentally-sound handling and disposal of both hazardous and non-hazardous solid waste. Subtitle D of the act specifies criteria for MSW landfills.
- f. *Federal Emergency Management Agency (1979)*: Prohibits siting of facilities within the 100-year floodplain.
- g. *Comprehensive Environmental Response, Compensation and Liability Act (Superfund) (1980)*: Establishes programs for the identification and remediation of waste disposal sites containing hazardous substances; establishes standards for clean-up efforts and

disposal of wastes; and provides a mechanism for assigning liability for contaminated sites.

The CFR provides documentation of the rules established in the Federal Register by the executive departments of the federal government. The CFR is divided into 50 titles which are further divided into chapters and subparts thereof. CFR Title 40 is titled *Protection of the Environment*, which includes Subchapter I-Solid Wastes (Parts 240 through 272).

Solid waste management, on the federal level, is the responsibility of the United States EPA. Federal regulations establish overall regulatory direction and minimum nationwide standards for protecting human health and the environment. Direct implementation of solid waste programs is delegated to state and local governments. The following is a summary of federal regulations important to solid waste management contained in CFR, Title 40, Subchapter I - Solid Wastes:

Summary of Federal Regulations Affecting Solid Waste Management (CFR, Title 40, Subchapter I):

- a. *Part 240: Guidelines for the Thermal Processing of Solid Wastes:* Minimum performance level for MSW incinerators with a capacity of 50 tons per day, or greater.
- b. *Part 241: Guidelines for the Land Disposal of Solid Wastes:* Minimum performance levels for any MSW disposal site operation.
- c. *Part 243: Guidelines for the Storage and Collection of Residential, Commercial and Institutional Solid Waste:* Minimum performance levels for solid waste collection operations. Issues addressed include storage, safety, equipment, frequency, and management.
- d. *Part 244: Management Guidelines for Beverage Containers:* Minimum actions for reducing beverage container waste; covers use of returnables, information requirements, and implementation.
- e. *Part 245: Promulgation of Resource Recovery Facilities Guidelines:* Guidelines for the recovery of resources from residential, commercial, and institutional solid wastes, including regionalization and planning techniques.
- f. *Part 246: Source Separation for Materials Recovery Guidelines:* Minimum actions for the recovery of resources from solid wastes, including high-grade paper, residential materials, and corrugated containers.
- g. *Part 247: Comprehensive Procurement Guideline Products Containing Recovered Materials:* Recommended guidelines for procedures that can be used in the

- specifications for procurement of products to increase the use of recycled materials.
- h. *Part 255: Identification of Regions and Agencies for Solid Waste Management:* These guidelines are applicable to policies, procedures, and criteria for the identification of those areas which have common solid waste management problems and which are appropriate units for planning regional solid waste management services, pursuant to Section 4002(a) of the Solid Waste Disposal Act.
  - i. *Part 256: Guidelines for Development and Implementation of State Solid Waste Management Plans:* The purpose of these guidelines is to assist in the development and implementation of State SWMP, in accordance with Section 4002(b) of the Solid Waste Disposal Act.
  - j. *Part 257: Criteria for Classification of Solid Waste Disposal Facilities and Practices:* Criteria to determine which solid waste facilities pose a reasonable probability of adverse effects on health or the environment. Facilities in violation will be considered open dumps. Does not apply to municipal landfills (covered under Section 258).
  - k. *Part 258: Criteria for Municipal Solid Waste Landfills (Subtitle D Regulations):* Establishes minimum national criteria for the design and operation of MSW landfills. Includes location restrictions, operating criteria, design criteria, groundwater monitoring and corrective action, closure and post-closure care, and financial assurance criteria. Design standards apply only to new landfills and lateral expansions of existing facilities.
  - l. *Part 260: Hazardous Waste Management System – General:* Provides definitions of terms and a general overview of Parts 260 through 265.
  - m. *Part 261: Identification and Listing of Hazardous Waste:* Provides identification of those materials which are subject to regulation as hazardous wastes under Parts 270, 271, and 124.
  - n. *Part 262: Standards Applicable to Generators of Hazardous Waste:* Establishes standards for generators of hazardous wastes including EPA identification numbers, manifest, pre-transportation requirements, record keeping, and reporting.
  - o. *Part 263: Standards Applicable to Transporters of Hazardous Waste:* Establishes regulations for transporters of materials requiring a manifest as defined in Part 262.
  - p. *Part 264: Standards for owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities:* Establishes minimum national standards for the management of hazardous waste.
  - q. *Part 265: Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities:* Establishes minimum national standards that define the management of hazardous wastes during the period of interim status and

until the certification of post-closure or closure of the facility.

- r. *Part 266: Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities:* Establishes minimum national standards for the recyclable materials used in a manner to constitute disposal, hazardous waste burned for energy recovery, used oil burned for energy recovery, recyclable material used for precious metal recovery, and spent lead-acid batteries being reclaimed.
- s. *Part 267: Standards for Owners and Operators of Hazardous Waste Facilities Operating under a Standardized Permit:* Establishes minimum national standards which define the management of hazardous waste for new land disposal facilities.
- t. *Part 268: Land Disposal Restrictions:* Identifies a schedule to evaluate listed wastes for prohibition of land disposal and establishment of treatment standards for these wastes.
- u. *Part 270: EPA Administered Permit Programs: The Hazardous Waste Permit Program:* Application requirements, standard permit conditions, monitoring, and reporting requirements for EPA permitting for the treatment, storage, and disposal of hazardous waste.
- v. *Part 271: Requirements for Authorization of State Hazardous Waste Programs:* Identifies the requirements that State programs must meet to fulfill interim and final authorization as well as the procedures EPA uses to approve, revise, and withdraw approval of State programs.
- w. *Part 272: Approved State Hazardous Waste Management Programs:* Establishes the applicable State hazardous waste management programs.
- x. *Part 503: Standards for the Use or Disposal of Sewage Sludge:* Requirements and standards for the treatment, land application, surface disposal, and incineration of sewage sludge.

#### 1.4.2 State Legislation

The State of Maryland has adopted a number of laws that address solid waste management issues. The MDE is the primary State agency having responsibility for regulating solid waste management within the State of Maryland.

#### MDE:

MDE implements Federal and State solid waste regulations, and enforces Maryland environmental regulations addressing surface water and groundwater protection, erosion

and sediment control, preservation of wetlands, and recycling. MDE reviews solid waste facility plans and management plans, issues permits, and inspects facilities.

MDE issues permits for the various types of waste facilities that may be sited in Calvert County including municipal landfills, land-clearing debris landfills, rubble landfills, and processing facilities (e.g., rubble processing facilities). Industry and the private sector are responsible for permitting and providing industrial and/or hazardous waste facilities for disposal of their wastes, as required. One way that Calvert County is able to regulate industrial and hazardous waste facilities is through public review of permit applications for waste management facilities.

A summary of the state laws affecting solid waste management is provided below. The development of recycling programs in Calvert County is governed by a number of these state laws.

Summary of Maryland Laws Affecting Solid Waste Management (Title 9 Environment Article):

- a. *Maryland State Implementation Plan (SIP) (1972)*: Limits emissions from specific pollutant sources to prevent air quality from falling below NAAQS.
- b. *Sludge Application (1974)*: Regulates land application procedures to maintain the public health.
- c. *Chesapeake Bay Critical Area Protection Program (1984)*: Controls human intervention in the Chesapeake Bay drainage area.
- d. *Maryland Recycling Act (1988)*: Establishes a requirement for Maryland counties to plan and implement a recycling system by 1994. Calvert County was mandated to reduce the County's waste stream by 15%.
- e. *Nontidal Wetland Regulations (1990)*: Prevents net loss of nontidal wetlands by establishing a stringent permitting process.
- f. *Asbestos Control - Asbestos Hazard Emergency Response Act (1990)*: Requires completion of a teaming program by those who do asbestos-related work within schools; deals with asbestos controls.
- g. *Land-clearing Debris Landfills - Amount of Surety (1990)*: Addresses the amount of surety required for each acre of land-clearing debris landfills.
- h. *Medical Waste Legislation (1991)*: Regulates identification, record keeping, treatment, transport, and disposal of special medical wastes: infectious wastes are prohibited in solid waste landfills in the State.

- i. *Newsprint Recycled Content Act (1991)*: Regulates newsprint recycling by imposing specified recycling content percentage requirements on the Maryland newspaper industry.
- j. *Telephone Directory Recycling Act (1991)*: Regulates telephone directory publishers to meet specified recycling content percentage requirements for telephone directories.
- k. *Plastic Material Code (1991)*: Bans rigid plastic containers or bottles from distribution or sale in the State unless appropriately labeled indicating the plastic resin used to produce them.
- l. *Natural Wood Waste Recycling Facilities (1991)*: Wood waste recycling facilities must be appropriately permitted and operated, and may accept only NWW.
- m. *Scrap Tire Recycling Act (1991)*: Regulates the storage of scrap tires, including prohibition against landfill disposal or scrap tires after January 1, 1994. Established a mechanism for the cleanup of scrap tire stockpiles and for the collection, transportation and recycling or processing of the more than 5.9 million scrap tires that are generated annually in Maryland. The Act established the Fund as the funding support for the Scrap Tire Program. The Fund is generated from the collection of a \$0.80 fee (effective April 1, 2005) per tire on the first sale of each new tire in the State. The funds generated from the tire fee are being used to:
  - Administer the scrap tire program
  - License businesses and haulers
  - Enforce and ensure compliance of scrap tire laws and regulations
  - Clean up scrap tire stockpiles
  - Develop and distribute information regarding scrap tire issues
  - Implement and oversee projects that will reduce, recover, and recycle scrap tires
- n. *Composting Act (1992)*: Includes composting in the definition of recycling. Requires that County recycling plans address composting issues, and bans yard waste from landfills effective in 1994.
- o. *Mercury Oxide Battery Act (1992)*: Makes battery manufacturers responsible for collection, transportation, and recycling or disposal of batteries sold or offered for promotional purposes in the State.
- p. *Maryland State Senate Joint Resolution 6 (2000)*: Established a voluntary statewide diversion of goal of 40% by the year 2005 in order to reduce the amount of waste going to solid waste disposal facilities.
- q. *Statewide Computer Recycling Pilot Program (2005)*: Act establishing statewide Computer Recycling Pilot Program and computer manufacturer registration fee.
- r. *Sale of Mercury Containing Thermostats (2008)*: Prohibits sale of mercury containing

thermostats by October 2007.

- s. *Recycling – Public School Plans (2009)*: An Act requiring a county recycling plan to address the strategy for the collection, processing, marketing and disposition of recyclable materials from county public schools.
- t. *Maryland Greenhouse Gas Reduction Act (2009)*: Required the Greenhouse Gas Reduction Plan to have a positive impact on job creation and economic growth in Maryland. The Plan was required to reduce greenhouse gases by 25% by year 2020.
- u. *Fluorescent and CFL Recycling (2010)*: An Act requiring a county recycling plan to address the strategy for the collection and recycling of fluorescent and CFLs that contain mercury.
- v. *Recycling – Apartment Buildings and Condominiums (2012)*: An Act requiring a county recycling plan to address the collection and recycling of recyclable materials from residents of apartment buildings and condominiums that contain ten or more dwelling units by property owners or managers of apartment buildings and councils of unit owners of condominiums. Further, if applicable, a method for implementing a reporting requirement for recyclable materials generated at apartment and condominiums that contain ten or more dwelling units.
- w. *Recycling Rates and Waste Diversion – Statewide Goals (2012)*: An act revising the 1988 MRA, requiring a county Plan to address a reduction through recycling of at least 20% of the county's solid waste stream by December of 2015.
- x. *Special Event Recycling Program (2014)*: An Act requiring a county recycling plan to address the collection and recycling of paper, bottles and cans and food at events held on public property, having at least an estimated 200 people or more, and serves food or drink.
- y. *Recycling Rates and Waste Diversion – Statewide Voluntary Goals (2020)*: The State of Maryland implemented a voluntary waste diversion goal of 60% and a voluntary recycling rate of 55% by 2020.

State laws are codified under the articles of the Annotated Code of Maryland. Laws addressing solid waste management are included throughout the Code; the Title 9 Environment Article contains many of the laws affecting the location, design, and operation of solid waste disposal facilities. These laws are developed into regulation by the agency to which the responsibility is delegated by the State Legislature. An abbreviated summary of the Annotated Code of Maryland titles affecting solid waste management is provided below.

Summary of Sections of the Environment Article, Annotated Code of Maryland Affecting Solid Waste Management:

- a. Title 4 - Water Management
- b. Title 6 - Toxic, Carcinogenic, and Flammable Substances
- c. Title 7 - Hazardous Materials and Substances
- d. Under Title 9 - Water, Ice and Sanitary Facilities; MDE regulates the location, design, and operation of sanitary landfills through refuse disposal permits issued and enforced under authority of the following sections in Subtitle 2, Part II:
  1. Section 204 Installing, Altering, or Extending Water Supply Systems, Sewerage Systems, or Refuse Disposal Systems
  2. Section 204.1 Installing, Altering, or Extending Incinerators
  3. Section 204.2 Installing, Altering, or Extending Landfill Systems
  4. Section 209 Landfill System Hearings
  5. Section 210 Prerequisites for Issuance of Permit
  6. Section 211 Landfills, Incinerators, and Transfer Stations; Requirements for Security
  7. Section 212 Landfill Systems - Options to Purchase
  8. Section 212.1 Denial of Permit to Non-government Person(s)
  9. Section 213 Term of Permit (five years)
  10. Section 214 Revoking or Refusal to Renew a Permit
  11. Section 215 Closure and Cover when Operation Ends
  12. Section 225 Landfills near Hospitals Prohibited (½-mile radius)
  13. Section 226 Certificate of Public Necessity Required for Hazardous Waste Landfill System
  14. Section 227 Infectious Waste in Landfill System Prohibited
  15. Title 9, Subtitle 5, County Water and Sewerage Plans
  16. Title 9, Subtitle 17, Office of Recycling

Administrative rules and regulations adopted by State agencies pursuant to State laws are compiled into a document entitled COMAR. Title 8 contains the regulations of the Maryland DNR which must be considered when siting solid waste facilities. COMAR Title 26 contains the administrative rules and regulations for MDE including solid waste management regulations. A summary of the regulations which affect solid waste management is provided below.

Summary of Maryland Regulations Affecting Solid Waste Management:

- a. Under Title 8, the following sections must be considered in the siting of solid waste management facilities:
  1. Subtitle 3, Chapter 8, *Threatened and Endangered Species*
  2. Subtitle 7, Chapters 1-8, *Forests and Parks*
- b. Title 26, Subtitle 3, Water Supply, Sewerage, Solid Waste, and Pollution Control Planning and Funding, Chapter 3, *Development of County Comprehensive Solid Waste Management Plans*: Requires that each county maintain a current SWMP and establishes the content and format for these plans.
- c. Title 26, Subtitle 3, Chapter 10, *Financial Assistance for the Construction of Processing and Disposal Facilities*: Stipulates the requirements, priority listing criteria, and ranking system for counties to receive financial assistance from the State of Maryland.
- d. Title 26, Subtitle 4, *Regulation of Water Supply, Sewerage Disposal and Solid Waste*, Chapter 7, *Solid Waste, Solid Waste Management*: Regulates permitting, designing, constructing, operating, and closing municipal, land-clearing debris, rubble, and industrial waste landfills, processing facilities, transfer stations, and incinerators.
- e. Other regulations under Title 26 that are important to solid waste management include:
  1. Subtitle 4, Chapter 6, *Sewage Sludge Management*
  2. Subtitle 4, Chapter 8, *Storage, Collection, Transferring, Hauling, and Processing of Scrap Tires*
  3. Subtitle 4, Chapter 9, *NWW Recycling Facilities*
  4. Subtitle 17, Chapter 4, *Construction on Non-tidal Waters and Flood Plains*
  5. Subtitle 23, Chapters 1-6, *Non-tidal Wetlands*
  6. Subtitle 24, Chapters 1-5, *Tidal Wetlands*
  7. Subtitle 8, Chapters 1-10, *Water Pollution*
  8. Subtitle 17, Chapter 1, Erosion and Sediment Control, Disposal of CHS's
  9. Subtitle 17, Chapter 2, *Stormwater Management*
  10. Subtitle 11, *Air Quality*
  11. Subtitle 13, *Disposal of CHS's*

Summary of COMAR Regulations Affecting Solid Waste Management Facilities Permitting Requirements:

All solid waste acceptance facilities are required to operate in a manner that reduces health hazards and minimizes environmental impacts. Discharges to water or air are limited to those permitted by solid waste management, water pollution control, or air pollution

control regulations. These permitting requirements are included for use in planning and are not intended to provide a complete description of COMAR permitting requirements. An applicant for a permit must obtain a copy and strictly follow all requirements of the applicable COMAR regulations.

a. **Municipal Landfills (COMAR 26.04.07.06-.09):**

The permitting process for municipal landfills proceeds in three phases and requires that the public be notified of a proposed sanitary landfill. The first phase of the permit application is a detailed site selection study and a site recommendation; once the landfill site is selected, a site specific hydrogeologic study for the recommended landfill site is presented in the second phase and a conceptual design of the proposed sanitary landfill is presented in the third phase. The siting of proposed solid waste acceptance facilities is accomplished and approved at the local or county level. Upon completion of the three phases, public notice is required for permit application to install, materially alter, or materially extend a landfill.

Section 9-210, Environment Article, Annotated Code of Maryland clarifies the local approvals required in the permitting process. The MDE may not issue a permit until the following steps are taken.

1. MDE completes the preliminary review and sends its preliminary written findings to the County Commissioners and the Planning Commission.
2. Calvert County completes its review and provides MDE with a written statement that the proposed refuse disposal system: (a) meets all applicable County zoning and land use requirements; and (b) is in conformity with the Calvert County Solid Waste Plan.

In addition, the applicant must give notice by certified mail to land owners adjacent to the site, the chairman of the legislative body, and any elected executive of the county, the elected executive of any municipal corporation within the county, and any other county within one mile of the site. Should MDE receive a request to conduct a public information meeting, a meeting will be conducted prior to the approval of the first phase of the permit application. The applicant and interested parties will be invited to this meeting.

b. **Land-clearing Debris Landfills (COMAR 26.04.07.11-.12):**

Land-clearing debris landfills are restricted by COMAR regulation to accepting only those naturally occurring wastes that have been generated from land clearing operations. C&D waste is prohibited from this specific class of landfill. Information required for a permit is included in a single-phase permit application report. Prior to issuance of the refuse disposal permit, MDE will hold a public hearing for the debris landfill.

c. Rubble Landfills (COMAR 26.04.07.13-.18):

The refuse disposal permitting process for a rubble landfill follows the three-phase procedure used for municipal landfills. The MDE review procedure and public participation requirements are also similar.

d. Nonhazardous Industrial Waste Landfills (COMAR 26.04.07.03, .19 and .20):

The permit application requirements for an industrial waste landfill are similar to those for a municipal landfill. A background water analysis and a detailed waste characterization is required for industrial landfills. The information required for an industrial waste landfill is included in a single-phase permit application report.

e. Processing Facilities (COMAR 26.04.07.23):

The refuse disposal permit application for a solid waste processing facility consists of a permit application letter briefly describing the project followed by detailed engineering drawings and specifications.

Processes requiring unloading, separation, reduction, or alteration of solid waste must be performed within an enclosed building. Composting, white goods storage, and tire storage may be conducted outdoors. Composted materials for distribution must be non-pathogenic, biologically and chemically stable, and free of injurious components. A public hearing or notification is not required for processing facilities. These facilities may also require permits issued by the Air and Radiation Management Administration of the MDE.

f. Transfer Stations (COMAR 26.04.07.24):

Procedures and requirements for obtaining a transfer station refuse disposal permit are similar to those for processing facilities. Additionally, transfer station permitting requirements include information on procedures and methods for identifying and segregating unacceptable wastes. These facilities may also require permits issued by the Air and Radiation Management Administration of the MDE.

g. Incinerators (COMAR 26.04.07.25):

Procedures and requirements for obtaining an incinerator refuse disposal permit are similar to those for transfer stations. Additional requirements include location of

storage areas for incinerator ash and other non-combustible products generated by the process, identification of a disposal site for the non-combustible materials, and a written operational plan for disposal of the waste in the event that the facility is non-operational. A public hearing will be held prior to the issuance of the permit. These facilities also require permits issued by the Air and Radiation Management Administration of the MDE.

h. Compost Facilities (COMAR 26.04.11.11):

Compost facilities may apply for an individual or general compost facility permit, in accordance with COMAR 26.04.11.10 or 26.04.11.11, respectively. The compost facility permit applications require a brief description of the project followed by detailed engineering drawings and specifications.

The compost facility design must meet siting requirements, as well as groundwater separation requirements, pad sizing and design requirements, and stormwater management requirements. During the application review process for the individual composting facility permit, MDE will engage the public through a public notification process.

Maryland Environmental Service:

MES is a self-supporting, independent State agency. MES has no regulatory authority and receives no direct operating appropriations. MES has the authority to plan, acquire, construct, and operate water, wastewater, and solid waste facilities; institute and charge user fees; and create and administer funding authorities for issuing revenue bonds to provide project financing. MES is available to provide support to any locality which requests assistance. Additionally, MES will provide remedial services requested by MDE for a locality which has not complied with regulations. MES has been delegated the responsibility for overseeing Maryland's used oil program. Under MDE authorization, MES may use portions of the State Used Tire Cleanup and Recycling Fund to implement and oversee programs established as part of a Scrap Tire Recycling System and other projects that reduce, recover and/or recycle scrap tires.

### 1.4.3 Calvert County Legislation

Calvert County regulates solid waste management activities through the Code of Public Laws, the administrative regulations adopted pursuant to the code, the Calvert County Zoning Ordinance, and the resolutions adopted by the BOCC. Additional resolutions will

be adopted as required to ensure that the County's solid waste management system is adequate to meet the needs of County residents, businesses, and institutions, including to ensure an adequate funding mechanism for the County's solid waste management system. The specific pertinent County regulations addressing solid waste management are described in the paragraphs below:

Code of Public Local Laws of Calvert County:

Chapter 119, Solid Waste, Articles I through VI of the Calvert County Code of Public Laws provides the adopted, promulgated and amended solid waste ordinance requiring, regulating or providing for the storage, collection, transportation and disposal of solid waste (trash, refuse, garbage, rubbish or any other matter or thing that is or may become injurious to the health or comfort of the inhabitants of the County) throughout Calvert County including but not limited to all cities, towns, hamlets and villages, whether incorporated or unincorporated.

Chapter 119 includes the solid waste definitions and regulations on the accumulation and storage of garbage and refuse (private premises container requirements, requirements for the bundling of certain refuse offered for collection, breeding places for pests, farm animal waste and hazardous waste), regulations on the transportation of refuse (garbage, refuse and dry non-putrescible material, vehicle requirements, hazardous waste and sewage treatment residue), regulations on Commercial Haulers (permitting, liability insurance, displaying of permit number on vehicle, notifications of violations and suspension of permit, application for reinstatement of permit, and appeal, hearing and decision), regulations on the disposal of refuse (approved methods of disposal, sanitary landfill requirements, hazardous waste handling requirements, rules for disposal of sewage treatment residue and residential refuse disposal), and miscellaneous provisions (exemptions, enforcement, violations and penalties and amendments).

BOCC of Calvert County, Maryland Resolution No. 38-75. *Resolution Adopting a Solid Waste Ordinance for Calvert County:*

On July 15, 1975, the BOCC adopted Resolution Number 38-75 establishing an ordinance governing the storage, collection, transportation and disposal of solid waste throughout Calvert County (see **Appendix C**). Resolution Number 38-75 (with subsequent amendments) is now titled "Chapter 119, Solid Waste, Calvert County Code of Public Laws, henceforth referred to as "The Solid Waste Ordinance".

This ordinance established rules regarding the accumulation and storage of garbage and refuse on public and private premises (container requirements, acceptable non-putrescible refuse handling, non-permitted placement of or handling of refuse that would allow pest breeding or refuge, and the prohibiting of hazardous waste disposal in any public litter receptacles or “green boxes”), requirements on the transportation of refuse (transportation via approved containers in appropriate vehicles to prevent scattering, spillage or leakage), Health Department permit requirements for commercial haulers, standards for disposal of refuse (burning in an incinerator approved by the State, residential self-haul to a “green box” or compactor site [provided that only household refuse is disposed], placement in a State-permitted sanitary landfill, or a manner approved by the Health Officer and sanitary fill requirements), exemptions, Health Officer enforcement duty, penalties and remedies (outlined the fees [fine between \$10 and \$100], how the fees will be collected and provides for enforcement authority), the repealing of prior rules and regulations and provisions for amendments.

**Table 1-1** lists the Resolutions, their date and the actions contained in the Resolution.

Calvert County Solid Waste Comprehensive Plan, Adopted 2018:

The major SWMP review is anticipated for adoption in 2018. The County SWMP provides a framework for establishing a long-range action plan for solid waste management. Issues included in the SWMP related to solid waste management are land use, general status report of solid waste management issues, policy considerations, and implementation strategies.

Calvert County Zoning Ordinance, Maryland, Revised August 7, 2007:

The Calvert County Zoning Ordinance implements planning policies and objectives presented in the County SWMP. The County SWMP serves as a policy guide as the BOCC consider amendments to the Zoning Ordinance.

Calvert County Recycling Plan:

Calvert County drafted a Recycling Plan in 1990, but it was never adopted. The Recycling Plan is currently under review and revision. The SWMP is the foundation of Calvert County's recycling program and addresses the requirements outlined in Maryland Environment Article §9-1703 in regards to the Calvert County Recycling Plan. The County has consistently attempted to exceed the minimum goal of 15% diversion set forth in the Act for counties under 150,000 population. In 2012, the Maryland General Assembly

passed the MRA (1988) by increasing the mandated recycling rates for Calvert County to 20%. The deadline for plan implementation was December 31, 2015.

Calvert County EOP:

The EOP was endorsed and promulgated by the BOCC on July 16, 1991. This plan is reviewed annually and updated as necessary. The EOP addresses a wide range of natural and technological hazards within the County and contains procedures, organizations and responsibilities involved in the response and recovery phases of major emergencies and disasters, with flexibility sufficient to address any type of disaster which may occur. The EOP supersedes all previous emergency and disaster plans, excluding the Calvert Cliffs Nuclear Power Plant Response Plan, Annex Q, Appendix 1, and the Calvert County SOP to Appendix 1.

The EOP does not address procedures to be followed in specific occurrences, including chemical spills or leakage of a CHS. Indeed, the likelihood is low for a hazardous waste spill in the County because: (1) hazardous wastes are not generated in regulated quantities; and (2) the County is not traversed by a significant interstate highway that may facilitate transportation of hazardous wastes from other jurisdictions.

However, if a spill or leakage were to occur, the EOP will be implemented. In general, Calvert Control (telephone 911) will be notified, the EOC will be activated, and one or more of six fire companies and the Hazardous Materials and Weapons of Mass Destruction Response Team located in the County, which are trained in hazmat awareness, will respond to initially mitigate the situation. Concurrently, a combined effort of the Calvert County Department of Public Safety, the County Sheriff's Office, Maryland State Police and DNR, will provide traffic control, personnel evacuation, and other services, if required. The first agency to arrive at the scene will begin to gather information from witnesses, transportation drivers, plant manager, and others.

Calvert Cliffs Nuclear Power Plant Response Plan (Plan):

Emergency operations for Calvert Cliffs Nuclear Power Plant (Plant) have been described in the Calvert Cliffs Nuclear Power Plant Response Plan (Plan). The Plan describes the protocol, procedures, participating organizations and responsibilities involved in reacting to major emergencies or disasters at the Plant, including a spill of radioactive waste.

Dominion Liquefied Natural Gas Plant Response Plan (Plan):

Emergency operations for Dominion Liquefied Natural Gas Plant (Plant) have been described in the Dominion Liquefied Natural Gas Plant Response Plan (Plan). The Plan describes the protocol, procedures, participating organizations and responsibilities involved in reacting to major emergencies or disasters at the Plant, including a spill of radioactive waste.

#### 1.4.4 Incorporated Towns and Federal Facilities

The Annotated Code of Maryland and the COMAR address the potential for incorporation of subsidiary solid waste plans developed by individual municipalities into County SWMP. The specific citations from the codes are as follows:

- a. Annotated Code of Maryland, Title 9-504 - "(a) Required incorporation. - To the extent that the incorporation will promote the public health, safety, and welfare, each county plan shall incorporate all or part of the subsidiary plans of each town, municipal corporation, sanitary district, privately owned facility, or local State, or Federal agency that has existing or planned development in that county."
- b. COMAR 26.03.02.B - "Each county plan shall include all or part of the subsidiary plans of the towns, municipal corporations, sanitary districts, privately owned facilities, and local, State and Federal agencies having existing, planned or programmed development within the county to the extent that these inclusions shall promote the public health, safety, and welfare. These subsidiary plans may be incorporated by reference into the county plan."

While COMAR provides Maryland municipalities the option to develop their own, or portions of their own solid waste plan and have it incorporated into the County SWMP, the Towns of North Beach and Chesapeake Beach have chosen to not have separate SWMPs. The solid waste management practices of these municipalities are reflected in the County SWMP. Information on current collection services offered by the Town of Chesapeake Beach and the Town of North Beach to their residents is included in Chapter 3, Section 3.1.1. **Figure 2-2** shows the location of these incorporated municipalities.

## 1.5 AMENDMENT OF THE PLAN

Any individual, agency, party or firm may request an amendment of the SWMP by submitting a request to the Calvert County DPW. The request will be processed as follows:

1. The SWD will obtain comments and recommendations from the BOCC and appropriate agencies, which include the County Health Department, the Department of General Services, the Department of Planning & Zoning, and the County Planning Commission.
2. Review of all comments by DPW and SWD with recommendations to BOCC.
3. Recommendations from other agencies will be submitted to the County Commissioners.
4. Comments from all stakeholders will be incorporated into the SWMP Update.
5. A Draft Comprehensive SWMP will be submitted to MDE for a preliminary review.
6. After appropriate advertisement and notifications, a public hearing will be conducted by the County Commissioners, who will then officially adopt, disapprove, or modify the proposed amendment.
7. If a proposed amendment of the SWMP is adopted by the County, the proposed amendment will be submitted to the MDE for final State approval.

#### 1.6 ADVISORY BOARDS AND COMMISSIONS

The following Boards, Commissions and Councils are appointed by the County Commissioners to work with the various departments and divisions, and would routinely review the SWMP.

1. Planning Commission: With staff support from the Department of Planning & Zoning, the Planning Commission approves subdivision plans, makes recommendations on proposed land rezoning, and prepares plans for development and growth in the County for the County Commissioners.
2. Zoning Board of Appeals: Also receiving staff support from the Department of Planning & Zoning, the Board of Appeals hears appeals on decisions made with reference to the County Zoning Ordinance and acts on applications for special exceptions as provided in the Zoning Ordinance.
3. Environmental Commission: Makes recommendations to the BOCC and Department of Planning & Zoning pertaining to matters affecting the environment.

Table 1-1

Calvert County Resolution/Ordinance Information

Resolution/Ordinance Number	Title	Date	Action Description
No. 13-74	Declaring Moratorium	February 5, 1974 (amended via addendum on March 5, 1974)	Placed a moratorium on the commercial importation or acceptance of solid waste, trash, sludge or similar waste which originates outside the geographical area of Calvert County for disposal in or upon any land in Calvert County.
No. 38-75	Resolution Adopting a Solid Waste Ordinance for Calvert County	July 15, 1975	Established an ordinance governing the storage, collection, transportation and disposal of solid waste throughout Calvert County (see Appendix D). Now titled "Chapter 119, Solid Waste, Code of Calvert County (Calvert County Code of Public Laws), henceforth referred to as "The Solid Waste Ordinance".
No. 18-97	A Resolution Amending the Solid Waste Ordinance for Calvert County	April 22, 1997	Amended the "Penalties and Remedies" Section of the Solid Waste Ordinance, providing civil penalties from improper disposal of solid waste. Specifically, persons that are convicted of any violation of the Solid Waste Ordinance are guilty of a misdemeanor, with fines of \$100 for the first conviction; \$250 for a second conviction and \$500 for a third conviction. This amendment provided that each day that a violation exists may be considered a separate offense. This amendment also established that the Calvert County Health Officer may bring a proceeding in the Circuit Court of Maryland for the abatement of any condition violating the Solid Waste Ordinance, and the Circuit Court may, upon hearing and for good cause shown, enjoin the continuance of the condition, regardless of all other remedies at law.
No. 85-87	Pertaining to a Budget Adjustment to set up Budget for Revenue and Expense for Tipping Fees at the Landfill	December 8, 1987	Amended the Fiscal 1988 Expense Budget to set up a revenue and expense budget in the amount of \$100,000 for tipping fees at the Barstow Landfill.

BK00056PG325

Table 1-1

Calvert County Resolution/Ordinance Information  
(continued)

Resolution/Ordinance Number	Title	Date	Action Description
No. 86-87	A Resolution Adopting a Tipping and User Fee at the Calvert County Landfill	December 8, 1987	Established a tipping fee of \$15 per ton for all business and commercial/non-private residential haulers commencing January 1, 1988 at the Barstow Landfill. A user fee of \$34 per year per improved real property was established effective July 1, 1988.
No. 14-91	Pertaining to the Adoption of Tipping and User Fee at the Calvert County Landfill	July 30, 1991	Established a tipping fee of \$55 per ton for all businesses and commercial and governmental haulers commencing August 2, 1991. Non-business residents hauling their own household refuse were exempt from the tip fee. A user fee of \$51 per year per improved real property was established effective July 1, 1991. The resolution extended the annual user fee to each occupant of individual residential dwelling units (including apartments and mobile homes), and each occupant of a commercial or industrial unit (including each store or each tenant in a separately owned retail or industrial area).
No. 20-93	Pertaining to the Adoption of Tipping, User and Impact Fees for Financing the Calvert County Landfill	June 22, 1993	Established a tipping fee of \$62 per ton for all businesses and commercial and governmental haulers commencing July 1, 1993. Non-business residents hauling their own household refuse were exempt from the tip fee. A user fee of \$63 per year per improved real property was established effective July 1, 1993. A tipping fee of \$120 per ton was established for tires received at the landfill. A building impact fee was established at a rate of \$350 per each new residential dwelling and \$0.11 per gross square foot of area for each new or converted commercial, industrial or institutional construction project (including places of worship and public facilities). Identification stickers were to be provided to Calvert County residents for all non-commercial vehicles using the Convenience Centers or the Appeal Municipal Landfill with the intent that only vehicles displaying a County sticker will be authorized to dump household refuse at the sites. Residents were required to display satisfactory proof of residence in order to obtain a County identification sticker.

BK00056PG326

**Table 1-1**

**Calvert County Resolution/Ordinance Information  
(continued)**

<b>Resolution/Ordinance Number</b>	<b>Title</b>	<b>Date</b>	<b>Action Description</b>
No. 42-99	Pertaining to the Adoption of User Fees at the Calvert County Landfill	November 9, 1999	Established a user fee of \$103 per year per improved real property, effective July 1, 1999.
No. 03-5	Pertaining to the Adoption of the Calvert County Comprehensive Plan	January 11, 2005	Calvert County Comprehensive Plan adopted.
No. 45-10	Pertaining to the Repeal and Replacement of Chapter 1 of the Calvert County Comprehensive Plan	November 1, 2010	Repealed and replaced Chapter 1 of the Comprehensive Plan.
No. 49-10	Pertaining to the Adoption of the 2006-2018 Calvert County Comprehensive Solid Waste Management Plan	December 14, 2010	Adopted and amended a County plan dealing with water supply systems, sewerage systems, solid waste disposal systems, solid waste acceptance facilities and the systematic collection and disposal of solid waste, including litter.

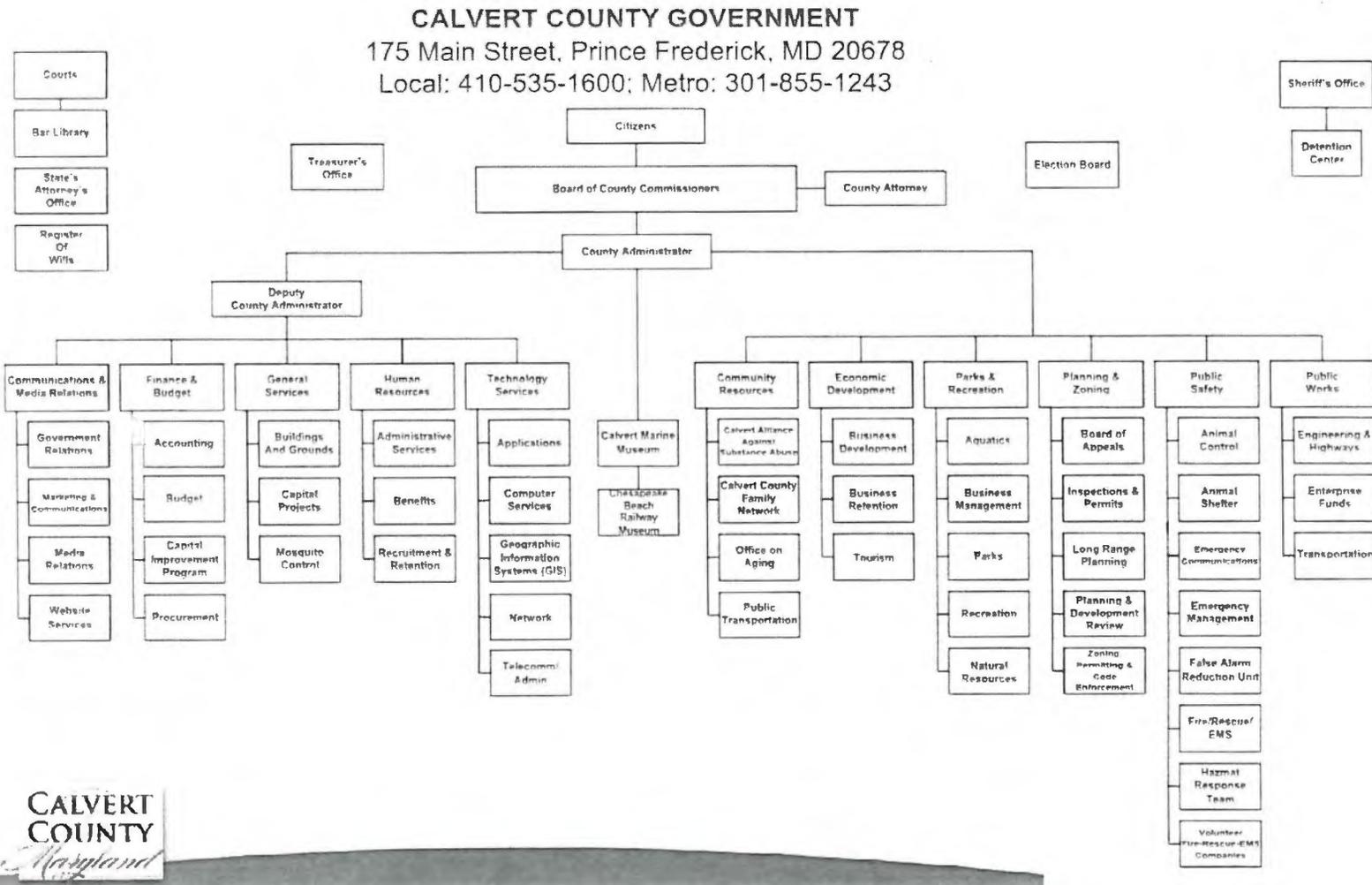
**Table 1-1**

**Calvert County Resolution/Ordinance Information  
(continued)**

Resolution/Ordinance Number	Title	Date	Action Description
No. 24-17	Pertaining to the Adoption of the Operating and Capital Improvement Budgets for Fiscal Year 2018, Setting Certain Fees, and Levying Taxes	June 6, 2017	<p>The resolution established the user fee (\$126 per dwelling, commercial, or industrial unit, which is billed to the real property owner) shall continue until amended in subsequent fiscal years, but, until such amendment, shall automatically increase two percent (2%) each fiscal year after County Fiscal Year 2018, then be rounded up to the next dollar each year, effective July 1, 2017. Multiple units within a single property are billed individually regardless if the lot or parcel is in common ownership.</p> <p>Repealed Resolution 42-99 and reassessed user fees. The Resolution also amended the current tipping fees to \$71.48 per ton for residents and \$79.42 per ton for commercial and out-of-county customers.</p>
No. 48-17	Amendments to the Calvert County Comprehensive Plan to include the Calvert County Growth Tier Map	December 8, 2017	Calvert County Comprehensive Plan updated to include the County Growth Tier Map.

BK00056PG328

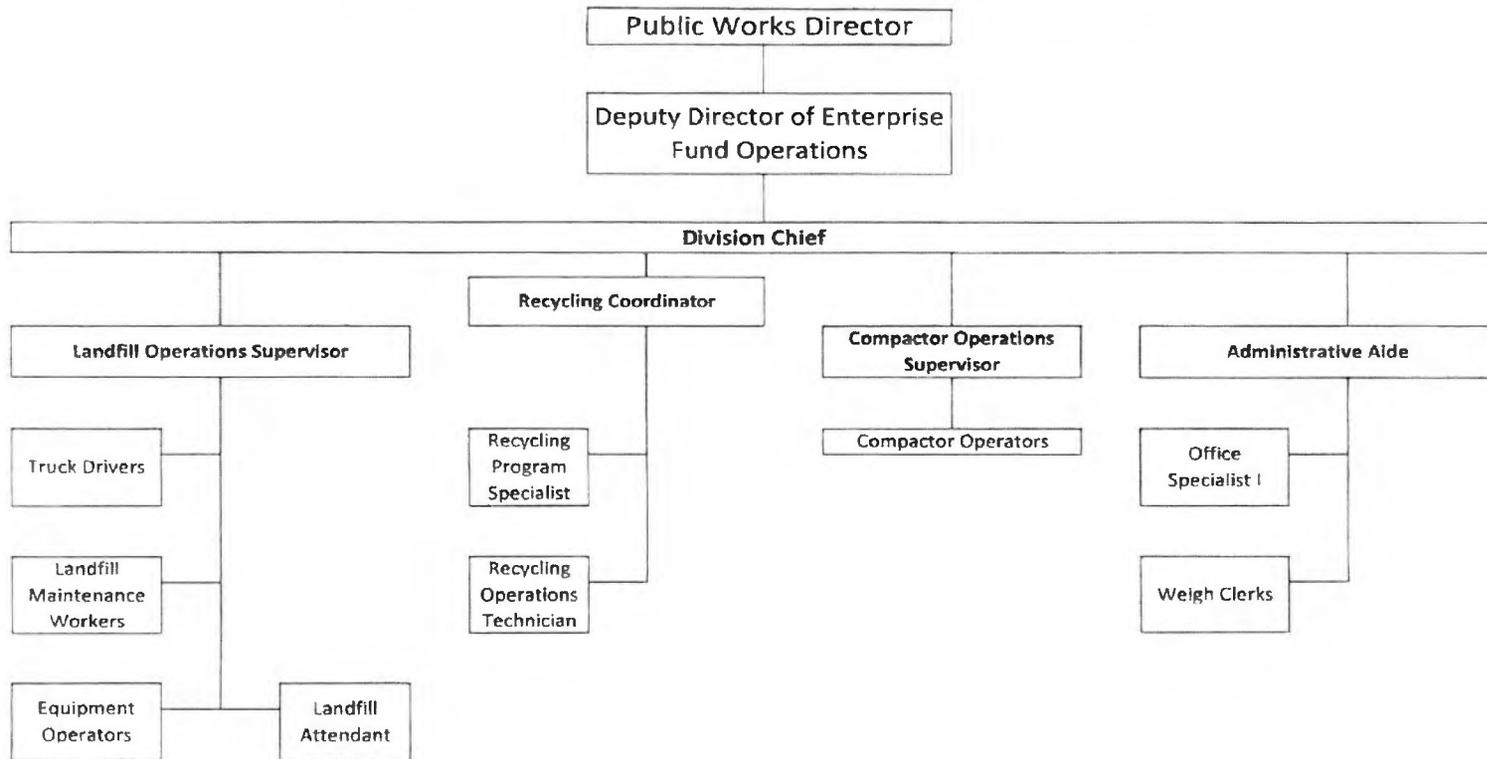
**Figure 1-1**  
**Calvert County Government Structure**



BK00056PG329

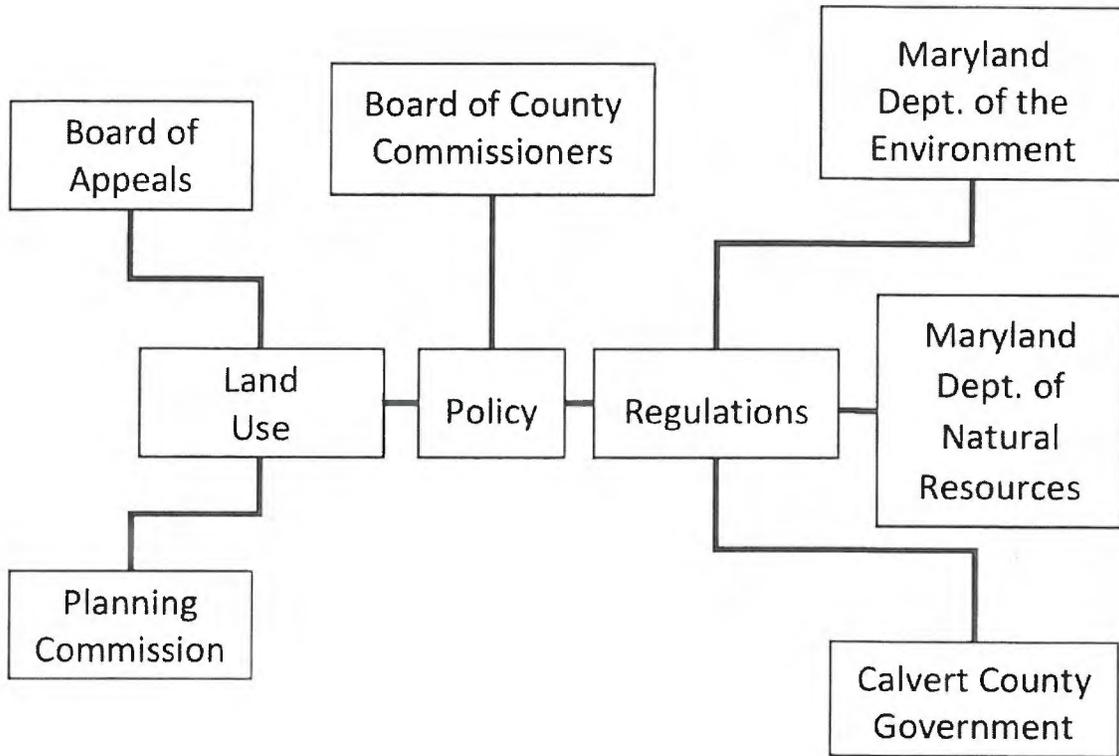
**Figure 1-2  
Calvert County Division of Solid Waste Structure**

Calvert County - Department of Public Works - Division of Solid Waste - Chain of Command



Adopted: 07/01/15

**Figure 1-3  
Administration of the Comprehensive  
Solid Waste Management Plan**



**(This Page Intentionally Left Blank)**

**Regulatory Topic Summary  
COMAR Title 26.03.03.03(C)**

**Chapter 2 – County Background**

*“Chapter 2 shall contain:*

- 1. A table which shows the county’s present and projected population (if more than one set of projections is shown, the set upon which the plan is based shall be noted);*
- 2. A map which shows the location of municipalities and Federal facilities within the County;*
- 3. A discussion of current county zoning requirements as they relate to solid waste management activities; and*
- 4. A discussion of the current status of the county comprehensive land-use plan, including the date that the plan was adopted and last update.”*

## CHAPTER TWO COUNTY DEMOGRAPHICS

### 2.1 POPULATION

Between 1970 and 1980 Calvert County's population increased from 20,682 to 34,638, an average annual increase of 5.19% and an overall increase of 67.5% for the decade. By 1990, the population had increased to 51,372, indicating a similar (5.01%) average annual increase for the 1980's. The average annual growth rate for the State for that period was only 1.03%. The U. S. Census Bureau reported a population of 74,563 in the year 2000 and a population of 88,737 in the year 2010 with an estimated overall increase of 19% for the decade and an average annual growth of 1.76%. The average annual growth rate for the State for that period was only 0.87%. The Maryland Department of Planning estimates that population will reach nearly 94,600 by the year 2020. Population annual estimates and projections from Maryland's Department of Planning for Calvert County are shown in **Table 2-1**.

Growth management is necessary to direct the overall development in the County. Continued growth in Calvert County is expected. There are a number of forces stimulating growth which are likely to continue into the foreseeable future, which include the following:

1. Taxes are lower than other Washington/Baltimore metropolitan outer areas or suburbs.
2. There is a continuing desire for Calvert County's rural lifestyle and property with water access.
3. Access to the urban/suburban job market is relatively good.
4. Growth management practices in adjacent counties may result in a spill-over effect to Calvert County.
5. Calvert County is an attractive retirement area for some in the metropolitan area.
6. Calvert County has a good school system.

The census designated places are shown on **Figure 2-1**.

Due to growth management tools in place, population is not projected to grow as rapidly as it did between 1970 and 2010; however, early fluctuations can be expected as a response to economic forces affecting the entire country. It is likely, however, that Calvert County will continue to grow as long as it is perceived to be an alternative to more urban or suburban communities.

## 2.2 ZONING

The County SWMP shall not be used to create or enforce local land use and zoning requirements. The Calvert County Zoning Ordinance limits the development of solid waste and recycling facilities based on zoning and land use regulations. As mandated in the County SWMP, the Zoning Ordinance is adopted and regularly updated to regulate land uses as part of the effort to promote the health, safety and general welfare of Calvert County residents. **Tables 2-2 and 2-3** provide a list of the pertinent land uses from the Zoning Ordinance, in what zoning districts they are permitted, and under what conditions these uses are allowed outside town centers.

## 2.3 COMPREHENSIVE PLAN

According to Maryland law, local jurisdictions are required to revisit their comprehensive plans every ten years. The most recent comprehensive plan was adopted in 2004 and amended in 2010 and again in 2017. See **Table 1-1** for more information on the corresponding resolutions and/or ordinances. The comprehensive plan update is occurring simultaneously to the SWMP update and is anticipated to be adopted in 2018. The 2018 County SWMP lists the following Waste Management Objectives pertaining to solid waste:

1. Protect public health and safety and preserve the natural environment.
2. Implement and maintain programs that promote source reduction, material reuse, and recycling over disposal.
3. Ensure cost effective and sustainable material management services to accommodate current and future County-generated and/or County-managed residential and commercial MSW and recyclables.
4. Ensure adequate facilities and infrastructure to accommodate current and future County-generated and/or County-managed residential and commercial MSW and recyclables.
5. Collectively plan future initiatives, to the greatest extent possible, with internal County Departments and regional County jurisdictions, councils, and other potential partnerships.

Table 2-1

## Population Projections

<b>Year</b>	<b>State Projections<sup>1</sup> (August 2017)</b>
2015	90,650
2016	91,440
2017	92,230
2018	93,020
2019	93,810
2020	94,600
2021	95,150
2022	95,700
2023	96,250
2024	96,800
2025	97,350
2026	97,720
2027	98,090
2028	98,460
2029	98,830
2030	99,200

---

<sup>1</sup> Source: Maryland Department of Planning, August 2017, with an average 0.48% growth rate.

Table 2-2

Solid Waste Land Uses by Zoning District<sup>1</sup>

Use	FFD	RCD	RD	APD	HD	I-1	Conditions
Commercial Recycling Facility						C	<ol style="list-style-type: none"> <li>The Commercial Recycling Facility shall be constructed and operated in accordance with the Solid Waste Chapter of the County Code, as amended from time to time; and</li> <li>No incinerator shall be permitted; and</li> <li>No outdoor processing shall be permitted.</li> </ol>
Landfill, Land-clearing Debris  [Amended 9-22-2009]	SC	SC	SC	C	C	C	<ol style="list-style-type: none"> <li>All materials shall be physically inert or biodegradable and occurring naturally such as stumps, brush and logs.; and</li> <li>If in an individual recorded section in a major subdivision, all dumping must cease after 75% of the lots in that section have been developed; and</li> <li>All County, State and Federal permits shall be obtained; and</li> <li>On land that is designated as an Agricultural Preservation District, only debris originating onsite shall be permitted.</li> </ol>
Landfill, Rubble  [Amended 9-22-2009]						SC	<ol style="list-style-type: none"> <li>The area shall be located at least 500 feet from any adjacent property line of a property owned by a party other than the applicant (unless such adjacent property owner gives written consent) and 200 feet from any street, highway, or road right-of-way; and</li> <li>All County, State and Federal permits shall be obtained; and</li> <li>The use shall be 100% screened from adjoining properties and roads.</li> </ol>
Landfill, Sanitary  [Amended 9-22-2009]						C	The area shall be located at least 500 feet from any adjacent property line of a property owned by a party other than the applicant (unless such adjacent property owner gives written consent) and 200 feet from any road right-of-way.
Solid Waste Collection Site	C	C	C			C	It shall be constructed and maintained in accordance with the Comprehensive Solid Waste Management Plan.
<p><b>Notes:</b>                      Zoning Districts Key:                      FFD = Farm and Forest District                      RCD = Rural Community District                      RD = Residential District                      APD = Agricultural Preservation District                      HD = Historic District                      I-1 = Light Industrial District</p> <p>Conditions Key:                      C = Use is permitted only if it meets the conditions specified in the Table of Land Uses.                      SC = Use is subject to a special exemption from the Board of Appeals and must meet the conditions specified in the Table of Land Uses.</p>							

BR 00056 PG 337

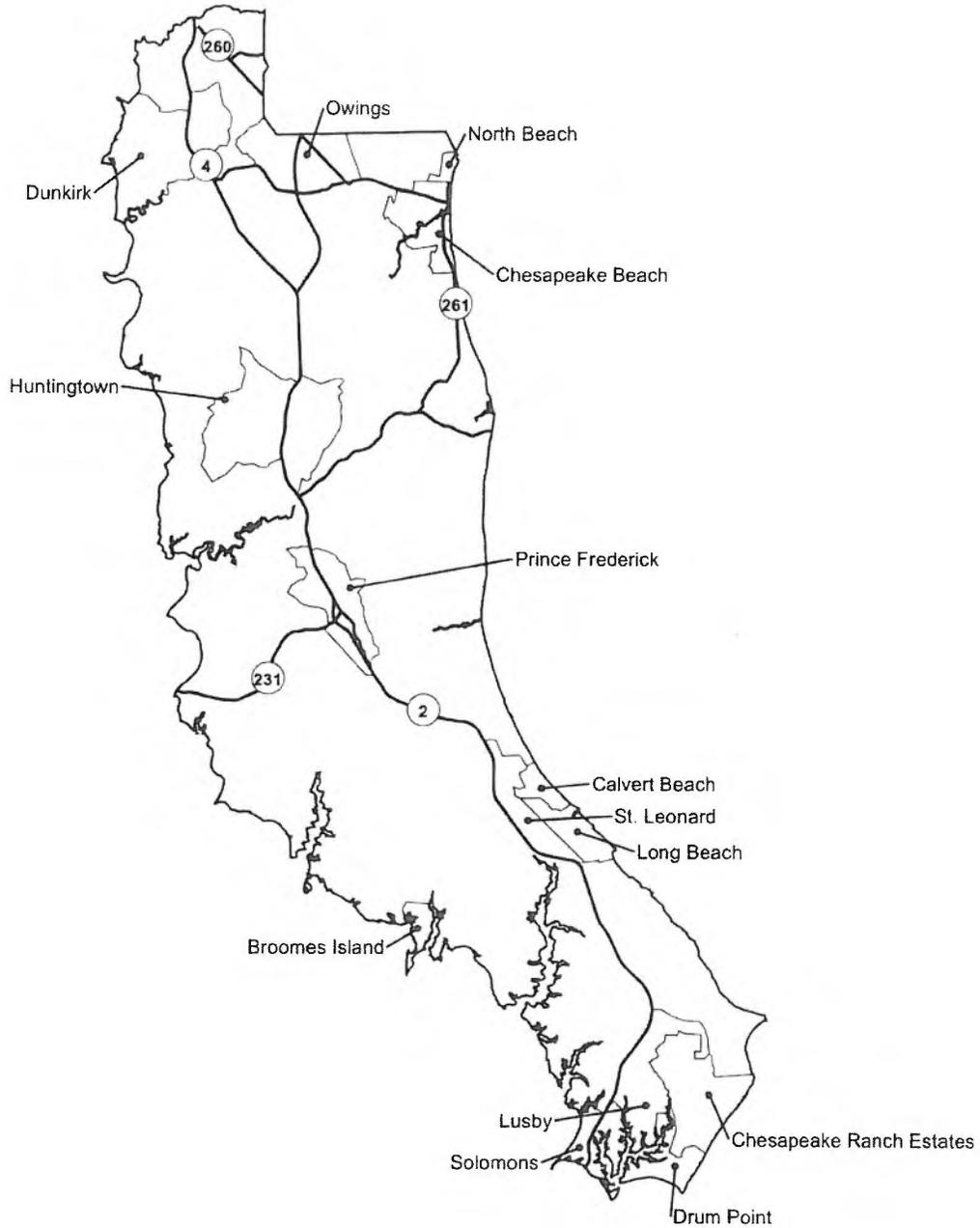
<sup>1</sup> Data from the Calvert County Zoning Ordinance, Article 3-1: Land Uses By District Outside the Town Centers, last amended 8-7-2007.

**Table 2-3**

**Solid Waste Collection Site in Town Center Districts<sup>1</sup>**

<b>Town Center</b>	<b>Conditions</b>	<b>Permitted Sub-Districts</b>
Dunkirk	-	-
Owings	S	Core
Huntingtown	C	Residential
Prince Frederick	C	Entry, Village, New Town and Forest
St. Leonard	S1	S1 use within Residential
Lusby	-	-
Solomons	-	-
<p>Conditions Key:                      P = Permitted Use                      C = Use is permitted only if it meets the conditions specified in the Table of Land Uses.                      S = Permitted Use subject to special exception from the Board of Appeals.                      SC = Use is subject to a special exemption from the Board of Appeals and must meet the conditions specified in the Table of Land Uses.                      S1 = Permitted Use subject to special exceptions if less than 150 feet from a residential building or site where there is an active house permit or an established Historic District.</p>		

<sup>1</sup> Data from the Calvert County Zoning Ordinance, Article 3-2: Land Use By Town Center District, last amended 4-26-17



**Legend**

-  Highways
-  Census Designated Place
-  Calvert County Boundary



CALVERT COUNTY DEPARTMENT OF PUBLIC WORKS  
TEN YEAR COMPREHENSIVE SOLID WASTE  
MANAGEMENT PLAN

**CENSUS DESIGNATED  
PLACES**

Figure Number

**2-1**

Project Number

1990.001.001

Date

JULY, 2018

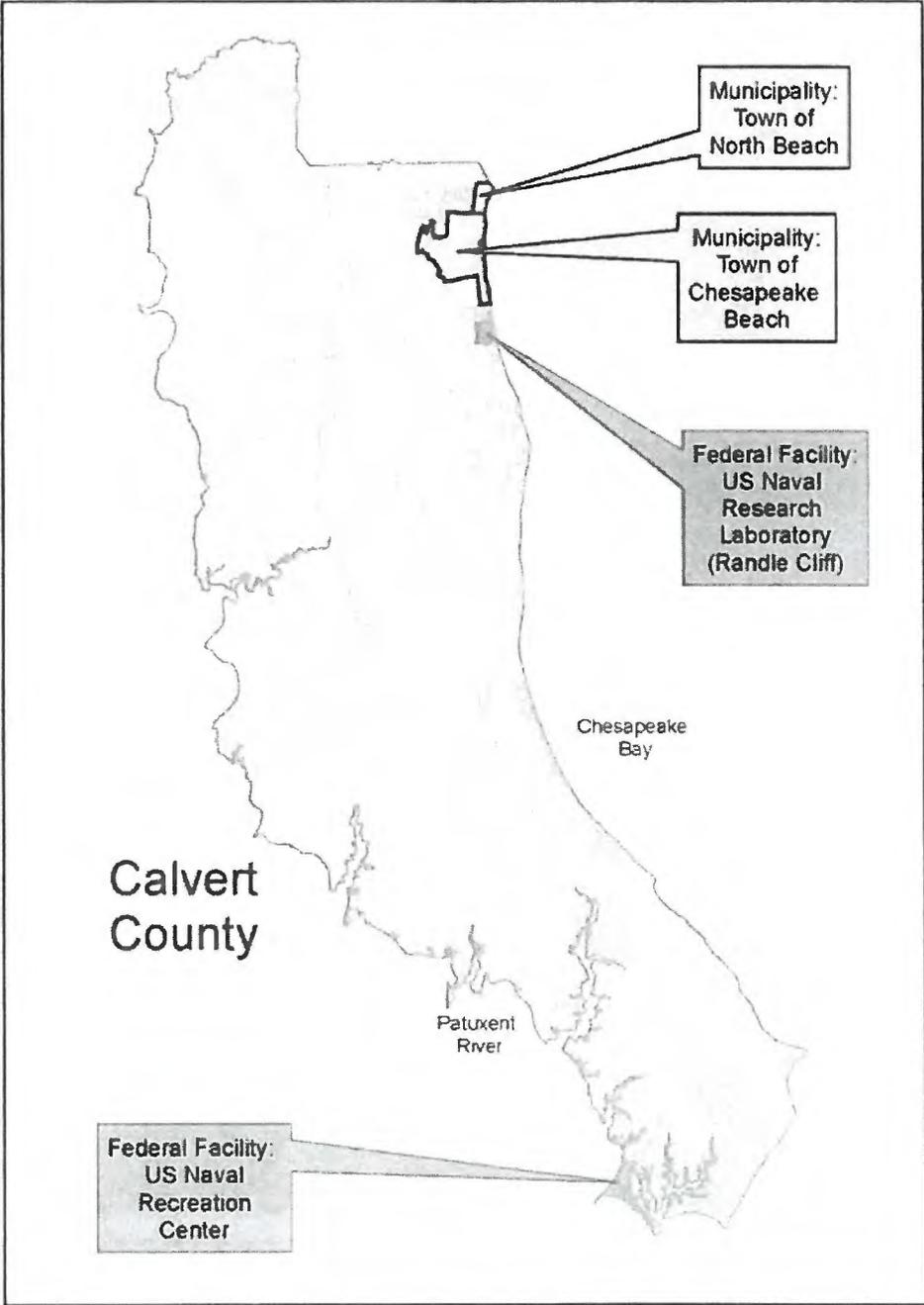
Scale

NOT TO SCALE

CALVERT COUNTY, MARYLAND

Figure 2-2

Location of Municipalities and Federal Facilities



**Regulatory Topic Summary**  
**COMAR Title 26.03.03.03(D)**

**Chapter 3 – Solid Waste Management Systems**

*"Chapter 3 shall contain:*

- 1. A table that shows the existing and projected, for at least the succeeding ten-year period, annual generation (in tons, CYs, or gallons, as appropriate) of:
  - a. Residential (household, domestic) wastes;*
  - b. Commercial wastes;*
  - c. Industrial (nonhazardous) solids, liquids, and sludges;*
  - d. Institutional (schools, hospitals, government buildings) waste;*
  - e. Land clearing and demolition debris (rubble);*
  - f. Controlled hazardous substances (CHS);*
  - g. Dead animals;*
  - h. Bulky or special wastes (automobiles, large appliances, etc.);*
  - i. Vehicle tires;*
  - j. Wastewater treatment plant sludges;*
  - k. Septage; and*
  - l. Other wastes (water treatment plant sludges, residues collected by a pollution control device, agricultural wastes, mining wastes, etc.) unless they are generated in insignificant quantities. However, the Department may require the county to substantiate any omission.**
- 2. A discussion of the bases for the data presented in the table required by §D(1) of this regulation.*
- 3. A discussion of the types and quantities of solid waste, if significant, which are entering or leaving the county for processing, recovery, or disposal.*
- 4. A description of existing solid waste collection systems, including service areas.*
- 5. Information concerning each existing public or private solid waste acceptance facility (incinerators, transfer stations, major composting sites, sanitary and rubble landfills, dumps, major resource recovery facilities, CHS facilities, injection wells, and industrial waste liquid holding impoundments) including:
  - a. Its location on a map;*
  - b. Its Maryland grid coordinates;*
  - c. Its size in acres;*
  - d. The types and quantities of solid waste accepted;*
  - e. Ownership;*
  - f. Permit status; and*
  - g. Anticipated years of service life remaining."**

## CHAPTER THREE

### DESCRIPTION OF EXISTING COLLECTION, RECYCLING, PROCESSING AND DISPOSAL SYSTEM

The following sections describe the waste and recyclables generated and the collection, processing/disposal and recycling systems serving Calvert County, Maryland. The County currently operates six (6) convenience centers for the acceptance of MSW and recyclables, a landfill, a yard waste and wood waste processing area at the Appeal Municipal Landfill and leases the land that the Appeal Transfer Station is currently located on to Waste Management.

#### 3.1 SUMMARY OF WASTE STREAM QUANTITIES (EXISTING AND PROJECTED)

**Tables 3-1 and 3-2** present reported recycling quantities for 2016. Waste generation in the County in 2016 is shown in **Table 3-16**; and projections of future waste generation for 2018 through the year 2030 are shown in **Table 3-3**. It shall be noted that very little of the waste quantities generated in Calvert County are disposed in Calvert County's Appeal Municipal Landfill. As discussed in the following sections, a small quantity of waste is estimated to be disposed on-site, certain residential, commercial and institutional waste is recycled, and the substantial waste quantities leave the County for processing or disposal through the Appeal Transfer Station, owned and operated by WM under a 25 year contract with the County, set to expire in 2022. The waste received at the Appeal Transfer Station includes, but is not limited to, residential, commercial, institutional and certain industrial waste collected in Calvert County by private haulers; residential waste from the Convenience Centers and the Towns of North Beach and Chesapeake Beach; certain C&D waste and other MSW from Calvert County; a substantial quantity of MSW generated in adjacent St. Mary's County through agreement; and certain MSW from other parts of Southern Maryland.

The waste received at the Appeal Transfer Station is loaded into open top transfer haulers, which are tarped and hauled to the King George Landfill, operated by WM in King George County, Virginia. This lined, leachate controlled, facility is one of the larger megafills in the East. It is permitted by the Virginia Department of Environmental Quality, receives waste by truck and rail, and is reported to have received over 1.3 million tons of waste in 2016, with a remaining permitted capacity of 7,548,696 tons (estimated 29.9 years) as of December 31, 2016.

In 2016, 99,025 tons of material was reported to have been delivered to the Appeal Transfer Station. Of that quantity, 55,438 tons represented waste (38,101 tons of MSW, 17,064 tons of C&D material

and 273 tons of 'other wastes') originating in Calvert County and 43,587 tons represented out-of-County waste received at the Appeal Transfer Station. Over 95% of the out-of-County waste, approximately 41,473 tons, was from St. Mary's County, Maryland. In addition, 1,889 tons of Calvert County sewage sludge was transported from the Solomons Island Waste Water Treatment Plant to the King George Landfill in 2016.

The County's Appeal Municipal Landfill is estimated to have remaining capacity for approximately 1.9 million tons of waste, which includes the remaining capacity in the active cell and the permitted capacity in the inactive cell. If all waste generated for processing or disposal in the County (as shown in the projections in **Table 3-3**) were to be disposed of in the Appeal Municipal Landfill (which is highly unlikely), there will be approximately 15 years of capacity at the Appeal Municipal Landfill to handle the material.

### 3.1.1 Residential Waste

Approximately 55% of the estimated residential waste generated in the County is currently received at the County operated Convenience Centers (also known as Drop-off Locations). As of 2018, the Appeal, Ball Road, Barstow, Huntingtown, Mt. Hope, and Plum Point Convenience Centers were operational. **Figure 3-1** shows the current Convenience Center locations as of 2018. Though the Convenience Centers are available for all County residents, residents may also contract for waste collection with private waste haulers. A list of major waste haulers serving Calvert County as of 2017 are contained in **Table 3-20**. In addition, it is possible some residents may dispose of wastes on their property through burning, composting, or burying, though this is considered inconsistent with the SWMP, and may violate certain Health Department regulations.

The Convenience Centers are open from 7:00 a.m. to 7:00 p.m., Monday through Saturday, with the exception of the Appeal Convenience Center, which is open from 6:00 a.m. to 4:00 p.m. Monday through Saturday. Special Sunday hours for the Appeal and Mt. Hope Convenience Centers are from 10 a.m. to 7:00 p.m. Special Sunday hours for the Barstow Convenience Center are from 12 p.m. to 7:00 p.m. **Table 3-5** lists the waste quantities received at each of the Convenience Centers in 2016.

**Table 3-6** presents a summary of the estimated residential waste generated in the County based on residential waste collected at Convenience Centers and residential waste estimated

to be collected by private haulers (including residential waste from the Towns of North Beach and Chesapeake Beach) in 2016.

#### Incorporated Municipalities

Calvert County has two incorporated municipalities: (1) the Town of North Beach; and (2) the Town of Chesapeake Beach. Though the Towns of North Beach and Chesapeake Beach do not have separate SWMPs, these jurisdictions are incorporated into the County SWMP, and the municipalities benefit from the County's solid waste management system. Residential waste quantities from the individual municipalities are included in **Table 3-7**.

The Town of North Beach, through the municipal contract with Southern Maryland Recycling, offers residents once-a-month bulk trash pick-up, by appointment only. Some acceptable items include refrigerators, freezers, air conditioners, mattresses, sofas, tables, chairs, appliances, etc. Construction debris is not eligible for pick-up. Additionally, residents are offered curbside collection of commingled recyclables, such as glass, metal/aluminum, #1-5 & 7 plastic, paper and cardboard.

The Town of Chesapeake Beach, through the municipal contract with Southern Maryland Recycling, offers residents once-a-month bulk trash pick-up, by appointment only. Bulk trash collection is limited to three items per pickup per house. Items that are acceptable for pickup are large items that normally would not be picked up by the household trash contractor. Items that will not be collected include: hazardous materials, gas motors or farm equipment, pianos, pool tables, heat pumps, carpeting, grass and yard debris, construction debris, etc. Additionally, residents are offered curbside collection of commingled recyclables, such as glass, cardboard, newspaper, phone books and office paper, junk mail, metal/aluminum cans, metal food and beverage containers, and #1-5 & 7 plastic.

#### Apartments and Condominiums

It is the responsibility of the BOCC to ensure the implementation of the 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 ten or more dwelling units. This plan was to be implemented in compliance with State Law by October 1<sup>st</sup>, 2014. More information on this program is located in **Appendix A** and **Table 3-8(a) and 3-8(b)**.

### **3.1.2 Commercial Waste**

Commercial waste includes garbage and refuse from businesses that is collected by a private hauler or self-hauled by the generator to the Appeal Transfer Station or out-of-County. Commercial waste is not allowed at the Convenience Centers, but the County recognizes that small amounts of commercially generated solid waste or recyclables may potentially be delivered to these locations. Refuse collection from commercial establishments is the responsibility of the owner or user of the establishment.

### **3.1.3 Industrial Waste**

COMAR defines industrial waste as any liquid, gaseous, solid, or other substance, or combination thereof, resulting from any process of industry, manufacturing, trade, or business; or the development of any natural resource, including agriculture. There are reportedly no “significant” generators of industrial process wastes, liquids, and sewage sludge in Calvert County.

In general, the substantial portion of waste generated by industrial operations in the County is recycled/reused, self-hauled, or hauled by a private hauler to the Appeal Transfer Station or out-of-County.

### **3.1.4 Institutional Waste**

Institutional waste includes waste generated by Federal, State, County, or local government offices and facilities, schools, prisons, and other institutional entities. Institutional waste is typically collected as commercial waste (either self-hauled or hauled by a private collector to the Appeal Transfer Station or out-of-County). Some key institutional waste generators are addressed below.

#### Calvert County Government

Most Calvert County government offices and facilities receive contracted waste collection from a local private hauler. The County has a contract with Affordable Refuse and Recycling, LLC for solid waste collection from most County facilities.

### Schools

In Calvert County, there are a total of 45 schools -- 25 public schools and 20 non-public, or private, schools. Approximately 15,564 students are enrolled in the public school system. This includes County alternative schooling and special education, but excludes vocational schools. The public school system includes thirteen elementary schools with an enrollment of 6,660; six middle schools (6th through 8th grades) with an enrollment of 3,716; and four high schools with an enrollment of 5,139. The public school system also supports a special education school with an enrollment of 40 and a vocational school through the Calvert County Career Center. There are also nine students in the County alternative school system. The private school system has eleven (11) kindergarten/pre-kindergarten schools, eight elementary and combined (elementary and secondary) schools, and one high school. **Table 3-9** shows the Calvert County schools and total student enrollment as of 2016.

Affordable Refuse and Recycling LLC provides waste and recycling collection for public schools in Calvert County. The quantity of waste collected from these institutions is included in the Commercial, Industrial and Institutional waste quantity generation totals for Cyr 2016 in **Table 3-3**.

It is the responsibility of the BOCC to ensure the implementation of the CCPS recycling programs. The BOCC delegated the CCBOE and the CCSMBOT to have the responsibility for developing the recycling plans and implementing the recycling programs for all of their respective schools. If needed, the BOCC may also direct the Calvert County DPW, SWD to develop recycling plans and implement recycling programs for the respective schools.

a. Calvert County Public School Recycling Plan:

CCPS's recycling plans were to be implemented and operational in compliance with State Law as of October 1, 2010. To date, all CCPS's have recycling plans in place and are participating in a recycling program. Information on this recycling plan is located in **Appendix A** and **Table 3-14**.

b. Community College of Southern Maryland Recycling Plan:

The CCSMPFB recycling plan was to be implemented and operational in compliance with State Law as of October 1, 2010. To date, the CCSMCPFB has a recycling plan in place and is participating in a recycling program. The CCSMBOT oversees and funds the CCSMPFB of the CCSM. The CCSMBOT

is responsible for the implementation of a recycling plan for the CCSMPFB. Information on this recycling plan is located in **Appendix A**.

#### Calvert County Detention Center

The Calvert County Detention Center is located at 325 Stafford Road in Barstow and has a rated design capacity of 190 inmates, detaining pre-trial suspected offenders, to adequately assure their appearance at trial or other judicial proceedings, and to hold those offenders serving short-term sentences until legally released. Additionally, the detention center is responsible for a Work Release Program, designed to provide inmates with the opportunity to continue their employment while paying their debt to society. The operational capacity of the facility is greater than the design capacity, allowing for a daily population exceedance of the 190 inmate design capacity. The facility is staffed by 94 full-time employees and had an average daily population of 195 in 2016. The Detention Center utilizes two 25-yard dumpsters for trash, collected weekly by Affordable Refuse and Recycling LLC. In addition, the Calvert County SWD collects paper and commingled recyclables from the Center, and those quantities are included in the County's recyclables tonnage totals.

#### Federal Facilities

a. Naval Research Laboratory (NRL) - Chesapeake Bay Detachment:

One significant institutional waste generator in the County is the NRL - Chesapeake Bay Detachment<sup>1</sup>, shown on **Figure 2-2**. The Laboratory is located on 168 acres in Randle Cliff (within Chesapeake Beach) and has 18 full-time government and contracted employees. Approximately 50 additional researchers use the facility throughout the year. The facility has a SWMP and a recycling plan.

The Laboratory uses Six Nations Inc. through a State contract for waste hauling of 6 CY and 30 CY containers located throughout the facility. The containers are collected for disposal on a bi-weekly basis. In 2016, 183 tons of MSW was generated by the facility. Six Nations transports the collected municipal waste to the Fort Totten Transfer Station in Washington D.C., or the Federal IPC Transfer Station in Washington D.C. Additionally any corrugated cardboard material

---

<sup>1</sup> Information on the solid waste management system of the NRL - Chesapeake Bay Detachment was provided by Michael Knutson, Recycling Manager, via email, in Sept. and Oct. 2017.

collected is transported by Six Nations to the Recycle One Facility in Washington, D.C.<sup>2</sup>

Paper, aluminum cans, glass bottles, plastic bottles, metals, and batteries are collected for recycling at the facility. In 2016, approximately 18 tons of recycled material was collected from the facility by NRL staff and transported to the NRL in Washington, D.C. where it was incorporated into their recycling materials. Recyclables are collected and transported on a bi-weekly basis.

The Laboratory reports generation of less than one ton per year of hazardous wastes such as boiler soot, gasoline, and oil. Clean Harbors Environmental Services, Inc. is contracted by the NRL to dispose of hazardous waste materials in accordance with the CFR, Titles 40 and 49. The materials are collected every other month and transported to permitted disposal sites.

b. Solomons Annex:

The U.S. Navy's "Solomons Annex", shown on **Figure 2-2**, in Calvert County includes: (1) the Patuxent River NAS Annex (Pax River Annex), which is a separate element of the Patuxent River Naval Air Warfare Center - Aircraft Division located in St. Mary's County; and (2) a number of other civilian and military tenants, including the NDW, which occupies the majority of land on the Annex (approximately 222 acres of the 296 total acres of the facility).

The Pax River Annex houses an industrial complex and certain equipment which generate solid waste and recyclables, including certain hazardous waste. In 2016, Solomons Annex generated approximately three tons of waste, of which 1.46 tons were hazardous wastes. These hazardous wastes included 0.76 tons of paint and paint related materials, 0.44 tons of blast media, and 0.26 tons of aerosols. Municipal waste from Solomons Annex was collected and transported by Tradebe Treatment and Recycling, LLC.

The U.S. Navy Department submits updated waste and recyclables quantities and management practice information on an annual basis to the DPW SWD as part of the requirements of the *Patuxent River NAS Solid Waste and Recycling Program*.

---

<sup>2</sup> According to telephone conversation with Six Nations Representative, Paul Davis, November 2017.

The program includes waste materials from the NDW Recreational Center, which includes campsites, athletic fields, housing units, and swimming pools, in addition to the industrial complex. Waste from these facilities is collected weekly by WM and/or Affordable Refuse. In 2016, WM received approximately 112 tons of MSW and C&D waste from the facility and Affordable Refuse received approximately 295 tons of MSW. In total, Solomons Annex produced just over 407 tons of waste in 2016. Waste collected by WM was taken to the Appeal Transfer Station<sup>3</sup>, while the waste collected by Affordable Refuse was taken to a WTE Facility in Virginia.<sup>4</sup>

Recyclables are collected weekly by the Pax River NAS Recycling Program. In 2016, approximately 86 tons of MRA materials were collected at the facility. The recycling program includes the collection of lead-acid batteries, scrap metal, asphalt, waste oil, polymer scrap and carpeting/padding materials. Recyclables produced at the Annex are brokered through Re-Direct Recycling. Scrap metals are transported by Melwood Services for processing and reuse by Yowell Contractors in Woodbine, Maryland.<sup>5</sup>

### 3.1.5 Special Events Recycling Program

Environment Article, §9-1712, Annotated Code of Maryland, requires special event 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. An Event Day shall mean each day that meets the criteria stated above.

---

<sup>3</sup> Based on telephone conversation with WM Staff members; November 2017.

<sup>4</sup> Based on telephone conversation with Affordable Refuse Vice President, Herb Schoenberg; November 2017

<sup>5</sup> Information on solid waste and recycling at Pax River/Solomons Annex provided by Gary Costanzo, Environmental Protection Specialist, Pax River NAS; via email dated September 2017

In consultation with municipalities, the County has identified the public sites within the County that host or may host special events meeting the above criteria. A list of these sites can be found in **Table 3-15**. 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). Information on the SERP is included in **Appendix A** and **Table 3-15**.

### 3.1.6 Land-clearing Debris

Land-clearing debris is limited to the types of waste associated with land-clearing operations, including earthen materials, such as clay, sand, gravel, and silt; topsoil; tree stumps; root mats; brush and limbs; logs; vegetation; and rock. In Calvert County, land-clearing debris is disposed at private landfills. These materials are not permitted to be disposed of at the Appeal Municipal Landfill because this type of debris consumes valuable air space. It shall remain the responsibility of the generator to have an area approved for this type of operation, which includes securing the necessary permits from all agencies involved, including the MDE.

There are two private land-clearing debris landfills in the County permitted by MDE; TLH Landfill LLC (Hance) (**Inactive as of 2018**) and Howlin LCD Landfill. Quantities of land-clearing debris managed at each permitted land clearing debris landfill in 2016, as reported to MDE, are shown in **Table 3-4**.

While Calvert County does not directly manage land-clearing debris, the County encourages the recycling or reuse of land-clearing debris. The County will provide assistance to land-clearing debris generators to promote recycling and waste reduction in the form of market development guidance and other technical assistance.

C&D (rubble) includes: (1) land-clearing debris and (2) construction waste and demolition debris associated with the construction or demolition of buildings, roads, and other structures. C&D material may include structural steel, concrete, bricks, lumber, plaster and plasterboard, sheetrock, insulation material, cement, corrugated cardboard, shingles, roofing materials, floor and wall tiles, asphalt, pipes and wire, and other items physically attached to the structure. C&D debris is permitted for disposal at Rubble Landfills in the State of Maryland. There are no permitted Rubble Landfills located in Calvert County, and, thus, rubble is disposed primarily out-of-County.

Based on previous discussions with home builders and private haulers in Calvert County, it is estimated that approximately 80 CY of waste requiring disposal is generated during the construction of each new home in the County. Using a density conversion of 250 pounds per CY, it is estimated that the average new home in Calvert County results in ten tons of construction waste. Much of this material is recyclable. According to contractors and haulers in the area, builders and collectors are increasingly seeking ways to reduce disposal costs by recycling corrugated cardboard, scrap metal and clean lumber waste from construction projects.

In 2016, the total number of building permits issued by the County was 378. This included new single-family homes, multi-family homes, residential accessory structures and new commercial or commercial accessory structures. Of that, 180 were for single-family detached units, 21 for single family attached units, five for Duplex units and the remaining 23 permits were for rebuilds or extensions.<sup>6</sup> There were 149 permits issued for commercial buildings and accessory structures in 2016. Based on this figure, and the average estimate of construction waste generation shown above, it is estimated that approximately 3,780 tons of new home construction waste was generated in Calvert County in 2016. Some of this waste was reused and recycled, and some inert building wastes may be buried on-site during construction operations. Although some construction waste is handled at the Appeal Transfer Station, the substantial portion of this waste stream is managed by private contractors at out-of-County disposal facilities and/or taken to Southern Maryland Recycling and Processing, LLC (owned by Republic Services) where it is ultimately disposed.

The County's infrastructure is relatively new, therefore, little demolition debris is estimated to be generated in the County. Debris generated from the razing of private structures must be disposed properly by the individuals or firms providing demolition services. Concrete and asphalt, primarily generated by road, bridge and paving-related construction or rebuilding, are easily collected in a source separated manner. Although they may include some soil material, they are typically generated separate from other debris materials.

The County will continue to monitor the need for rubble disposal capacity in the future. If increases in County population result in significant increases in new construction in the County and existing facilities and out-of-County processors are inadequate, private or public disposal capacity for rubble may be considered for development. Any such facility will be

---

<sup>6</sup> Source: Dawn Mister, Calvert County Department of Planning & Zoning, Building and Inspections Division, September 2017.

required to meet all Federal, State, and local permit requirements and will be required to conform to County zoning ordinances and land use planning considerations.

In addition, the County will provide technical assistance to local builders, contractors, and haulers to encourage recycling and reuse of construction waste and demolition debris. Projects to encourage reuse of home construction and remodeling wastes that have been adopted in other Maryland counties and other locations in the nation will continue to be evaluated and applied, as appropriate, for Calvert County.

### 3.1.7 Controlled Hazardous Substances

CHS are treated under Maryland regulations as synonymous with hazardous waste, with some exceptions for recyclable materials. In order to classify as a CHS, or hazardous waste, a material must be a statutory solid waste, be designated by MDE to be "controlled," and fulfill the criteria of a hazardous substance. A hazardous substance, as defined by the Annotated Code, is "any substance that conveys toxic, lethal, or other injurious effects; causes sub lethal alterations to plant, animal, or aquatic life; may be injurious to human beings; persists in the environment; or any material identified as a hazardous substance by the EPA."<sup>7</sup>

Maryland regulations divide hazardous wastes or CHS into several categories, including "Hazardous Waste from Specific Sources (State)," "Hazardous Waste from Non-Specific Sources," and "Discarded Commercial Chemical Products, Off Specification Species, Containers, and Spill Residues of These." A material that does not appear on any of these lists may still be regulated as hazardous waste or CHS if it is characteristically hazardous, namely, if it is ignitable, reactive, toxic, or corrosive.<sup>8</sup>

Aside from controlled hazardous and radioactive wastes produced at the Calvert Cliffs Nuclear Power Plant, which is the responsibility of Constellation Energy Group, and hazardous waste generated at the Federal facilities in the County (see Section A.4 above), there is no significant generation of hazardous waste in the County (see **Table 3-10, Hazardous Waste Generation**).

---

<sup>7</sup> Piper & Marbury, *Maryland Environmental Law Handbook*, September, 1991.

<sup>8</sup> Piper & Marbury, *Maryland Environmental Law Handbook*, September, 1991.

As of 2018, Calvert County was contracted with MES to bid the HHW collection services to a certified hazardous waste contractor. The current bid is with Clean Venture, Inc. County residents bring their HHW materials, two times per year, to collection events held at the Appeal Municipal Landfill and the Mt. Hope Community Center. This material is collected and disposed of by the certified hazardous waste contractor, who transports this material for further processing the same day as collection. In 2016, the County reported the collection of approximately 1,177 tons of HHW material on the MDE Recycling report. This material was collected at the Convenience Centers<sup>9</sup>.

The County has an ongoing collection program for the collection of mercury thermometers and thermostats at the Appeal Municipal Landfill.

### 3.1.8 Dead Animals

Dead animals do not pose a significant problem in Calvert County. Small animals (pets and wildlife) make up the greatest portion of this waste stream and are usually buried on private property, handled by veterinary or animal control services, or collected and taken to the Appeal Municipal Landfill for burial. Larger animals, such as cows and horses, are normally picked up by commercial rendering companies, but may be buried by owners on their land. Large animals are only accepted for burial at the Appeal Municipal Landfill by special arrangement with the SWD Chief or Landfill Operations Supervisor. The Appeal Transfer Station does not accept dead animals, small or large, with the exception of deer, which are brought in only by Maryland State Highway or DPW Highway Maintenance crews. In 2016, the County generated an estimated 11 tons of dead animals<sup>10</sup>, of which approximately 0.2 tons were disposed of at the Appeal Municipal Landfill.

The DPW Highway Maintenance Department does not maintain records on the collection and disposal of carcasses from the streets and highways. Most of these dead animals are buried along roadsides or delivered to the Appeal Municipal Landfill.

Valley Proteins, Inc., a renderer with a processing facility in Baltimore, Maryland, stated that they collect and process millions of pounds of animals per day at their Baltimore location. The processed material is sourced from farms, grocery stores, and processing plants, in addition to other locations throughout Calvert County.

---

<sup>9</sup> HHW materials include oil filters, fluorescent lamps, printer cartridges, rechargeable batteries, Freon containing items, antifreeze and waste oil.

<sup>10</sup> Table 3-1 Annual Waste Generation in Calvert County: Actual 2016 (tons); provided by Calvert County Staff, October 2017.

### 3.1.9 Bulky or Special Wastes

Large bulky items such as tables and sofas are not accepted at Convenience Centers in the County. The County provides a collection service two to three days each week to pick up these bulky household items on a “call-in basis.” Each resident is allowed three items per pick-up, and the point-to-point route covers 36 residents per week. A collection list is maintained in the County SWD and names are placed on the list upon receipt of a telephone or written request.

For this operation, the County has been divided into two regions, north and south, with Maryland Route 231 and Maryland Route 402 as the dividing lines. Each region is collected on alternating weeks by the County SWD personnel. All items are disposed at the Appeal Transfer Station or Appeal Municipal Landfill, or separated for recycling at the Appeal Municipal Landfill.

Bulky waste items containing Freon are separated at the Appeal Municipal Landfill for delivery to a scrap metal processor. The County has a qualified contractor remove the Freon prior to recycling the items. Other metal items that may have been delivered to the Appeal Transfer Station for ultimate disposal at King George Landfill are recovered at the Appeal Municipal Landfill site and diverted to a scrap metal processor for recycling (see **Tables 3-1 and 3-2** for the quantity of white goods/metal recycled from the County in 2016).

In addition, the County has an “e-Cycling” (electronics recycling) program. The Convenience Centers at Appeal, Ball Road, Barstow, Huntingtown, Mt. Hope and Plum Point all have permanent electronic recycling containers. The program includes the acceptance of computers, monitors, printers, VCRs, DVD players, two way radios, stereos, scanners and televisions. The items are stored in 40 yard enclosed boxes and brought to the Appeal Municipal Landfill for sorting and loading into trailers. Once the trailer is full it is shipped to eRevival LLC for processing. Lamps (fluorescent, incandescent and other types of lamps) are accepted at all of the Convenience Centers and are collected and stored by the County at the Appeal Municipal Landfill until sufficient quantities for shipping are obtained to be recycled by AERC LLC. Recycled quantities from this program are included in **Table 3-1**.

The County also participates with the State of Maryland in a program to recover abandoned boats. When a State contractor picks up an abandoned boat in or near Calvert County, the County accepts the item at the Appeal Municipal Landfill. Tonnages of abandoned boats are

not maintained separately from non-abandoned boats and trailers. The metal boats are crushed at the Landfill and included in the scrap metal recycling quantities. Wood and fiber glass boats are broken down and inspected by landfill staff to ensure they are free of metal and fluids prior to the transfer of the materials to the Transfer Station unless they are unable to handle the boat, in which case they are landfilled directly in the Appeal Municipal Landfill. Scrap automobiles are not accepted at the Appeal Municipal Landfill. If a resident or business in the County needs to dispose of a scrap automobile, the County will provide technical assistance in the form of a list of available salvage yards.

### **3.1.10 Vehicle Tires**

Used and scrap tires accumulate primarily at service stations and tire dealerships, although some tires are delivered directly to the Appeal Municipal Landfill. Tires can no longer be disposed of in the Appeal Municipal Landfill, per Section 9-228 of the Maryland Annotated Code. In addition, Section 9-228 required the County to cooperate with State agencies, representatives of the tire industry, and local government representatives to put a tire recycling system in place. This system was required to be in place by January 1, 1994. Pursuant to this legislation, and the recommendations of the County SWMP, Calvert County has implemented a tire recovery program at the Appeal Municipal Landfill.

Tires are not accepted at the Convenience Centers; all tires, (used and scrap) must be delivered directly to the Appeal Municipal Landfill. All tires received at the Appeal Municipal Landfill are weighed and placed in a designated container. When the container is full, the tires are picked up by the County's contractor, Emanuel Tire, Inc. The contractor reported their handling process/final destination for scrap tires includes recycling or resource recovery. A fee of \$178 per ton (or approximately \$1.78 per tire) is charged for tires delivered to the Appeal Municipal Landfill.

If tires shipped by the County are used in cement kilns, the County may earn a "recycling credit" from MDE for 12% of the quantities of tires handled through this operation. The recycling credit percentage offered by MDE is based on a 12% metal content in the tires recovered during the cement-making process.

It is estimated that the majority of tires generated in the County are taken to an approved recycling facility for recycling into crumb rubber. The County receives the recycling credit for the vehicle tire tonnage delivered to the recycler.

### 3.1.11 Wastewater Treatment Plant Sewage Sludge

Currently, there are eight Waste Water Treatment Plants (WWTPs) in Calvert County. They include: (1) Chesapeake Beach; (2) Prince Frederick #1 [Sugar Notch]; (3) Prince Frederick #2 [Tobacco Ridge]; (4) Calvert Cliffs Nuclear Power Plant; (5) Northern High School; (6) Randle Cliff Naval Research Facility, (7) Solomons Island, and (8) Marley Run. Of the eight WWTPs, five are managed by Calvert County Department of Public Work, Water & Sewerage Division. Table 3-11 contains the WWTP Sewage Sludge Generation Estimates.

Sewage sludge produced at Calvert Cliffs, Prince Frederick WWTP #1, Marley Run, and Northern High School are brought to Solomons Island WWTP in liquid form for further processing. Sewage sludge produced at the Prince Frederick WWTP #2 is dewatered and hauled to the sludge storage building at the Solomons Island WWTP. Duffield Hauling, Inc. then transports the sludge from both Solomons Island WWTP and Prince Frederick WWTP at the King George Landfill in Virginia for disposal. The sludge is reported to be beneficially used as supplemental landfill cover.

Calvert County Water and Sewerage Division has proposed a Bio-Solids Program in the Division's Capital Improvement Plan. The program includes the study of present and future sludge disposal cost and recommendations for future sludge/Bio-Solids disposal/reuse.

#### 3.1.11.1 Chesapeake Beach WWTP

There is an Interjurisdictional Agreement by and between Chesapeake Beach, the Town of North Beach, the BOCC of Calvert County (collectively referred to as the "Owners") and Anne Arundel County. The capacity of the facility is jointly-owned by the Town of Chesapeake Beach (49.66%), the Town of North Beach (18.09%), Calvert County (21.81%), and Anne Arundel (10.44%). The facility services all portions of the Towns of Chesapeake Beach and North Beach and a small portion of Calvert County and Anne Arundel County. Anne Arundel County utilizes a portion of the treatment capacity of the WWTP in order to meet the treatment needs of the Rose Haven and Holland Point communities located within Anne Arundel County. The Chesapeake Beach WWTP upgraded its capacity to 1.5 MGD and implemented tertiary treatment in 2016. The facility was upgraded to enhance nutrient removal with tertiary filters with chemical addition for denitrification (methanol) and phosphorous removal. Treated effluent from this facility is discharged into the Chesapeake Bay by means of a 30 inch gravity outfall at a point

approximately 200 feet from the seawall. Sludge is dewatered and lime stabilized before being hauled by Old Line Environmental, Inc. for further processing. In 2016, approximately 1,500 wet tons of sludge were hauled by Old Line Environmental, Inc. for further processing and land application at the Old Line facility.

#### *3.1.11.2 Prince Frederick WWTP I and II*

The Prince Frederick WWTP #1 (Sugar Notch) and II (Tobacco Ridge) are owned and operated by the Calvert County Water and Sewerage Division. These plants service the Prince Frederick Sanitary District, Dares Beach Sanitary District, and the Calvert County Industrial Park. The facilities currently have a combined 0.750 MGD capacity (Sugar Notch at 0.450 MGD and Tobacco Ridge at 0.300 MGD).

The Prince Frederick WWTP #1 (located on Sugar Notch Road, west of MD 2/4) had an actual flow of 0.240 MGD in 2016. The plant was constructed in April 1991 and is an aerated lagoon process facility with effluent disposal via spray irrigation onto forested land. The aerated treatment of wastewater practically eliminates the regular production of sewage sludge, hence the lagoons only require dredging once every ten years or as needed. Prince Frederick WWTP #1 is currently in design to be upgraded and expanded to include changing the treatment process to activated sludge and added sludge dewatering.

The Prince Frederick WWTP #2 (located on Tobacco Ridge Road, 7 miles from the Prince Frederick WWTP I, east of MD 2/4) was constructed in 2003. It is an activated sludge facility with sequencing batch reactors with effluent disposal via spray irrigation onto forested land. The facility has an 18 MG storage pond. The Prince Frederick WWTP #2 had an actual flow of 0.260 MGD in 2016 and produced approximately 700 wet tons of sludge. Sludge is dewatered on site and hauled to the Solomons Island WWTP sludge storage building prior to being hauled to the King George Landfill in Virginia for final disposal.

#### *3.1.11.3 Calvert Cliffs Nuclear Power Plant Sewage Treatment Plant*

The sewage treatment plant for the Calvert Cliffs Nuclear Power Plant was built to treat domestic wastewater from the kitchens and restrooms on the Calvert Cliffs site. The plant is privately owned by Exelon and is operated by MES. It has a design capacity of 0.0665 MGD with an average flow of 0.0126 MGD in 2014. Liquid sludge is hauled, by a septic hauler, to Solomons Island WWTP for treatment and dewatering. It is estimated that 121,100 gallons of liquid sludge was transported to Solomons Island WWTP in 2016.

#### 3.1.11.4 Calvert County Industrial Park WWTP (Decommissioned 2015)

The Calvert County Industrial Park WWTP was decommissioned and demolished in the spring of 2015. The facility was replaced with a sewer pumping station that pumps sewage directly to Prince Frederick WWTP #1 for treatment and disposal.

#### 3.1.11.5 Northern High School

Northern High School WWTP is owned by CCPS and is operated by the Calvert County Water and Sewerage Division. The Northern High School WWTP in Chaneyville was placed in operation to serve a population of 700. The design capacity of the plant is 0.025 MGD, with an actual flow of 0.0068 MGD in 2016. The plant is restricted to the processing of sewage generated by the High School and provides secondary treatment followed by sand filtration beds and ultraviolet disinfection. In 2016, 9,000 gallons of liquid sludge was hauled, by a septic hauler, to Solomons Island WWTP for processing, dewatering, and disposal.

#### 3.1.11.6 Randle Cliff WWTP

The Randle Cliff WWTP, which is owned and operated by the U.S. Government, has a design flow of 0.075 MGD and population loading of approximately 200. The system provides secondary sewage treatment by means of commutation of raw sewage, primary settling, rotor distribution of settled effluent on a trickling filter bed, and aerobic sewage sludge digestion with provisions for open sewage sludge drying beds. Ultraviolet disinfection is used before discharge of treated effluent into the Chesapeake Bay. In 2016, 20.9 dry tons of sewage sludge from the Randle Cliff WWTP was taken to the Solomons Island WWTP sludge storage building.<sup>11</sup>

#### 3.1.11.7 Solomons Island WWTP

Solomons Island WWTP services Solomons Island Sanitary District, including Solomons Island Town Center and the districts around Back Creek (tributaries to Solomons Harbor) including Lusby and Dowell. The Solomons Island WWTP currently has 0.70 MGD of capacity, with an actual flow of 0.350 MGD (Cyr 2016). The majority of the septage collected in the County by septage haulers (e.g., septic tank pumpers) is taken to the County septage receiving facility located at the Solomons Island WWTP. In 2016, approximately 1,889 dry tons of dewatered sewage sludge was transported by Duffield Hauling, Inc. from the Solomons Island WWTP to the King George Landfill in Virginia for final disposal.

---

<sup>11</sup> Information obtained via email correspondence with Michael Knuston, Recycling Coordinator at the Navy Research Laboratory.

#### 3.1.11.8 Marley Run WWTP

The Marley Run WWTP serves the subdivision of Marley Run and Huntingtown High School, and is owned and operated by the Calvert County Water and Sewerage Division. The plant has a design flow of 0.040 MGD, with an actual flow of 0.024 MGD (Cyr 2016). Marley Run WWTP produced 210,244 gallons of sewage sludge in 2016. The liquid sludge was transported to the Solomons Island WWTP by a septic hauler for processing and dewatering prior to transport to the King George Landfill in Virginia for disposal.

#### 3.1.12 Septage

According to COMAR definitions, the term septage means “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.” Currently, the majority of County residents are not served by public or community sewage systems. Most residents utilize on-site septic systems or tanks. These tanks are serviced by septage haulers that periodically pump-out the solid and liquid wastes.

The County Health Department issues permits for septage hauling service under provisions of COMAR 26.04.02. The septage haulers are permitted through the County and must dispose of septage at the Solomons Island septage receiving facility located at the Solomons Island WWTP. This facility is part of the Solomons Island WWTP upgrade that was completed in 1995. Only in special cases can septage haulers land apply, and they must have an MDE-approved disposal site arranged before a permit can be obtained. In approving a disposal site, MDE considers the crop on the land, slope, soil conditions, neighborhood, and adjacent property owners. In 2016, 7.4 million gallons of septage were processed at the County septage facility at Solomons Island WWTP.

An updated septage hauler list was provided by the Calvert County Health Department. As of September 2017 there were 28 listed septage haulers. (See **Table 3-12**).

In addition to septage haulers, Calvert County allows recreational vehicles (RVs), food trucks, and other vehicles with septage holding tanks to off load their septage material at the Solomons Island WWTP septage receiving facility. Calvert County charges for disposal at the following rates for FY 2018: septage/portable toilet (\$65/1,000 gallons), grease trap waste (\$45/1,000 gallons), holding tanks (\$65/1,000 gallons), and RV discharge (\$10 per occurrence).

### Marinas:

Marinas represent a thriving segment of the County's recreational facility network. State law requires marinas with 50 or more slips, as well as new and expanding marinas with more than ten slips, to provide pump-out service for vessel holding tanks and portable toilets. Additionally, marinas are often required to maintain a pump-out facility as a condition of a wetland's permit. The Maryland DNR administers a grant program that provides up to \$15,000 in reimbursement to marinas for the purchase and installation of pump-out facilities. Funding comes from the Federal Clean Vessel Act (75%) and the State Waterway Improvement Fund (25%). Since the program's inception in 1989, several marinas in the State (including ones in Calvert County) have received DNR grant monies for this purpose. **Table 3-18** presents a list of marinas in the County that provide pump-out services.<sup>12</sup> Septage from pump-out stations goes directly into the County sewage system or is collected by a private hauler.

### **3.1.13 Other Wastes**

#### *3.1.13.1 Asbestos*

The Appeal Municipal Landfill will accept asbestos in non-friable form (e.g., asbestos shingles). The material must be in “double-containers” (dual containment). Customers must make prior arrangements with Landfill personnel in advance of bringing non-friable asbestos to the Appeal Municipal Landfill. The quantities of non-friable asbestos accepted at the Appeal Municipal Landfill in 2016 are included in the C&D waste quantities.

The Appeal Municipal Landfill will accept friable asbestos waste, provided that the material is received packaged and labeled as specified in COMAR 26.11.21.08A, the Landfill Supervisor is notified prior to its arrival, and its managed in accordance with the Refuse Disposal Permit.

Generally, if asbestos is properly packaged in 3mm. plastic bags and landfilled, it is rendered inert and poses no health risk. Problems will occur if it arrived at the Landfill and is inadvertently broken open to the air. Asbestos is harmful and poses a health risk when inhaled. Therefore, the SWD must be aware when asbestos is delivered in order to immediately take proper precautions.

---

<sup>12</sup>Contact with Donna Morrow, Maryland DNR, September 2017.

### 3.1.13.2 Medical/Infectious Waste

The U.S. EPA, CDC, OSHA, and the JCAHO present differing positions with regard to medical waste disposal. The EPA, which has regulatory authority over infectious waste, has adopted guidelines regarding tracking and disposal of medical waste. Although the CDC has no regulatory authority, it is regarded as an authoritative source of information for the health care community.

The two State agencies that regulate the management of medical wastes are MDE and the DHMH. Both of these agencies use the term "SMW." SMW are considered to be CHS according to COMAR 26.13.11.01C, 26.13.11.02B (10). Whereas MDE regulations pertain to the identification, packaging, manifesting, and transporting of SMW, the DHMH regulations outline acceptable methods for handling these wastes and rendering them non-infectious. SMW are considered infectious until they are properly treated. State law prohibits landfill disposal of infectious waste; however, properly treated medical wastes may be landfilled.

SMW include the following materials:

- anatomical material (both human and animal),
- blood (both human and animal),
- blood-soiled articles,
- contaminated material,
- microbiological laboratory wastes, or
- sharps.

A SMW generator is defined by COMAR 26.13.11.02B (5) and (7) to be "any person, business, government entity or group of people whose act or process produces a SMW". Generators that produce less than 50 pounds of SMW per month, termed "small volume generators," are exempt from MDE's manifest and transport requirements but must meet identification, packaging, and treatment regulations. Generators of more than 50 pounds per month must meet all regulations governing the management and handling of SMW. A list of licensed medical transporters within the State of Maryland is available in **Table 3-13**.

In 2015, 1.8 tons of medical waste was reported to be generated by the Calvert Memorial Hospital<sup>13</sup>. Of the 1.8 tons, 0.6 tons were shipped out-of-State. The remaining 1.2 tons of medical wastes were thermally processed at one of the two incinerators in Baltimore. The RMW is initially treated at either incinerators or autoclaves. Once the RMW is treated by incineration or autoclave, it is no longer RMW and is disposed of as regular solid waste in various approved landfills. The generators of medical/infectious waste in the County continue to be primarily local doctors, dentists, CalvertHealth, Urgent Care, laboratories and veterinary clinics.

#### 3.1.13.3 Agricultural Wastes

In 2012, 32,901 acres, of the total land area of the County was occupied by farms. According to the 2012 Census of Agriculture Report this was a 24% increase from the 2007 acreage of 26,443. In addition, the average size of the farm has seen a similar increase of 26% from 97 acres in 2007 to 122 acres in 2012. Overall land use of these farms is nearly 65% cropland, with nearly 20% being woodland and the remaining 15% being pastureland and other uses. The primary types of crops raised in the County include corn and wheats used for grain, soybeans, and forage land used for hay and haylage, grass silage and green chop. Farm animals in the County include 1,072 cattle, 645 horses, 166 goats and 62 sheep and lambs.<sup>14</sup>

Agricultural wastes are not a significant problem in the County because agricultural wastes (manure, corn cobs, tobacco stalks, etc.) are generally recycled on farmland, and there are no large feedlots in the County.

#### 3.1.13.4 Recreational Facility Waste

Calvert Cliffs State Park in Calvert County has continued to be “Trash Free” since 1993. Rather than provide waste receptacles throughout the park, visitors are provided with trash bags upon entering the recreational facility. They are requested to take their waste home with them, and they are encouraged to recycle appropriate materials. The program has been successful statewide, allowing park staff to perform other functions at the facilities.<sup>15</sup> Waste collection from County and District parks was provided by the County SWD, in section 3.1.3 of this Plan. These waste quantities are included in the Commercial, Industrial, Institutional waste quantities for 2016 in **Table 3-3**.

---

<sup>13</sup> Data from the 2015 Biennial Report

<sup>14</sup> All figures based on 2012 Census of Agriculture provided by the USDA.

<sup>15</sup> Personal communications with Park Ranger Zach, Calvert Cliffs State Park, Calvert County, Maryland, September 2017.

All marinas and beaches in Calvert County are private and contract with a waste hauler or self-haul wastes to the Appeal Transfer Station. These waste streams are included in the Commercial, Industrial, Institutional waste quantities in **Table 3-3**.

#### *3.1.13.5 Used Motor Oil, Antifreeze, and Oil Filters*

Effective July 1, 1978, Maryland State Law prohibited disposal of used oil by discharge, dump or deposit into sewers, drainage systems, surface or ground waters. Provisions have been made for collection of used motor oil at all of the Convenience Centers. Each of the Convenience Centers is equipped to handle the drop-off collection of waste oil, oil filters, and antifreeze. Residents can dispose of used motor oil, oil filters and antifreeze in specialized collection tanks, which, in turn, are collected by a waste oil/antifreeze recycler. As of 2018, MES is contracted with Calvert County to bid the collection services of used oil, etc. The bid is currently awarded to Mid States Oil Refining, LLC.

For Cyr 2016, approximately 12 tons of antifreeze, 148 tons of waste oil, and nine tons of oil filters were collected from the used oil collection tanks at the Convenience Centers. The County recovered a substantial percent of the used oil estimated to be generated by "do-it-yourself"-ers. However, used motor oil also may be taken to service stations or garages, or used by "do-it-yourself"-ers in appropriate oil-burning appliances designed for such used oil, or collected by used oil recovery companies and these quantities are unknown.

Based on these tonnage totals, the County will continue to promote proper disposal methods for used motor oil and antifreeze. If new Convenience Centers are developed, used oil tanks will be sited at each of these locations.

#### *3.1.13.6 Petroleum-Contaminated Soil*

The State of Maryland regulates the disposal of petroleum-contaminated soil. Petroleum-contaminated soil can be disposed by landfilling, incineration, mixing with asphaltic materials for paving, or by other approved methods. If disposed by landfilling:

- Disposal must take place in a lined landfill permitted to accept petroleum-contaminated soil;
- The landfill operator must decide to accept the material to be disposed; and
- The soils must not exhibit free liquid as per COMAR 26.04.07.03B (8).

Several landfills in Maryland will accept petroleum-contaminated soil, essentially following the guidelines stated above. In Calvert County, the Appeal Municipal Landfill is permitted to accept petroleum-contaminated soil. If petroleum-contaminated soil is generated in the County, the generator is referred to a private licensed transporter or the MDE. In the event of an oil spill, the Calvert County Hazardous Materials Response Team, MDE and the appropriate Federal agencies, as needed, will respond. Calvert County DPW does not respond to spills. If petroleum contaminated soil is received at the Appeal Municipal Landfill, it is coded as such, the tonnage is recorded, and this tonnage is reported to the State as part of the required annual reporting. Although there were no major spills in Calvert County in 2016, to date, petroleum-contaminated soil has been received at the Appeal Municipal Landfill for final disposal (approximately 106 tons in 2016).

#### *3.1.13.7 Special Event/Other Waste*

It is estimated that the Appeal Transfer Station received approximately 51 tons of special project waste or park/special event waste in 2016. Special Project wastes are generated through the “Christmas in April” program, where volunteers in the County repair low income and senior’s homes and the County donates roll-off containers for the repair waste. In addition, the County waives the tip fee for this waste brought to the Appeal Transfer Station. In 2016, approximately 47 tons of Special Project wastes were generated through the Christmas in April event. Christmas trees represent Special Event wastes and are brought to all Convenience Centers and the Appeal Municipal Landfill at no charge to residents between December 26<sup>th</sup> and January 31<sup>st</sup>. The Christmas trees are ground into mulch and made available to County residents at no charge. In 2016, the County received approximately 4 tons of Christmas trees.

Additionally, the Appeal Municipal Landfill accepts tree and yard debris after major storm events, typically free-of-charge for a specified period of time, from the residents of the County.

#### **3.1.14 Types and Quantities of Materials to be Separated or Recycled**

The County has adopted a Recycling Plan (as part of the County SWMP) that outlines a strategy for reaching the recycling goal established for Calvert County in the MRA. The County has consistently attempted to exceed the minimum goal of 20% diversion set forth in the Act for counties under 150,000 population. As part of the implementation of the Recycling Plan, the County's recycling program currently includes the following components:

- a. Recycling drop-off centers for collecting residential recyclables at each of the existing Convenience Centers;
- b. Privately contracted curbside recycling programs in the Towns of North Beach and Chesapeake Beach as well as certain County subdivisions;
- c. Recovery for recycling of white goods and other scrap metal items that may otherwise have been disposed in the Appeal Municipal Landfill or Appeal Transfer Station;
- d. Collection of mixed office paper from local government facilities and one authorized business in the County;
- e. Acceptance of cardboard from commercial businesses;
- f. Collection of single stream recycling from school administrative and classroom facilities;
- g. Diversion of scrap tires from the waste stream;
- h. Diversion and processing of yard waste, brush, and wood waste into mulch and compost that may otherwise have been disposed in the Appeal Municipal Landfill or Appeal Transfer Station;
- i. Recovery of electronics from County residents and local businesses;
- j. Recovery of HHW through the County's HHW collection events held at the Appeal Municipal Landfill and Mt. Hope Community Center;
- k. Recovery of lead acid batteries for recycling;
- l. Recovery of used clothing and textiles;
- m. Recovery of other non-MRA recyclables such as waste oil, antifreeze, concrete, asphalt, C&D debris, scrap metal, and scrap automobile parts;
- n. Recovery of fluorescent and CFLs containing mercury; and
- o. Recovery of plastic film and rigid plastic for recycling.

The County currently operates recycling drop-off locations at the following Convenience Centers: Appeal, Ball Road, Barstow, Huntingtown, Mt. Hope, and Plum Point. Each site is currently equipped with roll-off containers for: a) newspaper, magazines, hardback and paperback books, mixed paper, and cardboard; b) metal and white goods; and c) mixed (commingled) recyclables including glass bottles and jars (clear, green, and brown), metal cans (aluminum and tin/steel), and all food and beverage plastic containers (#1-5 & 7, bottles, jars, and tubs). In addition, cell phones, computer equipment (e-cycling), motor oil, oil filters, anti-freeze, auto batteries, and textiles are also collected at the Convenience Center sites. We also take propane cylinders, cooking oil, and rechargeable batteries.

Both the Town of North Beach and the Town of Chesapeake Beach contract their own curbside solid waste and recycling collection services with Southern Maryland Recycling, Inc., a hauler operating in the County. The Town of Chesapeake Beach includes the cost of this service in their municipal tax, whereas, the Town of North Beach includes the cost of this service in a separate refuse tax.

The County collects corrugated cardboard and mixed office paper from local government facilities and buildings and one authorized business in the County. These materials are hauled by County staff to the BFI Transfer Systems of VA, LLC, dba Northern Virginia MRF in Manassas, Virginia. County schools have capabilities within their buildings for the collection of cardboard and mixed paper. The school system is active in the collection and recycling of these materials under a contract with Waste Management.

Used tires are diverted from the waste stream. They are received at the Appeal Municipal Landfill where Emanuel Tire Co. is currently under contract for tire removal.

In order to conserve landfill space and meet its recycling goals, the County requires residents, businesses, and commercial haulers to deliver all loads of yard waste to a yard waste processing area at the Appeal Municipal Landfill. This material is further processed into untreated mulch, which is given out free of charge to residents who must haul it. Given the rural nature of the County, most yard waste is disposed of on site and/or processed by homeowners.

**Tables 3-1 and 3-2** present a summary of reported recycling quantities for 2016.

Recyclables that are transported directly to the Northern Virginia MRF by the County include:

- Commingled containers including: glass bottles and jars (clear, green, and brown), metal cans, and all plastic food and beverage containers #1-5 and 7).
- Newspaper, magazines, hardback and paperback books, mixed paper, and cardboard.

The County contracts with several vendors for the transport of recyclables to markets and processing facilities. The recyclable material includes:

- The ORP collects shells from oysters, clams, and mussels from the DPW, who has stationed collection containers at the Convenience Centers, as well as directly from contracted restaurants. The shells are returned to the Chesapeake Bay to serve as habitats for future generations.

- Bulky Rigid Plastic (#3-5, and #7) items including milk and soda crates, empty buckets and drums, lawn furniture, five-gallon water bottles, pallets, toys and garbage bins are collected at the Appeal Municipal Landfill and Barstow Convenience Centers.
- Plastic film from items such as grocery bags, shrink wrap, bubble wrap, ice bags, and newspaper sleeves are taken at the Convenience Centers.
- Metal collected at the Convenience Centers are transferred by the solid waste staff to the Appeal Municipal Landfill, prior to transportation to a recycling market.
- Freon containing appliances may be dropped off at the Appeal Municipal Landfill. In addition, the County may pick up Freon containing appliances as part of their bulk item pick-up program. These items are brought to the Appeal Municipal Landfill.
- Automotive and industrial fluids including, motor and transmission oils, diesel fuel and kerosene, oil filters, and antifreeze are collected by Mid States Oil Refining, LLC (Mid States) through a contract with MES, who bids these collections services for the County and currently awarded the collection contract to Mid States, from each of the Convenience Centers in the County.
- Building materials, including concrete, bricks, cinderblocks, and asphalt are accepted at the Appeal Municipal Landfill for a fee.
- Cell phones, printer cartridges and batteries (including lead acid batteries, button batteries and rechargeable batteries) are currently collected at the Convenience Centers and are transferred to the Appeal Municipal Landfill.
- Electronic waste, including computers, stereos, DVD players, cameras and televisions are accepted at all of the Convenience Centers and are transferred to the Appeal Municipal Landfill for sorting and loading into trailers. Once full, the trailer is shipped to eRevival LLC for processing.
- Lightbulbs including, fluorescent and CFLs, incandescent lamps, metal-oxide, halogen and other lamps are collected at the all of the Convenience Centers. All lamps are transferred to the Appeal Municipal Landfill where they are sorted and placed in shipping containers for recycling under a contract with AERC.com, a private recycling company.
- Textiles are collected by Mid Atlantic Clothing (M-A-C) Textiles from each of the Convenience Centers and other SWD approved facilities in the County.
- Tires may be disposed of at the Appeal Municipal Landfill for a fee of \$178 per ton (or approximately \$1.78 per tire). When the container is full, the tires are picked up by the County's contractor, Emanuel Tire, LLC. The contractor reported their handling process/final destination for scrap tires includes recycling (i.e. manufacturers of playground bedding) or resource recovery (i.e. burned at a WTE to produce electricity).

- Needles and other sharps are collected at all Convenience Centers.
- X-Ray and MRI Film is accepted at the Appeal Municipal Landfill only and at County paper shredding events.
- Propane tanks are collected at all Convenience Centers, and are transferred to the Appeal Municipal Landfill.

Many commercial establishments recycle paper and cardboard products and self-haul to a processor or end-market. One of the larger establishments is Giant Foods, which produces six to eight bales of corrugated cardboard per day. These bales are loaded onto trailers and transported to the Giant Foods warehouse in Jessup, Maryland, to be sold directly to recycling processors.

At this time, County representatives are on a state task force to explore composting of mixed solid waste, but does not currently have this capability to process.

Calvert County SWD follows the Calvert County procurement regulations as specified in The Code of Public Laws of Calvert County, Maryland, Contracts and Purchasing, Title 6. Standard contract terms are one year with two one year renewals.

### 3.2 BASIS FOR WASTE RECYCLING RATE

#### 3.2.1 Diversion Rate for MRA Recyclables

Based on the Cyr 2016 data, the quantities of MSW and recyclables reported in Calvert County are as follows:

Quantity of MRA Disposed	39,854.80 tons
Quantity of Non-MRA Disposed	90.10 tons
Quantity of MRA Recyclables	14,013.27 tons
Quantity of Non-MRA Recyclables	26,124.57 tons
Total MRA Waste and Recyclables	53,868.07 tons

Recycling rate percentage =  $(14,013.27 \div 53,868.07) * 100 = 26.01\%$  for Cyr 2016. Therefore, the reported percent diversion of the waste stream for reuse/recycling of MRA materials for 2016 is just over 26%. See **Table 3-1 and 3-2**.

### **3.2.2 Statement that the Recycling Goal Stated in Chapter 1 Has Been Achieved**

Based on the County's reported MSW stream for disposal and quantities of MRA recyclables recovered for reuse or recycling in 2016, the County has met its recycling goal in 2016. In fact, the County has met or exceeded its recycling goals and requirements since 2010. In addition to the MRA recyclables, in 2016, 26,124.57 tons of non-MRA recyclables were also reported to be recovered for recycling or reuse in the County. See **Table 3-2**.

### **3.3 IMPORT/EXPORT WASTE QUANTITIES**

In order to ensure sufficient landfill capacity to meet the long-term solid waste disposal needs of Calvert County residents and businesses, the Appeal Municipal Landfill only accepts waste material generated as overflow from the Appeal Transfer Station at the close of business or from special projects/events as designated by the County.

The County entered into a 25-year contract with WM for hauling of MSW and C&D wastes thus, substantially all waste generated in the County and collected by the County and private haulers is brought to the Appeal Transfer Station for transport to, and ultimate disposal at, King George Landfill in Virginia, owned and operated by WM per fully executed agreement. In 2016, approximately 1,889 dry tons of sewage sludge from Calvert County was unloaded at Appeal Municipal Landfill and reloaded into transfer trailers for transport to King George Landfill in Virginia. This material is handled and transported by Duffield, Inc. In 2016, 55,438 tons of waste from Calvert County generators was delivered to the Appeal Transfer Station, an additional 43,586 tons of waste from out-of-County sources were received at the Appeal Transfer Station and transported to King George Landfill for disposal. Over 90% of the out-of-County waste was from St. Mary's County.

The County operates the scales at the Appeal Municipal Landfill and will continue to track waste receipt records and review disposal data from other facilities in the County to determine the impact of imported and exported waste streams on the County's solid waste system. Beginning with FY 2018, the County tipping fees for disposal at the Appeal Municipal Landfill, which includes transfer station and disposal services, are \$79.42 per ton of MSW for all out-of-County and commercial customers; \$71.42 for residential chargeable loads\*, and \$178 per ton for tires.

\*The Appeal Municipal Landfill charges residents for the following items brought in for processing and/or disposal:

- Yard Debris: includes leaves, branches, grass clippings, trees (no stumps allowed)
- C&D Debris: includes anything generated during the construction, renovation, and demolition of a home or other building including, but not limited to building components (doors, windows, and cabinets), plumbing fixtures (sinks, tubs, and toilets), drywall, gypsum, wood, glass, carpet, siding, shutters, shingles, fencing, sheds, plastics
- Mixed loads: includes any of the above items mixed with household trash

Recyclables exported by the County for processing include: paper (newspaper, magazines, hardcover and paperback books, mixed paper, and cardboard) and commingled containers (glass bottles and jars, metal cans, and all food and beverage plastic containers #1-5 & 7). They are transported by the County to the Northern Virginia MRF in Manassas, Virginia.

Several vendors are also contracted by the County for the collection and transportation of recyclables to markets. Certain recyclables, such as textiles, oil, oil filters, and antifreeze, are collected by vendors from each of the Convenience Centers. Propane tanks, scrap metals/white goods and lead acid batteries are collected from the Appeal Municipal Landfill only.

### **3.4 EXISTING SOLID WASTE COLLECTION AND RECYCLING SYSTEMS**

The County, at present, does not provide curbside collection of solid waste or recyclables; however, the County operates Convenience Centers with the SWD staff and contracts for the transport and marketing/processing of certain recyclables received at the Convenience Centers. Recyclables handled by the County include: paper (newspaper, magazines, paperback and hardback books, mixed paper, and cardboard) and commingled containers (glass bottles and jars, metal cans, and all food and beverage plastic containers #1-5 & 7).

Residential waste received at the Convenience Centers is hauled to the Appeal Transfer Station by County SWD staff where it is unloaded by County staff and loaded by WM staff into transfer trailers and hauled by WM to their privately-owned King George Landfill in Virginia for disposal. A network of private haulers and recyclers serve the solid waste and recycling collection needs of residents, businesses, and institutions beyond the services provided by the Convenience Centers. Residents who wish to have their trash and recyclables collected by the private haulers can do so by subscription service.

The Town of North Beach contracts directly with Southern Maryland Recycling, Inc. for residential curbside solid waste and recycling collection. Solid waste is collected twice per week

and recyclables are collected once a week. Curbside recycling services include: clear, green and brown glass food and beverage containers and jars; metal and aluminum cans, empty aerosols, foils and aluminum food trays; #1-5 & 7 plastics including jugs, bottles, containers and jars up to three feet square; magazines, newspapers, catalogues, and other papers; and cardboard. Bulky item (waste) collection is offered by the contractor once per month, by appointment only.<sup>16</sup> The municipal waste is taken to either a non-county facility or the Appeal Transfer Station for transport and disposal, where the Town's contractor is charged the standard tipping fee by the County. Commercial waste is collected by commercial haulers as this service is not provided by the Town.<sup>17</sup>

Residents of the Town of Chesapeake Beach are also provided with curbside collection of residential waste through a contract that the Town administers with Southern Maryland Recycling, Inc. Waste collection in the Town of Chesapeake is divided into two regions, North and South. In both regions, waste and recyclables are collected curbside once per week.<sup>18</sup> This waste is delivered to either the Appeal Transfer Station or the Benning Road Transfer Station in Southeast Washington, D.C. The recycling program includes: paper products such as newsprint, magazines, computer paper and books; cardboard materials; glass bottles and jars; metals including tin and aluminum cans, aluminum foil, utensils, wire, copper and brass; and plastic bottles. Services also include bulk trash pick-up via appointments and bagged yard waste collection, which occurs by-weekly between April and November. Commercial businesses in the Town have the option to contract out their collection of waste and recyclables to any number of local private haulers servicing the County or self-haul to the Appeal Transfer Station.<sup>19</sup>

Calvert County currently markets the majority of the recyclable materials collected at the Convenience Centers to manufacturers, based on the best available markets at that time.

### 3.5 EXISTING SOLID WASTE ACCEPTANCE FACILITIES

Calvert County has, within its jurisdiction, public and private solid waste acceptance facilities. All permitted facilities are shown in **Figure 3-2**. Tonnages accepted by permitted solid waste facilities is shown in **Table 3-17**.

<sup>16</sup> From Residents Section of North Beach website: [www.northbeachmd.org](http://www.northbeachmd.org).

<sup>17</sup> Based on conversation with Marsha Stiner, Administrative Assistant at the Town of North Beach

<sup>18</sup> From Town of Chesapeake Beach website: [www.chesapeake-beach.md.us](http://www.chesapeake-beach.md.us).

<sup>19</sup> Based on email correspondence with Holly Wahl, Chesapeake Beach Town Administrator, October 2017.

### 3.5.1 Public Facilities

#### 3.5.1.1 Sanitary Landfills

Two sanitary landfills exist in Calvert County: Barstow Municipal Landfill, which has ceased accepting waste and has been closed and capped, and the Appeal Municipal Landfill which is open but typically receives less than 1,000 tons per year. There are no other sanitary landfills being planned for development at this time.

##### (1) Barstow Municipal Landfill

The Barstow Municipal Landfill is located on a 55-acre site off Stafford Road in Barstow (approximate MGC N257,000 E909,000). The Landfill ceased accepting solid waste on March 6, 1993, and contains approximately 2.9 million CY of waste and cover material. The Barstow Municipal Landfill has been capped and is monitored by MDE and maintained by Calvert County. The County operates a Convenience Center adjacent to the closed landfill for residential waste and recyclables.

##### (2) Appeal Municipal Landfill

The Appeal Municipal Landfill site contains the County's Appeal Municipal Landfill, privately-owned and privately-operated Appeal Transfer Station, a Convenience Center, and a mulching operation. The Appeal Municipal Landfill is located west of Maryland Route 2-4, on Sweetwater Drive, in Lusby, Maryland (MGC N201,000 E960,000). The state-of-the-art lined landfill commenced permitted operation on March 8, 1993, with a design capacity of approximately 1.5 million tons and remaining service life of 15 years. The facility is permitted by MDE under a refuse disposal permit #2017-WMF-0501. The facility contains 30 acres of permitted landfill disposal area. The County operates and maintains a scale house/administration building at the Facility, weighing all refuse, including that directed to Appeal Transfer Station. The Landfill currently accepts a very limited amount of MSW that can't be handled at the Transfer Station such as petroleum-contaminated soils and asbestos wastes.

In 2016, approximately 207 tons of County solid waste and waste soil was landfilled at the Appeal Municipal Landfill, and at the end of 2017, it has an estimated remaining permitted landfill capacity of +250,000 CY. The County has a long-term transfer and disposal agreement with WM, with approximately four years remaining. Although the County does not anticipate a need to develop and expand into the second cell available at Appeal Municipal Landfill within the succeeding ten year planning period, DPW recommends a feasibility study

for a new Transfer Station. This feasibility study will evaluate the County's options of owning land for the development of a County-owned or privately owned Transfer Station, as well as the evaluation of contracting with a private entity for the development of a new Transfer Station to be both privately owned and operated to service Calvert County residents. If municipal solid waste were to be disposed of at the Appeal Municipal Landfill instead of transferred out-of-County, the Appeal Municipal Landfill will reach capacity within the ten-year planning period (approximately 2027) without expansion.

#### *3.5.1.2 Convenience Centers*

Currently, six Convenience Centers are available to Calvert County residents for residential waste disposal and recyclables drop-off. Three of these facilities are considered critical infrastructure during emergency situations, such as inclement weather. The critical facilities are noted with an asterisk. The Convenience Centers are located:

- Appeal\* (MGC N201,000 E960,000);
- Ball Road (MGC N230,500 E937,000);
- Barstow\* (MGC N257,000 E909,000);
- Huntingtown (MGC N279,500 E904,500);
- Mt. Hope\* (MGC N306,500 E915,500); and
- Plum Point (MGC N281,500 E924,000).

All sites listed above are equipped with stationary compactors for solid waste. Enclosed roll-off boxes have been placed for the recovery of residential recyclables such as used motor oil, oil filters and antifreeze. None of the Convenience Centers are permitted to accept or store HHW.

The Convenience Centers are owned and operated by the County. Each facility is staffed by at least one attendant and has a small attendant shelter. The facilities are not required to obtain permitting. Two critical sites have been upgraded to provide expanded services and better flow of traffic. These sites are equipped with two or more staff, and have a site office as well as an attendant shelter.

#### *3.5.1.3 Mulching Sites*

The County has a yard waste and wood waste processing area within the Appeal Municipal Landfill. The County contracts for a grinder for mulching services when the quantities of brush and branches are sufficient. This contract is currently in the process of being awarded.

Mulching can also be done at the closed Barstow Municipal Landfill; however, this seldom occurs except for special situations or emergencies, like natural disasters.

### 3.5.2 Private Facilities

#### 3.5.2.1 Transfer Station

WM owns and operates a MSW transfer station at the Appeal Municipal Landfill site under a long-term contract executed with the County on February 22, 1997. The facility is permitted by MDE under a refuse disposal permit #2017-WTS-0519. This 20-year contract has a 5-year extension option, which will take the contract up through February 22, 2022. The County owns the site and leases it to WM. The Transfer Station has a permitted capacity of 750 tons per day of non-hazardous MSW. Waste received at the transfer station is hauled out-of-County to the WM owned and operated King George Landfill in King George County, Virginia. This transfer station provides services to Calvert County, St. Mary's County, and certain other Southern Maryland communities. In 2016, over 99,000 tons of waste was transported through this facility. MGC's are N201,000 E960,000.

#### 3.5.2.2 Land-Clearing Debris Landfills

In addition to the currently operating Appeal Municipal Landfill, the County has, within its borders, two land-clearing debris landfills. Quantities of land-clearing debris managed at each permitted facility in Cyr 2016, as reported to MDE, are shown in **Table 3-4**. Both of these landfills are privately owned and operated. Land-clearing debris, per COMAR 26.04.07.11B, generated by the owner / operator is accepted at the site. There are no dedicated rubble landfills located in the County.

##### (1) Howlin Land Clearing Debris Landfill

The Howlin Land Clearing Debris Landfill is located approximately 900 feet east of Solomons Island Road (MD Routes 2-4) on the east side of Nursery Road (MGC N200,000 E961,000) at 8580 Nursery Road, Lusby. The facility is permitted by MDE under a refuse disposal permit #2013-WLC-0577. Permit information resides with MDE. The facility has an estimated remaining capacity of 18,109 tons. It is expected to reach its capacity in 2020. Per the 2016 MDE Solid Waste Tonnage Report submitted by Howlin, no wastes were received in 2016.

(2) Hance Land Clearing Debris Landfill (a.k.a T.L.H. Landfill) (**Inactive as of 2018**)  
 The Hance Land Clearing Debris Landfill is located approximately 1,000 feet west of Solomons Island Road (MD Routes 2-4) on the north side of Sixes Road (MD Route 506) in Prince Frederick, MD (MGC N246,000 E923,000). The facility is permitted by MDE under a refuse disposal permit #2015-WLC-0252. Permit information resides with MDE. The facility has an estimated remaining capacity of 70,040 tons. It is expected to reach its capacity in 2044. Consideration is given to acceptance of debris from other selected contractors, some of which may generate debris outside the County. According to the 2016 MDE report submitted by Hance Landfill, no wastes were landfilled and all material accepted during the year was recycled.

(3) **Illegal (Unpermitted) Land-clearing Debris Landfills (Dumps)**

In addition to land-clearing debris landfills for which permits have been applied or that currently are permitted, a number of unpermitted dumps have operated in the past and/or currently operate in the County. The County Health Officer is responsible for monitoring and enforcement of such activities and investigates these sites and/or reports them to MDE and takes other appropriate action as warranted.

*3.5.2.3 Natural Wood Waste Recycling Facility*

A NWWRF accepts NWW such as stumps and tree limbs. NWW is usually generated when land is cleared for construction purposes. MDE views NWW as vegetation, in its natural state, that has been discarded or designated for disposal. A NWWRF produces a variety of products from this waste, including mulch and compost, and sells it to consumers. These facilities are valued because they take a waste product that would otherwise go to a landfill and make it into something useful.<sup>20</sup> A.H. Hatcher, operates a NWWRF at 7185 Sawmill Road in Lusby (Permit 2016-NWW-GP01, AI No. 37478), permitted under the name A & L NWWRF. Tonnages of material produced by processing and product removed from the facility in 2016, including residual wastes, are shown in **Table 3-19**. Discussions with the facility indicate that the vast majority of materials handled by this facility in 2016 were generated within Calvert County.<sup>21</sup>

Additionally, 231 Materials & Recycling Products, LLC operates a NWWRF at 171 Skipjack Road in Prince Frederick (Permit 2016-NWW-GP01, AI No. 131800). Tonnages

<sup>20</sup> Source: <http://www.mde.state.md.us/assets/document/factsheets/woodwasterecyc.pdf>

<sup>21</sup> Communication with Laura Hatcher of A.H. Hatcher, September 2017.

of material produced by processing and product removed from the facility in 2016, are shown in **Table 3-19**.

#### 3.5.2.4 *Mulching Sites*

There are three privately owned and operated mulching facilities in Calvert County: (1) A.H. Hatcher, Inc. NWWRF (Sawmill Road) in Lusby; (2) the Hance Land Clearing Debris Landfill (Solomon' Road) in Prince Frederick (**Inactive as of 2018**), and (3) 231 Farm Center (Skipjack Road) in Prince Frederick.

#### 3.5.2.5 *Processing Facility*

BFI Waste Services, LLC d/b/a Calvert Trash operates the Southern Maryland Recycling and Processing Facility, on property owned by Wayson Land Holdings, LP located at 7659 Binnacle Lane in Owings, Maryland (MGC N310,000 E910,000). The facility is permitted by MDE under a refuse disposal permit #2016-WPF-0597. Permit information resides with MDE. As this facility is a processing facility, they do not have capacity or service life constraints. This facility accepts C&D type wastes from sources in Calvert County in addition to sources in several other Southern Maryland counties and Washington, D.C. Approximately 60% of the total 16,172.22 tons of C&D material received in 2016 at the facility was generated by Calvert County residents, businesses and/or contractors. Although this facility is permitted as a processing facility by MDE, it is approved as a Commercial Recycling Facility by the Calvert County Zoning Ordinance. Over 99% of the C&D material received at this facility was reportedly transferred for disposal out of state to Virginia at the private 623 Landfill, owned by Republic Waste Services, Inc. Of the 1% of the materials received at this facility and reportedly recycled, the majority was scrap metal and the balance consisted of tires and "other" materials.<sup>22</sup>

Rubble Bee Recycling and Demolition, Inc. in Owings, Maryland, recycles clean concrete and asphalt brought to its facility from various counties, including Calvert County. A flat tip fee ranging from \$100 for clean material up to \$235 for mixed materials is charged for materials entering the facility<sup>23</sup>. The materials are crushed into RC-6 (a recycled concrete material ideal as a base material under paving projects or as a paving stone), 2 inch recycled concrete and asphalt fines, and 2 inch recycled asphalt (used throughout the construction

<sup>22</sup> Solid Waste Tonnage Report for Cyr 2016, submitted to MDE by Calvert Trash Systems, Inc., dated 1/17/17.

<sup>23</sup> Based on telephone conversation with Rubble Bee staff on September 5, 2017.

industry). Once crushed, the material is sold to contractors and road crews. These waste quantities are included in **Table 3-2**.

Super Salvage, Inc. in Prince Frederick, Maryland, is a full service salvage company that specializes in recycling copper, brass, aluminum, cast iron, steel, appliances, chillers, and condensers. Residents may bring their metal material to one of two locations in Maryland. A valid driver's license is required. Their annual recycling tonnages are incorporated into the total recyclables reported by Calvert County. Some of the items they accept include:

- Batteries
- Cell Phones
- Ballast
- Laptops & Computers
- Electric Motors
- Appliances
- Car Parts
- Scrap Metal
- Pipes & Pipe Fittings
- Railings
- Gutters, Soffits & Aluminum
- Metal Beams
- Metal Ladders
- Wiring
- Lawn & Garden Equipment
- Electronics
- Pots & Pans
- Empty Drums
- Farm Equipment
- Exercise Equipment
- Metal Lawn Furniture
- Wood Stoves
- Grills

Table 3-1

2016 MRA Recycling Quantities (Tons) <sup>1</sup>

Material	Residential (Tons)	Commercial (Tons)	Total (Tons)
Animal Protein/Fat	0.00	377.03	377.03
Commingled Containers	1,174.41	105.56	1,279.97
Old Corrugated Cardboard	0.00	2,778.62	2,778.62
Newspaper	0.00	0.00	0.00
Mixed Paper	1,840.68	1,749.83	3,590.51
Office/Computer Paper and Magazines	43.33	82.17	125.50
Brush and Branches	1,147.12	45.00	1,192.12
Mixed Yard Waste	0.00	23.54	23.54
Food Waste	1.00	472.93	473.93
MSW Compost (Bark Products)	0.00	0.00	0.00
Wood Materials	0.00	1.15	1.15
Mixed Glass	0.00	345.25	345.25
Front-End Scrap	8.30	150.45	158.75
Lead Acid Batteries	17.21	244.14	261.35
Electronics	403.25	38.50	441.75
Textiles	257.81	165.40	423.21
Mixed Plastic	0.00	316.82	316.82
Plastic Code #1	15.52	0.33	15.85
Plastic Code #2	127.67	1.40	129.07
Tires (Cement Kilns)	0.00	0.00	0.00
Tires (Recycled)	128.28	335.57	463.85
Tires (Retread)	11.81	0.00	11.81
Other - Pallets	30.00	64.85	94.85
White Goods	1,421.08	0.58	1,421.66
Other MRA Recyclables <sup>2</sup>	19.19	67.49	86.68
<b>TOTAL</b>	<b>6,646.66</b>	<b>7,366.61</b>	<b>14,013.27</b>

<sup>1</sup> Source: 2016 Calvert County, Maryland, MRA Tonnage Reporting Survey Form B, dated 7/24/17.

<sup>2</sup> Other MRA Recyclables includes oil filters, fluorescent lamps, printer cartridges, rechargeable batteries, cell phones, and Freon.

Table 3-2

2016 Non-MRA Recycling Quantities (Tons)<sup>1</sup>

Material	Residential	Commercial <sup>2</sup>	Total
Waste Oil	147.95	887.50	1,035.45
Scrap Metal (Electronics)	0.00	9,780.61	9,780.61
Soil	0.00	248.41	248.41
Scrap Automobiles	0.00	32.34	32.34
Land Clearing Debris <sup>3</sup>	0.00	14,553.79	14,553.79
Antifreeze	12.04	42.71	54.75
Asphalt	95.19	32.07	127.26
Concrete	25.76	260.00	285.76
Other: Mineral Spirits	0.00	6.20	6.20
<b>TOTAL</b>	<b>280.94</b>	<b>25,843.63</b>	<b>26,124.57</b>

<sup>1</sup> Source: 2016 Calvert County, Maryland, MRA Tonnage Reporting Survey Form B, dated 7/24/17, as resubmitted to MDE.

<sup>2</sup> Commercial Recyclables includes residential recyclable materials collected in the incorporated Towns of Chesapeake Beach and North Beach.

<sup>3</sup> Earthen materials (i.e. clays, sands, gravels, and silts), topsoil, tree stumps, root mats, brush and branches, logs, vegetation, and rock from land clearing operations that if not recycled are discarded in land clearing debris, Rubble, or C&D Landfills.

**(This Page Intentionally Left Blank)**

Table 3-3

Estimated Waste Projections (Tons)

Waste Type	Year														
	2016 Historical	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
County Population (projected)	91.440	92.230	93.020	93.810	94.600	95.150	95.700	96.250	96.800	97.350	97.720	98.090	98.460	98.830	99.200
Employment (projected)	28.077	28.246	28.415	28.586	28.757	28.930	29.104	29.278	29.454	29.631	29.808	29.987	30.167	30.348	30.530
<i>Waste Type</i>	<b>Tons</b>	<b>Tons</b>	<b>Tons</b>	<b>Tons</b>	<b>Tons</b>	<b>Tons</b>	<b>Tons</b>	<b>Tons</b>	<b>Tons</b>	<b>Tons</b>	<b>Tons</b>	<b>Tons</b>	<b>Tons</b>	<b>Tons</b>	<b>Tons</b>
Residential	27.805	28.900	29.148	29.395	29.643	29.815	29.987	30.160	30.332	30.504	30.620	30.736	30.852	30.968	31.084
Commercial, Industrial, Institutional	10.319	10.735	10.800	10.864	10.930	10.995	11.061	11.127	11.194	11.261	11.329	11.397	11.465	11.534	11.603
Land Clearing, Construction & Demolition Debris (rubble)	27.414	28.494	28.738	28.982	29.226	29.396	29.566	29.735	29.905	30.075	30.190	30.304	30.418	30.533	30.647
Asbestos	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Dead Animal and Animal Waste	223	232	234	236	238	239	240	242	243	245	245	246	247	248	249
Bulky or Special Waste	156	162	163	165	166	167	168	169	170	171	172	172	173	174	174
Wastewater Treatment Plant Sludges/Septage	1,889	1,963	1,980	1,996	2,013	2,025	2,037	2,048	2,060	2,072	2,080	2,088	2,095	2,103	2,111
Controlled Hazardous Substance (CHS)	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
<b>Subtotal Wastes</b>	<b>67,812</b>	<b>70,491</b>	<b>71,067</b>	<b>71,644</b>	<b>72,221</b>	<b>72,643</b>	<b>73,065</b>	<b>73,488</b>	<b>73,911</b>	<b>74,334</b>	<b>74,642</b>	<b>74,949</b>	<b>75,257</b>	<b>75,566</b>	<b>75,875</b>
<i>Recyclables</i>															
Residential	6.780	7.047	7.107	7.167	7.228	7.270	7.312	7.354	7.396	7.438	7.466	7.494	7.523	7.551	7.579
Commercial, Industrial, Institutional	32.323	33.625	33.827	34.030	34.234	34.439	34.646	34.854	35.063	35.273	35.485	35.698	35.912	36.128	36.344
Used Oil	1,035	1,076	1,085	1,095	1,104	1,110	1,117	1,123	1,130	1,136	1,140	1,145	1,149	1,153	1,158
Scrap Metal	1,497	1,556	1,569	1,583	1,596	1,605	1,614	1,624	1,633	1,642	1,649	1,655	1,661	1,667	1,673
Asphalt	95	99	100	101	101	102	103	103	104	104	105	105	106	106	106
Concrete	26	27	27	27	27	28	28	28	28	28	28	28	29	29	29
Vehicle Tires	131	136	137	138	139	140	141	142	143	143	144	145	145	146	146
Mulch	25,193	26,185	26,409	26,633	26,858	27,014	27,170	27,326	27,482	27,638	27,743	27,849	27,954	28,059	28,164
Other	11	11	11	12	12	12	12	12	12	12	12	12	12	12	12
<b>Subtotal Recyclables</b>	<b>67,091</b>	<b>69,761</b>	<b>70,273</b>	<b>70,785</b>	<b>71,299</b>	<b>71,720</b>	<b>72,142</b>	<b>72,565</b>	<b>72,990</b>	<b>73,416</b>	<b>73,772</b>	<b>74,130</b>	<b>74,489</b>	<b>74,850</b>	<b>75,212</b>
<b>Total Waste and Recyclables</b>	<b>134,903</b>	<b>140,252</b>	<b>141,340</b>	<b>142,429</b>	<b>143,520</b>	<b>144,362</b>	<b>145,207</b>	<b>146,053</b>	<b>146,901</b>	<b>147,750</b>	<b>148,414</b>	<b>149,080</b>	<b>149,747</b>	<b>150,416</b>	<b>151,086</b>

BR00056PG381

Table 3-4

Reported Land Clearing Debris (LCD) Material Accepted in 2016<sup>1</sup>

Facility Submitting Report	In-County Tonnage	Out-of-County Tonnage	Total Tonnage Reported	Remaining Capacity (at 12/31/16) cubic yards)
Hance (TLH Landfill LLC) (Inactive as of 2018)	5,765	0	5,765	140,080
Howlin Land Clearing Debris Landfill <sup>2</sup>	0	0	0	14,487
<b>Total Non-MRA LCD Material</b>	<b>5,765</b>	<b>0</b>	<b>5,765</b>	<b>154,567</b>

---

<sup>1</sup> Source: 2016 MDE Solid Waste Tonnage Report.

<sup>2</sup> 2016 MDE Report states that zero tons of LCD materials were accepted at the Howlin Land-Clearing Debris Landfill.

Table 3-5

## Solid Waste Received at Calvert County Convenience Centers in 2016

Convenience Center	Tons <sup>1</sup>
Appeal	3,538
Ball Road	2,856
Barstow	2,340
Huntingtown	1,939
Lusby	3,126
Mt. Hope	4,560
Plum Point	2,382
<b>TOTAL</b>	<b>20,741<sup>2</sup></b>

<sup>1</sup> Source: 2016 Material Analysis Report by Material for the Seven Convenience Centers.

<sup>2</sup> Tonnage total for Convenience Centers included in the 27,804 tons reported by the Calvert County transfer station.

Table 3-6

## Residential Waste Quantities for 2016 (Tons)

Location / Facility Type	Number of Single-Family and Duplex Households <sup>1</sup>	Tons of Waste	Collection Method
Town of North Beach	911	943 <sup>2</sup>	Curbside collection
Town of Chesapeake Beach	42,960	403 <sup>2</sup>	Curbside collection
Convenience Centers & Appeal <sup>3</sup>	15,955	20,741	Drop-off
Subscription and On-site Disposal <sup>4</sup>	16,056	20,873	Curbside collection
<b>TOTAL</b>	<b>75,882</b>	<b>42,960</b>	

<sup>1</sup> Source: 2010 Census data for Housing Units in Calvert County Maryland. Does not include boats, vans, RV's and multi-family over duplex size.

<sup>2</sup> Information provided by Bill Teter, staff member with Calvert County DPW.

<sup>3</sup> Number of households are estimated based on an average 50 lbs./household/week (or 1.3 tons/household/year).

<sup>4</sup> Tonnage is estimated based on the remaining number of households (after removing those households in North Beach, Chesapeake Beach and those estimated to be using the Convenience Centers and Appeal) multiplied by 1.3 tons/household/year.

**Table 3-7**

**Incorporated Municipality Information**

	<b>Residential Waste and Recycling Collection Service</b>	<b>Contract Holder</b>	<b>Waste Disposal/Transfer Facility Utilized</b>	<b>Commercial Waste Collection</b>	<b>Tons of MSW delivered to the Appeal Municipal Landfill in 2016</b>	<b>Tons of MSW Recycled in 2016</b>
Town of North Beach	Municipal Contract/Curbside Collection	Southern Maryland Recycling, Inc.	Benning Road Transfer Station (Washington, DC) Appeal Transfer Station	Collected by commercial haulers or self-hauled, not a service provided by the Town	943 <sup>1</sup>	98 <sup>2</sup>
Town of Chesapeake Beach	Municipal Contract/Curbside Collection	Southern Maryland Recycling, Inc.	Benning Road Transfer Station (Washington, DC) Appeal Transfer Station	Collected by commercial haulers or self-hauled, not a service provided by the Town	403 <sup>3</sup>	248 <sup>4</sup>

<sup>1</sup> Tonnage received from Bill Teter at Calvert County DPW, via email, 11/2017.

<sup>2</sup> Recycling tonnage received from Marsha Stiner of North Beach Maryland, via telephone conversation on October 16, 2017.

<sup>3</sup> Tonnage received from Bill Teter at Calvert County DPW, via email, 11/2017.

<sup>4</sup> Recycling tonnage received from Calvert Trash via Calvert County staff.

BK 00056 PG 385

Table 3-8 (a)

List of Participating Apartment Buildings in the ABCR Program

#	Name & Property Manager Contact	Address (Physical & Mailing)	Phone Number	Number Of Buildings	Number Of Units
1	Asbury-Solomon's Inc C/O Asbury Solomon's, 201 Russell Ave. Gaithersburg, MD	11100 Asbury Cir, Solomon's, MD 20688	410-394-3000	19	300
2	Burnt Oaks North Apt I C/O Mt Harmony Property Mgmt. 9845 Sea Maid Ct, North Beach, MD 20714	9825 Sea Maid Ct, North Beach, MD 20714	301-855-2945	1	48
3	Burnt Oaks North Apt II C/O Mt Harmony Property Mgmt. 9845 Sea Maid Ct, North Beach, MD 20714	9610 Sea Shell Ct, North Beach, MD 20714	301-855-2945	1	60
4	Calvert Pines I C/O Calvert County Housing Authority 480 Main St, Prince Frederick, MD 20678	420 West Dares Beach Rd, Prince Frederick, MD 20678 POB 2509, Prince Frederick, MD 20678	410-535-5010	1	52
5	Calvert Pines II C/O Calvert County Housing Authority 480 Main St, Prince Frederick, MD 20678	470 West Dares Beach Rd, Prince Frederick, MD 20678 POB 2509, Prince Frederick, MD 20678	410-535-5010	1	48
6	Chapline House I Chapline Assoc Ltd Partnership C/O Habitat America LLC 125 Allnut Ct, Prince Frederick, MD 20678	115 Allnut Ct, Prince Frederick, MD 20678 175 Admiral Cochrane Dr. Ste. 20, Annapolis, MD	410-414-8280	1	30
7	Chapline House II Chapline Assoc Ltd Partnership C/O Habitat America LLC 125 Allnut Ct, Prince Frederick, MD 20678	115 Allnut Ct, Prince Frederick, MD 20678 175 Admiral Cochrane Dr. Ste. 20, Annapolis, MD	410-414-8280	1	60

BK 00056 PG 386

Table 3-8 (a)

List of Participating Apartment Buildings in the ABCR Program  
(continued)

8	Chesapeake Manor Apt C/O RAR Assoc 9132 Bay Ave, North Beach, MD 20714	9019 Chesapeake Ave North Beach, MD 20714	301-855-6600	1	17
9	Courtyard @ Fishing Creek 1 C/O Cheseldine Mgmt. consulting LLC 700 Yardley Dr. Ste. A, Prince Frederick, MD 20678	3945 Gordon Stinnett Blvd, Chesapeake Beach, MD 20732 POB 280, Hughesville, MD	410-286-3688	4	64
10	Courtyard @ Fishing Creek 2 C/O Cheseldine Mgmt. consulting LLC 700 Yardley Dr. Ste. A, Prince Frederick, MD 20678	3945 Gordon Stinnett Blvd, Chesapeake Beach, MD 20732 POB 280, Hughesville, MD	410-286-3688	4	16
11	Crosswinds C/O Patuxent Real Estate, 8909 Chesapeake Ave, POB 716 North Beach, MD 20714	4010 3rd St, North Beach, MD 20714 8120 Fenton St, Ste 300, Silver Spring, MD	410-257-9883	3	22
12	Harbor House Apt C/O L&E, LLC	3725 Harbor Rd, Chesapeake Beach, MD 20732 3195 Bayside Rd, Huntingtown, MD	410-535-2979	1	10
13	Prince Frederick Senior Apt C/O Fifth Mgmt. & Consulting, 77 West St, Ste. 210, Annapolis, MD	340 Fairground Rd, Prince Frederick, MD 20678	410-535-5816	4	30
14	Prince Frederick Village Apt LTD Partnership C/O Fifth Mgmt. & Consulting, 77 West St. Ste. 210, Annapolis, MD	340 Fairground Rd, Prince Frederick, MD 20678 77 West St, Ste. 210, Annapolis, MD	410-535-5816	5	36
15	Prince Frederick Villas Community Action Committee Inc C/O Cheseldine Mgmt. Consulting, 700 Yardley Dr. Ste. A. Prince Frederick, MD	480-549 Stamper Ct, Prince Frederick, MD 20678 POB 280 Hughesville, MD	410-414-7428	3	25

BK00056PG387

**Table 3-8 (a)**

**List of Participating Apartment Buildings in the ABCR Program  
(continued)**

16	Seaside Court C/O Mt Harmony Property Mgmt., 9845 Sea Maid Ct, North Beach, MD	3939 Sea Side Ct, North Beach, MD 20714 9845 Sea Maid Ct, North Beach, MD	301-855-2945	1	29
17	Silverwood Farm C/O Buzutto	100 Runningbrook Way, Prince Frederick, MD 20678 7850 Walker Dr. Ste. 400, Greenbelt, MD 20770	410-535-1889	15	180
18	Southern Pines C/O Calvert County Housing Authority 480 Main St, Prince Frederick, MD 20678	50 Appeal Ln, Lusby, MD 20657 POB 2509, Prince Frederick, MD	410-535-5010	1	76
19	Southern Pines II C/O Habitat America LLC 175 Admiral Cochrane Dr. Ste. 20 Annapolis, MD 21401	60 Appeal Lane Lusby, MD 20657	410-394-3900		
20	Southwinds C/O Patuxent Properties, 8909 Chesapeake Ave, North Beach, MD 20714	9000 Bay Ave, North Beach, MD 20714	410-257-9883	1	41
21	The Hermitage at St John's Creek	13325 Dowell Rd, Solomon's, MD 20688	410-326-0070	2	61
22	Town Center Senior Apt C/O Calvert County Housing Authority 480 Main St, Prince Frederick, MD 20678	8933 Chesapeake Ave, North Beach, MD 20714	410-535-5010	1	49
23	Yardley Hills 1 C/O Cheseldine Mgmt. Consulting, 700 Yardley Dr. Ste. A, Prince Frederick, MD 20678	700 Yardley Dr., Prince Frederick, MD 20678	410-414-7428	7	76
24	Yardley Hills 2 C/O Cheseldine Mgmt. Consulting, 700 Yardley Dr. Ste. A, Prince Frederick, MD 20678	700 Yardley Dr., Prince Frederick, MD 20678	520-414-7428	19	28

BK00056PG388

**Table 3-8(b)**

**List of Participating Condominiums in the ABCR Program**

#	Name & Contact	Address (Physical & Mailing)	Phone Number	Number of Buildings	Number of Units
1	Baywalk Condo C/O Discount Realty, POB 1183 North Beach, MD 20714	9100 Bay Ave, North Beach, MD 20714	410-257-7330	1	27
2	Horizons on the Bay C/O Mt. Harmony Property Mgmt., 9845 Sea Maid Ct, North Beach, MD 20714	8501 Bayside Rd, Chesapeake Beach, MD 20732	301-855-2945	1	80
3	Mill Creek C/O Patuxent Properties, 8909 Chesapeake Ave, POB 716, North Beach, MD 21714	Dowell Rd, MD 20688	410-257-9883	9	54
4	Oyster Bay Place C/O Brodie Mgmt., 134 Holiday Ct, Ste. 308, Annapolis, MD 21401	Dowell Rd, MD 20688	410-571-1400	7	80
5	Richfield Station Village Condo I C/O Sentry Mgmt., 2200 Defense Hwy, Ste. 405, Crofton, MD 21114	9033 Forest Ridge Dr. Chesapeake Beach, MD 20732	410-721-7171	5	56
6	Richfield Station Condo II C/O Sentry Mgmt., 2200 Defense Hwy, Ste. 405, Crofton, MD 21114	9033 Forest Ridge Dr. Chesapeake Beach, MD 20732	410-721-7171	4	46
7	Richfield Station Condo III C/O Sentry Mgmt., 2200 Defense Hwy, Ste. 405, Crofton, MD 21114	9033 Forest Ridge Dr. Chesapeake Beach, MD 20732	410-721-7171	3	19
8	Richfield Station Condo IV C/O Sentry Mgmt., 2200 Defense Hwy, Ste. 405, Crofton, MD 21114	9033 Forest Ridge Dr. Chesapeake Beach, MD 20732	410-721-7171	5	26
9	Richfield Station Condo V C/O First Real Estate Mgmt., 5304 Dorsey Hall Dr. Ellicott City, MD 21042	9033 Forest Ridge Dr. Chesapeake Beach, MD 20732	410-730-9531	3	16
10	Seagate Condo C/O POB 99, Chesapeake Beach, MD 20732	4017 Seagate Sq. Chesapeake Beach, MD 20732	202-713-9266	3	30

BK00056 PG 389

**Table 3-8(b)**

**List of Participating Condominiums in the ABCR Program  
(continued)**

11	Solomon's Landing C/O Brodie Mgmt., 134 Holiday Ct, Ste. 308, Annapolis, MD 21401	550 Runabout Loop, Solomon's, MD 20688	410-571-1400	17	225
12	Windward Harbour @ Solomon's C/O Brodie Mgmt., 134 Holiday Ct, Ste. 308, Annapolis, MD 21401	Dowell Rd, Solomon's, MD 20688	410-571-1400	15	80

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

BK 00056 Pg 390

Table 3-9

## Schools and Student Enrollment

Public <sup>1</sup>		
School Level	Number of Schools	Enrollment
Elementary	12	6,660
Middle (6th-8th grade)	6	3,716
High School	4	5,139
Career and Technology Academy	1	No enrollment – high school students attend part-time
Calvert County Alternative School	1	9
Calvert County Special Education	1	40 (varies from month to month)
<b>TOTAL</b>	<b>25</b>	<b>15,564</b>

Non-Public <sup>2</sup>	
School Level	Number of Schools
Pre-Kindergarten thru to 6th Grade	11
Grades 7-12	1
Un-graded Elementary	8
Un-graded Secondary	0
<b>TOTAL</b>	<b>20</b>

<sup>1</sup> Public Schools Enrollment County List received from Shuchita Warner, Director of School Construction, August 2017.

<sup>2</sup> List provided by Bill Teter, staff member with Calvert County, September 2017.

Table 3-10

Hazardous Waste Generation in 2016<sup>1</sup>

Waste Category	Generator	Tons Generated
Acidic Aqueous	Solomon's Annex	0.628
Compressed Gas	CCNPP	0.03
Inorganic Liquid	CCNPP	0.01
Lab Packs	CCNPP	0.511
Lab Packs	Chesapeake Bay	0.128
Metal Scale	CCNPP	0.325
Organic Liquids	CCNPP	0.585
Organic Liquids	Chesapeake Bay	0.125
Organic Solids	Solomon's Annex	0.245
Paint/Ink	Solomon's Annex	1.31
Waste Oil	Solomon's Annex	0.018
	<b>Total</b>	<b>3.915</b>

CCNPP = Calvert Cliffs Nuclear Power Plant

Solomon's Annex = Naval Air Station Pax River - Solomon's Annex

Chesapeake Bay = Chesapeake Bay Detachment

<sup>1</sup> Source: US Environmental Protection Agency, 2015 Biennial Hazardous Waste Report for Calvert Cliffs Nuclear Power Plant, Inc., Naval Air Station Patuxent River – Solomon's Annex, and Naval Research Lab CBD (Chesapeake Bay Detachment)

Table 3-11

## WWTP Sludge Generation Estimates in 2016

WWTP	Approximate Quantity	Disposal Method <sup>1</sup>
Chesapeake Beach	1,500 wet tons	Landfill <sup>2</sup>
Prince Frederick I (Sugar Notch) <sup>3</sup>	N/A	Lagoon
Prince Frederick II (Tobacco Ridge)	700 wet tons	Landfill
Calvert Cliffs Nuclear Power Plant	121,100 gallons	Solomon's Island WWTP
Northern High School	9,000 gallons	Solomon's Island WWTP
Randle Cliffs	20.9 dry tons	Solomon's Island WWTP
Solomon's Island <sup>4</sup>	1,889 dry tons	Landfill
Marley Run	210,244 gallons	Solomon's Island WWTP

<sup>1</sup> All sludge noted as "Disposal Method- Landfill" is hauled by Duffield Hauling from the respective WWTP for disposal at the King George Landfill in Virginia.

<sup>2</sup> Old Line Hauls dewatered sludge for further processing and disposal.

<sup>3</sup> Lagoons are reported to require dredging only once every 10 years; it is expected that dredging will be required within the current planning period.

<sup>4</sup> County reports that tonnages shown for Solomon's Island include the processing of all material from other facilities reported as Wet Gallons disposed at Solomon's Island WWTP

Table 3-12

**Estimated Quantities of Septage Collected by Septage Haulers  
(Gallons)<sup>1</sup>**

Septage Hauler	Gallons Collected in 2017
Annapolis Septic & Drain Cleaning Service, LLC	0
Brothers Johnson, Inc.	701,866
C&C Plumbing and Septic, Inc.	51,660
Carl B. Seeds Inc.	30,476
Calvert Cliffs	186,262
Calvert County	0
Camper	80,890
Concepts in Building, Inc.	129,425
Copsey's Septic Service, Inc.	843,054
Cottons Septic & Portable Toilet Rentals LLC	1,432,220
Down's Plumbing & Septic	8,180
Eugene Copsey Plumbing Septic & Well Service, LLC	349,683
Glover's Septic Service, Inc.	166,385
Good Sheppard Septic Service <sup>2</sup>	-
Guy Septic	0
Hallowing Point, LLC / Michael Mona	0
J&J Portable Toilet & Septic Services, Inc.	1,793,580
Jimmy's Septic	478,749
J.R. Wilson Septic Service <sup>2</sup>	-
Larry Hills & Sons Excavating, Inc.	41,079
Lee Industries, Inc.	321,720
LNT Enterprises <sup>2</sup>	
Mobile Dredging & Pumping Co	0
Outback Porta-Jon Inc.	84,334
Paul C. Hayden Plumbing and Heating	424,882
Patuxent Campsites <sup>2</sup>	
Still Water Septic	132,023
Strohecker Inc	0
SWWTP	0
T&T Port-o-let <sup>2</sup>	-
United Site Services of MD <sup>2</sup>	-
Water Services, Inc. <sup>2</sup>	-
Wayne's Drains & Backhoe Service	19,250

<sup>1</sup> Source: 2017 Data provided by Calvert County DPW.

<sup>2</sup> These entities are currently permitted through the County, but did not record any tonnages in 2017.

Table 3-13

Licensed Medical Transporters within the State of Maryland as of 2017<sup>1</sup>

Medical Waste Hauler	Certified Vehicle Count
Biomedical Recovery Systems, LLC	4
Smith Systems Transportation, Inc.	6
Cyntox, LLC	7
Miller Environmental Group, Inc.	7
SJ Transportation Co. Inc.	7
Choice Med Waste, LLC	2
University of Maryland – Baltimore	2
Environmental Management Inc.	8
National Institutes of Health	2
Approved Storage & Waste Hauling, Inc.	5
Stericycle, Inc.	200
Curtis Bay Energy	100
Brandywine Green, Inc.	13
Biomedical Waste Services Inc.	13
Clean Harbors Environmental Services Inc.	33
Alpha Bio/Med Services	5
Professional, LLC dba Professional Restoration	2
Ecology Services Inc.	5
Veolia ES Technical Solutions, LLC	51
Advant-Edge Solutions of Middle Atlantic Inc.	4
Conservation Environmental Services Inc.	5
All Pro Restoration	1
Secured Med Waste	3
CLYM Environmental Services	4
Aftermath Services LLC	2
Daniel Sharpsmart Inc.	15
In Memoriam LLC	1
Moran Environmental Recovery LLC	4
T. Pelot & Company Inc. dba Advanced Bio-Treatment	1
Agape Pet Services	3
IF Services Inc.	2
Apex Medical Disposal Group	1
University of Maryland – College Park	3
Environmental Waste Minimization Inc.	12
Triumvirate Environmental Inc.	44
DJ's Hospitality Service	1
<b>Total</b>	<b>578</b>

<sup>1</sup> SMH Certified Haulers through FY 2018. Data provided by Jennifer Hooper, Section Head of Hazardous Waste Program with MDE, October 2017.

Table 3-14

School Facilities Participating in the Collection of Recyclables<sup>1</sup>

School Name	Address	Phone Number
<b>Elementary Schools</b>		
Patuxent Appeal	35 Appeal Ln., Lusby	443-550-9670
Barstow	295 JW Williams Rd., Prince Frederick	443-550-9510
Beach	7900 Old Bayside Rd., Chesapeake Beach	443-550-9520
Calvert	1450 Dares Beach Rd., Prince Frederick	443-550-9550
Dowell	12680 H. G. Trueman Rd., Lusby	443-550-9480
Huntingtown	4345 Huntingtown Rd., Huntingtown	443-550-9360
Mt. Harmony	900 West Mt Harmony Rd., Owings	443-550-9620
Mutual	1455 Ball Rd., Port Republic	443-550-9650
Plum Point	1245 Plum Point Rd., Huntingtown	443-550-9730
St. Leonard	5370 St. Leonard Rd., St. Leonard	443-550-9760
Sunderland	150 Clyde Jones Rd., Sunderland	443-550-9390
Windy Hill	9550 Boyds Turn Rd., Owings	443-550-9790
<b>Middle Schools</b>		
Calvert	655 Chesapeake Blvd., Prince Frederick	443-550-8970
Mill Creek	12200 Southern Connector Blvd., Lusby	443-550-9230
Northern	2954 Chaneyville Rd., Owings	443-550-8950
Plum Point	1475 Plum Point Rd., Huntingtown	443-550-9170
Southern	9615 H. G. Trueman Rd., Lusby	443-550-9250
Windy Hill	9560 Boyds Turn Rd., Owings	443-550-9310
<b>Senior Schools</b>		
Career and Technology Center	330 Dorsey Rd., Prince Frederick	443-550-9940
Calvert	520 Fox Run Rd., Prince Frederick	443-550-8880
Huntingtown	4125 N. Solomon's Island Rd., Huntingtown	443-550-8810
Northern	2950 Chaneyville Rd., Owings	443-550-8950
Patuxent	12485 Southern Connector Blvd., Lusby	443-550-8840
<b>Other Schools and Facilities</b>		
Adult Education	Hunting Creek Annex, 4105 Old Town Rd., Huntingtown	410-535-7382
Spaceflight America Museum and Science Center Arthur Storer Planetarium	520 Fox Run Blvd., Prince Frederick	301-812-6480
Career and Technology Academy	330 Dorsey Rd., Prince Frederick	443-550-9940
Calvert Country School	1350 Dares Beach Rd., Prince Frederick	443-550-9910
Brooks Administrative and Instructional Facility	1305 Dares Beach Rd., Prince Frederick	443-550-8000

<sup>1</sup> Source: Calvert County Department of Solid Waste, August 2018.

Table 3-15

## Public Sites that Host or May Host Special Events

Site	Address	Phone Number
<b>Municipally Owned Sites</b>		
<i>Overseen by the Town of Chesapeake Beach</i>		
Kellam's Field <sup>1</sup>	3825 Gordon Stinnett Blvd., Chesapeake Beach	410-257-2330
Bay Front Park	Maryland Route 261, Chesapeake Beach	410-257-2230
Veterans' Memorial Park	Intersection of Route 261 and Route 260, Chesapeake Beach	410-257-2230
Chesapeake Beach Water Park	4079 Gordon Stinnett Blvd., Chesapeake Beach	410-257-1404
<i>Overseen by the Town of North Beach</i>		
North Beach		
Waterfront Beach		
Wetlands Overlook Park	10 <sup>th</sup> and Dayton Ave., North Beach	301-855-6681
<b>County Owned Sites</b>		
<i>Overseen by Sheriff's Department</i>		
All Public Streets and Roads	30 Church St, Prince Frederick	410-535-2800
<i>Overseen by Respective Board of Directors / Governors</i>		
American Chestnut Land Trust (ACLT)	POB 2363, Prince Frederick	410-414-3400
Anmarie Garden	13480 Dowell Rd., Lusby	410-326-4640
Calvert Marine Museum	14200 Solomon's Island Rd. S., Solomon's	410-326-2042
<i>Overseen by Calvert County Board of Education/Public Schools</i>		
<b>Elementary Schools</b>		
Patuxent Appeal	35 Appeal Ln., Lusby	443-550-9670
Barstow	295 JW Williams Rd., Prince Frederick	443-550-9510
Beach	7900 Old Bayside Rd., Chesapeake Beach	443-550-9520
Calvert	1450 Dares Beach Rd., Prince Frederick	443-550-9550
Dowell	12680 H. G. Trueman Rd., Lusby	443-550-9480
Huntingtown	4345 Huntingtown Rd., Huntingtown	443-550-9360
Mt. Harmony	900 West Mt Harmony Rd., Owings	443-550-9620
Mutual	1455 Ball Rd., Port Republic	443-550-9650
Plum Point	1245 Plum Point Rd., Huntingtown	443-550-9730
St. Leonard	5370 St. Leonard Rd., St. Leonard	443-550-9760
Sunderland	150 Clyde Jones Rd., Sunderland	443-550-9390
Windy Hill	9550 Boyds Turn Rd., Owings	443-550-9790
<b>Middle Schools</b>		
Calvert	655 Chesapeake Blvd., Prince Frederick	443-550-8970
Mill Creek	12200 Southern Connector Blvd., Lusby	443-550-9230
Northern	2954 Chaneyville Rd., Owings	443-550-8950
Plum Point	1475 Plum Point Rd., Huntingtown	443-550-9170
Southern	9615 H. G. Trueman Rd., Lusby	443-550-9250
Windy Hill	9560 Boyds Turn Rd., Owings	443-550-9310

<sup>1</sup> Considered a County Owned Facility, however direction is handled by the Town of Chesapeake Beach

Table 3-15

**Public Sites that Host or May Host Special Events  
(continued)**

<b>Senior Schools</b>		
Career and Technology Center	330 Dorsey Rd., Prince Frederick	443-550-9940
Calvert	520 Fox Run Rd., Prince Frederick	443-550-8880
Huntingtown	4125 N. Solomon's Island Rd., Huntingtown	443-550-8810
Northern	2950 Chaneyville Rd., Owings	443-550-8950
Patuxent	12485 Southern Connector Blvd., Lusby	443-550-8840
<b>Other Schools and Facilities</b>		
Adult Education	Hunting Creek Annex, 4105 Old Town Rd., Huntingtown	410-535-7382
Spaceflight America Museum and Science Center Arthur Storer Planetarium	520 Fox Run Blvd., Prince Frederick	301-812-6480
Career and Technology Academy	330 Dorsey Rd., Prince Frederick	443-550-9940
Calvert Country School	1350 Dares Beach Rd., Prince Frederick	443-550-9910
Brooks Administrative and Instructional Facility	1305 Dares Beach Rd., Prince Frederick	443-550-8000
<b>Overseen by Department of Community Resources / Division of Office on Aging</b>		
Calvert Pines Senior Center	450 West Dates Beach Rd., Prince Frederick	410-535-4606
North Beach Senior Center	9010 Chesapeake Ave., North Beach	410-257-2549
Southern Pines Senior Center	20 Appeal Ln., Lusby	410-586-2748
<b>Overseen by Department of Public Safety / Each Department and/or Squad</b>		
Dunkirk Volunteer Fire Department #5	3170 West Ward Rd., Dunkirk	301-855-8895
Huntingtown Volunteer Fire Department #6	4030 Old Town Rd., Huntingtown	301-774-7400
North Beach Volunteer Fire Department #1	8536 Bayside Rd., Chesapeake Beach	410-257-6564
Prince Frederick Volunteer Fire Department #2	450 Solomons Island Rd., Prince Frederick	410-535-9875
Prince Frederick Volunteer Rescue Squad #4	755 Solomons Island Rd., Prince Frederick	410-535-9836
Solomons Volunteer Rescue Squad and Fire Department #3	13150 H. G. Trueman Rd., Solomon's	410-326-6657
St. Leonard Volunteer Fire Department #7	200 Calvert Beach Rd., St. Leonard	410-586-1713
<b>Overseen by Department of General Services</b>		
Chesapeake Railway Museum	4155 Mears Ave., Chesapeake Beach	410-257-3892
<b>Overseen by Maryland Department of Planning / Maryland Historical Trust</b>		
Jefferson Patterson Park & Museum	10515 Mackall Rd., St. Leonard	410-586-8514
<b>Overseen by Maryland Department of Natural Resources / Maryland Historical Trust</b>		
Calvert Cliffs State Park	9500 H. G. Trueman Rd., Lusby	301-743-7613 301-888-1410

Table 3-15

**Public Sites that Host or May Host Special Events  
(continued)**

<i>Overseen by Department of General Services / Division of Natural Resources</i>		
Battle Creek Cypress Swamp Sanctuary	2880 Grays Rd., Prince Frederick	410-535-5327
Biscoe Gray Heritage Farm	2695 Gray's Rd., Prince Frederick	410-535-5327
Flag Ponds Nature Park	1525 Flag Ponds Pkwy, Lusby	410-586-1477 410-535-5327
Kings Landing Park	3255 Kings Landing Rd., Huntingtown	410-535-2661 410-535-5327
<i>Overseen by Department of General Services / Division of Parks and Recreation</i>		
Cove Point Park Pool	Cove Point Park, 750 Cove Point Rd., Lusby	410-394-6248
Edward T. Hall Aquatic Center	130 Auto Dr., Prince Frederick	410-414-8350
Kings Landing Pool	Kings Landing Park, 3255 Kings Landing Rd., Huntingtown	410-535-3321
Breeze Point Beach and Campground	5300 Breezy Point Rd, Chesapeake Beach	410-535-0259
Chesapeake Hills Golf Course	11352 H. G. Trueman Rd., Lusby	410-326-4653
Dowell House	4889 Calvert Dr., St. Leonard	410-586-1101
Harriett E Brown Community Center	901 Dares Beach Rd., Prince Fredrick	410-535-7080
Mount Hope Community Center	104 Pushaw Station Rd., Sunderland	410-257-6770
North Beach Community Center	9021 Dayton Ave., North Beach	410-257-4344
Northeast Community Center	4075 Gordon Stinnett Ave., POB 1360, Chesapeake Beach	410-257-2554
Southern Community Center	20 Appeal Ln., Lusby	410-586-1101
BGE Field	9550 H.G. Trueman Rd., Lusby	410-586-1477
Cove Point Park	750 Cove Point Rd., Lusby	410-326-2833
Dunkirk District Park	10750 Southern Maryland Blvd., Dunkirk	410-535-1600
Grays Road Dog Park	2695 Grays Rd., Prince Frederick	410-535-1600
Hallowing Point Park	4755 Hallowing Point Rd., Prince Frederick	410-535-9807
Marley Run Recreation Area	1455 Mairfield Ln., Huntingtown	410-535-1600
St. Leonard Recreation Area	4825 Maryland Ave., St. Leonard	410-586-1477
Solomons Town Center Park	13320 Dowell Rd., Dowell	410-535-1600
Twin Shields Recreation Area	2420 Shields Dr., Dunkirk	410-586-1477
<b>State Owned Sites</b>		
<i>Overseen by Respective Board of Trustees</i>		
College of Southern Maryland (Prince Frederick Campus)	115 J.W. Williams Rd., Prince Frederick	443-550-6000

Table 3-16

**County Generated Solid Waste Materials Accepted at Permitted  
Facilities in Calvert County, Maryland in 2016 (by material type)**

<b>Material</b>	<b>Appeal Municipal Landfill</b>	<b>Appeal Transfer Station</b>	<b>Southern Maryland Recycling and Processing Facility</b>	<b>Total (Tons)</b>
MSW – Residential	0.95	27,804.53	0	27,805.48
MSW – Commercial	22.57	10,296.82	0	10,319.39
Asbestos	1.27	0	0	1.27
Asphalt	95.19	0	0	95.19
C&D	43.32	17,064.35	10,306.75	27,414.42
Concrete	25.76	0	0	25.76
Scrap Metal	1,429.38	0	67.6	1,496.98
Scrap Tires	128.28	0	2.51	130.79
Sewage Sludge	1,888.52	0	0	1,888.52
Soil	105.93	0	0	105.93
Animals	0.21	11.37	0	11.58
Animal Wastes	0	211.35	0	211.35
Boats	0	50.00	0	50.00
Mulch	1,147.12	0	0	1,147.12
Other <sup>1</sup>	0	0	10.88	10.88
<b>Total Waste Accepted</b>	<b>4,888.50</b>	<b>55,438.42</b>	<b>10,387.74</b>	<b>70,714.66</b>

<sup>1</sup> There wasn't a qualifier reported under "other" on Southern Maryland Recycling and Processing Facility 2016 Annual Waste Tonnage Report

Table 3-17

**Solid Waste and Recycling Materials Accepted by Permitted Solid Waste Facilities (2016)**

	<b>Total Tons Managed</b>	<b>Total Tons from Calvert County</b>	<b>Total Tons Recycled</b>	<b>Total Tons Composted</b>	<b>Total Tons Transferred to Calvert County Transfer Station/ Appeal Municipal Landfill</b>	<b>Total Tons Disposed</b>	<b>Remaining Capacity (CY)</b>
<b>Appeal Municipal Landfill<sup>1</sup></b>	4,998.43	4,888.50	122.16 <sup>2</sup>	1,180.96	0	1,888.52	1,310,206.99
<b>Calvert County Transfer Station<sup>3</sup></b>	99,025.05	55,438.42	0	0	0	99,025.05	N/A <sup>4</sup>
<b>Southern Maryland Recycling and Processing, Inc.<sup>5</sup></b>	16,172.22	10,387.74	126.09 <sup>6</sup>	0	0	16,046.13	Not Reported

<sup>1</sup> Based on 2016 Annual Solid Waste Tonnage Report submitted to MDE. Sludge was disposed at King George Landfill, metals at Southern Maryland Recycling and tires at Emanuel Tires.

<sup>2</sup> Recycled materials included asphalt, and concrete.

<sup>3</sup> Based on 2016 Annual Solid Waste Tonnage Report submitted to MDE. Materials were disposed of at King George Landfill in Virginia.

<sup>4</sup> The Facility is currently operated by Waste Management, Inc. on the land owned by Calvert County. The operations contract will expire in 2022.

<sup>5</sup> Based on 2016 Annual Solid Waste Tonnage Report submitted to MDE. C&D Materials were disposed of at the 623 Landfill in Goochland County, Virginia. Metals were processed by Joe Smith in Prince Georges County, MD, tires by Auston Contracting in Hartford County, MD, and OCC materials by World Recycle and CWI both in Prince Georges County, Maryland.

<sup>6</sup> Recycled materials included metals, tires and "other" non-specified materials.

Table 3-18

**Marinas with Pump-out Facilities in Place<sup>1</sup>**

<b>Marina Name</b>	<b>Pump-out Facility Status</b>
Abner's Crabhouse & Marina	In Place
Breezy Point Marina	In Place
Calvert County Pumpout Station	In Place
Calvert Marina	In Place
Flag Harbor Yacht Haven	In Place
Harbor Island Marina	In Place
K.B. Derr and Son, LLC	In Place
Len's Marina	In Place
Marina West	In Place
Point Patience Marina	In Place
Quality Inn Solomon's- Beacon Marina	In Place
Rod n' Reel	In Place
Solomon's Harbor Marina	In Place
Solomon's Landing Marina	In Place
Solomon's Yachting Center	In Place
Spring Cove Marina	In Place
Zahniser's Yachting Center	In Place

<sup>1</sup> Source: Phone conversation with Donna Morrow, Program Manager at the Center for Marine & Coastal Stewardship Chesapeake & Coastal Service Department of Natural Resources. September 2017

Table 3-19

**Natural Wood Waste Recycling Facility  
Annual Tonnage Report for 2016**

	Natural Wood Waste Product Produced by Processing		Natural Wood Waste Product Removed from Facility		Residual Waste Removed from the Facility	
	Volume (CY)	Weight (Tons)	Volume (CY)	Weight (Tons)	Volume (CY)	Weight (Tons)
<b>A&amp;L Natural Wood Waste Recycling Facility (A.H. Hatcher)<sup>1</sup></b>	28,043	6,311	25,065	5,640	0	0
<b>231 Materials &amp; Recycling Products, LLC<sup>2</sup></b>	0	0	0	0	0	0

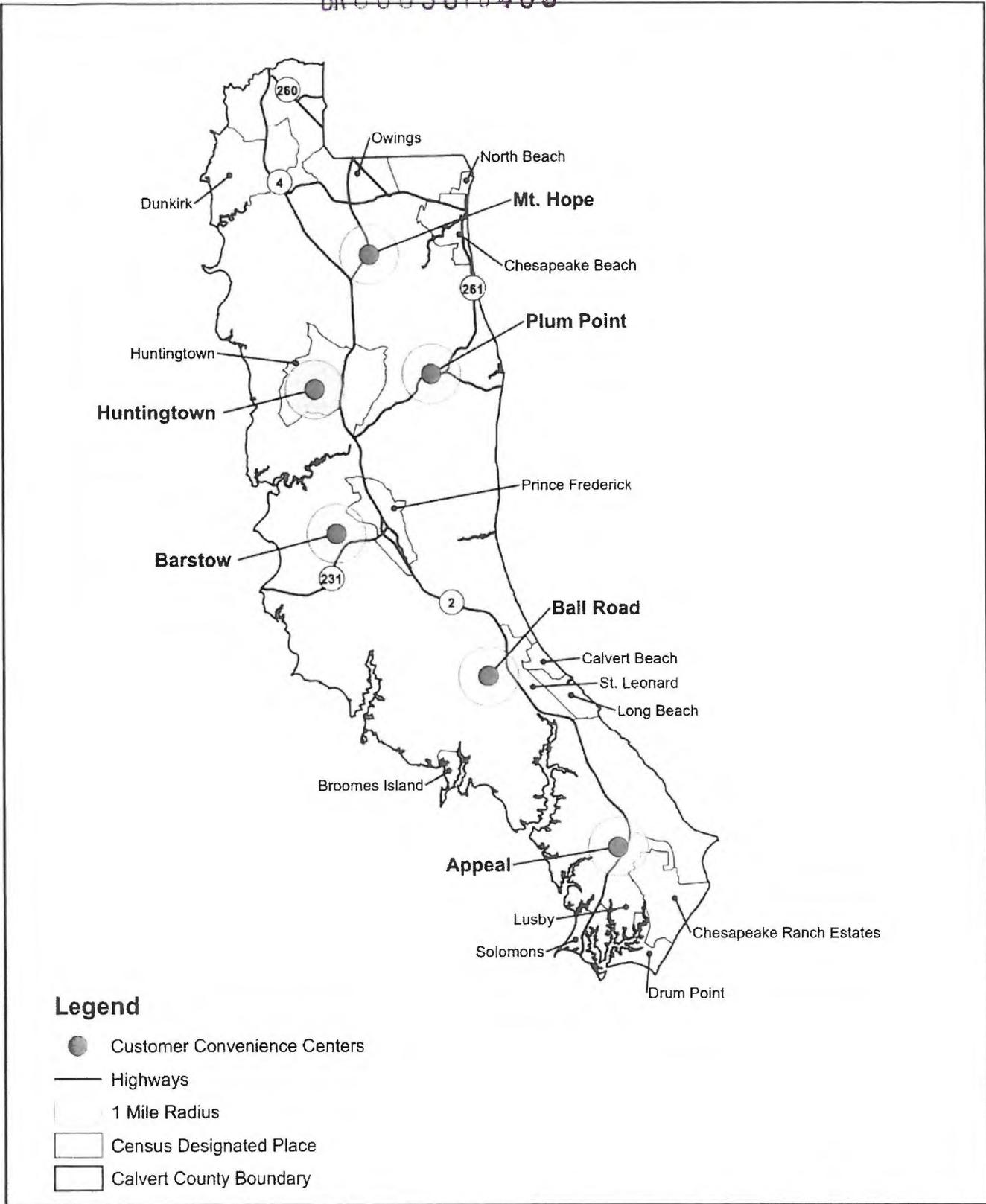
<sup>1</sup> MDE, 2016 Annual Tonnage Report as prepared by Site owner, A&L Natural Wood Waste Recycling, Calvert County, Maryland

<sup>2</sup> MDE confirmed that no data was reported for 231 Materials & Recycling Products, LLC.

Table 3-20

## Major Waste Haulers Serving Calvert County (as of 2017)

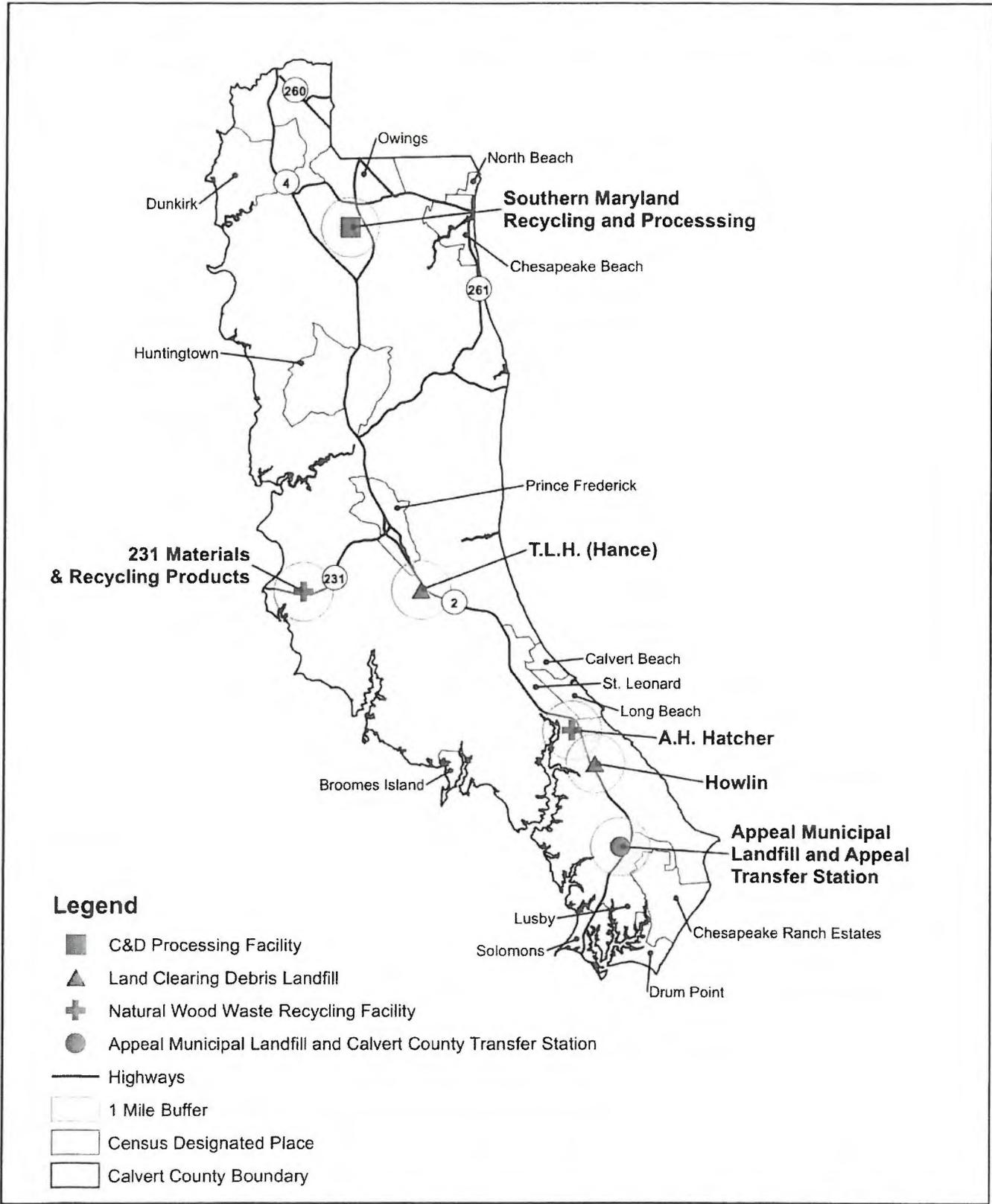
<b>Company</b>	<b>Contact</b>	<b>Phone</b>
A & B Disposal	Bonnie	(301) 899-1201
Ace Hauling	Kipp Brooks	(410) 286-5551
Affordable Refuse	John McLead	(301) 952-8700
Atlas Concrete Service	Dennis Atlas	(301) 475-2477
Barnes Trucking	Lee Barnes	(443) 532-1787
C & C Roll/off	Bradley/Megan Raley	(301) 884-8565
D & D Homes	David Gilbert	(410) 326-1270
Evergreen Disposal	Larry Foster	(571) 241-0860
Republic Service (BFI)	-	(301) 343-7757
Riverside Roll/off	Mike Schmidt	(301) 373-8588
Southern Maryland Recycling	Jim Graner	(301) 855-3078
St. Mary's Commissioners	Nick	(240) 925-1425
Steve Dyson	Steve Dyson	(240) 538-5760
WRA	William Alvey	(301) 884-8377
Waste Management	Agnieszka Newton	(301) 843-0190



Plotted: Jul 09, 2018 - 8:53AM  
 Z:\BL-Vault\ID2\18217AD2-1C71-4823-8927-99D5C4054147\0\1365000-1365999\1365595\1365595\1990.001.001 County Maps (ID 1365595).dwg  
 SYR By: dsp

		CALVERT COUNTY DEPARTMENT OF PUBLIC WORKS TEN YEAR COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN <b>CURRENT COUNTY CONVENIENCE                  CENTERS (AS OF 2018)</b>		Figure Number <b>3-1</b>
		Date JULY, 2018		Project Number 1990.001.001
Scale NOT TO SCALE		CALVERT COUNTY, MARYLAND		

Plotted: Jul 09, 2018 - 8:38AM  
 SYR By: dsp  
 Z:\BL-Vault\102\18217AD2-1C71-4823-8927-99D5C4054147\0\1365000-1365999\1365595\1365595\1990.001.001 County Maps (ID 1365595).dwg



**Barton**  
**oguidice, D.P.C.**

Date  
 JULY, 2018

Scale  
 NOT TO SCALE

CALVERT COUNTY DEPARTMENT OF PUBLIC WORKS  
 TEN YEAR COMPREHENSIVE SOLID WASTE  
 MANAGEMENT PLAN

**PERMITTED SOLID WASTE  
 PROCESSING & DISPOSAL FACILITIES**

CALVERT COUNTY, MARYLAND

Figure Number  
**3-2**

Project Number  
 1990.001.001

**(This Page Intentionally Left Blank)**

**Regulatory Topic Summary**  
**COMAR Title 26.03.03.03(E)**

**Chapter 4 – Assessment of Solid Waste Management Systems**

*“Chapter 4 shall contain:*

- 1. Chapter four shall contain an assessment (using a narrative description, maps, charts, and graphs as appropriate) of the county's needs to alter, extend, modify, or add to existing solid waste disposal systems during the next ten years.*
- 2. The assessment above shall use, when appropriate, the background information contained in chapters one, two, and three.*
- 3. The assessment shall consider the constraints imposed upon the establishment of solid waste acceptance facilities by:*
  - a. Topography;*
  - b. Soil types and their characteristics;*
  - c. Geologic conditions;*
  - d. Location;*
  - e. Use and depth of aquifers;*
  - f. Location of wetlands;*
  - g. Location of surface water sources and their flood plains and watersheds;*
  - h. Existing water quality conditions;*
  - i. Incompatible land use;*
  - j. Planned long-term growth patterns;*
  - k. Federal, State and local laws and areas of critical State concern (as designated by the Department of State Planning).*
- 4. The assessment shall evaluate:*
  - a. The use of source separation and source reduction programs to reduce the quantities of solid wastes which shall be collected for disposal;*
  - b. Resource recovery options to reduce land disposal capacity needs;*
  - c. Consumer education programs, and cooperation with appropriate suppliers for the purchase of recycled products to encourage, and help create a market for resource recovery and source separation programs;*
  - d. The need for disposal capacity for asbestos;*
  - e. Programs and procedures needed to respond to the unplanned emergency spillage or leaking of hazardous wastes within the county; and*
  - f. Whether existing local master plans and zoning regulations provide for the appropriate siting, operation, or both, of solid waste management systems or facilities.”*

## CHAPTER FOUR

### ASSESSMENT OF COUNTY NEEDS

#### 4.1 COLLECTION AND RECYCLING SYSTEMS

While the current systems of solid waste and recyclables collection in the County has been adequate to meet the needs of County residents and businesses, with the significant growth in population and increased tourist traffic, there are days when some of the County's Solid Waste Convenience Centers are overburdened. Approximately 55% of the estimated residential waste generated in the County is currently received at these Convenience Centers.

##### 4.1.1 Residential Collection and Recycling

Currently, residents of Calvert County are served by several possible residential waste and recycling collection systems. Residents may deliver solid waste and recyclables to one of the County's staffed Convenience Centers that include recycling drop-off containers. Alternatively, residents may arrange for collection on a subscription basis with one of several private haulers that provide solid waste and (in some cases) recycling collection services.

The staffed Convenience Center and recycling drop-off system is a convenient, sanitary, cost-effective way to handle the collection and transportation of residential solid waste and recyclables to central disposal and processing areas. Drop-off recycling capacity and used oil, oil filters and antifreeze collection facilities exist at all Convenience Centers, including the Appeal Municipal Landfill. It is anticipated that the staffed Convenience Centers/recycling site system will be continued to handle a majority of the residential waste and recyclables collection needs of the County, which will be augmented with curbside collection.

The County is in the process of updating and making improvements to a number of its Convenience Centers.

- a. Construction at the Mt. Hope Convenience Center was completed in 2017. Improvements included relocation of the existing entrance to the site and the addition of a second compactor. The configuration of the entire site was modified to improve the safety, improved traffic flow and ease of the site.
- b. Construction at the Appeal Convenience Center was completed in June of 2018. Improvements included relocation of the convenience center to the front of the facility

- and expansion of the convenience center to allow for greater residential service, and better traffic flow.
- c. The Lusby Convenience Center ceased operation in June 2018, as residents are now directed to use the newly designed and constructed Appeal Convenience Center.
  - d. Improvements to the Barstow Convenience Center are planned for FY 2019. The project includes a facility redesign, and the replacement of the existing single compactor with two new below grade MSW compactors. Two additional below grade compactors will also be added for recycling purposes.
  - e. In FY 2019, DPW will relocate the existing outbound scale and place a pre-fabricated building between the inbound and outbound scale. This will improve customer service and eliminate the need for a tube transfer system. The outbound traffic pattern will be re-aligned to improve traffic flow.
  - f. The construction of an expanded Appeal Transfer Station is scheduled for FY 2020. The project will add the ability to process recycling at the Transfer Station within a covered area, and provide Calvert County flexibility when negotiating future refuse hauling contracts.

The County will continue to monitor and evaluate the residential waste and recycling collection system to determine how the County can improve the efficiency and cost-effectiveness of the collection system, reduce adverse environmental impacts, and elevate the recycling rate.

#### **4.1.2 Commercial, Institutional, and Industrial Collection and Recycling**

Businesses, institutions, and industrial generators in Calvert County are largely served by one of two waste collection scenarios: (1) contract with a private hauler; or (2) self-haul to the Appeal Transfer Station or another facility out-of-County. There are several private haulers with sufficient equipment to serve the County, and this collection system is deemed to be adequate to handle the waste collection needs of Calvert County's commercial / industrial / institutional sector during the next ten year period.

Similarly, recycling opportunities are available for Calvert County businesses, industries, and institutions through private collection arrangements or self-haul to a County or out-of-County recycling center. The County will continue to monitor the recycling collection needs of this sector and determine if additional incentives are needed to encourage the County's institutional and private sector entities to maximize waste reduction and recycling. Among

the initiatives that may be considered are: (1) mandatory reporting requirements; (2) voluntary or mandatory separation requirements; and (3) increased technical assistance and outreach to generators and haulers.

#### 4.2 PROCESSING/DISPOSAL SYSTEMS

The solid waste disposal needs of Calvert County will require evaluation during the succeeding ten year planning period. The current contract with WM for transfer and disposal expires in February of 2022, anticipated to be approximately 4 years into the succeeding ten year planning period. As part of this SWMP update, a feasibility study is discussed in detail in Chapter 5 that will evaluate the options available to the County to either contract with a private entity for continued transfer and disposal services or the potential to own and/or operate a new transfer station or a combination of transfer station ownership with contracted disposal services. The feasibility study will evaluate these options and the ability to cost effectively manage the County generated waste over the remaining ten year planning period and beyond. Although the in-County management of waste may change during the succeeding ten year planning period, the King George Landfill, the disposal location in Virginia operated by WM has permitted capacity for the County's waste extending beyond the succeeding ten year planning period. As reported to the Virginia Department of Environmental Quality, the King George Landfill received over 1.3 million tons of solid waste in 2016, and at the end of 2016, it had a remaining permitted capacity of 7,548,000 tons. Additionally, under the current contract, WM has an obligation to provide alternative disposal if King George Landfill is not available due to no fault of Calvert County, and WM owns and operates several other large megafills in Virginia. As backup, the existing Appeal Municipal Landfill has capacity, if needed, to serve the County's projected MSW disposal needs through at least 2027 if no waste were transferred through the Appeal Transfer Station.

Calvert County will continue to monitor the need for additional processing or disposal capacity in the County for special waste stream items. It is expected that any additional processing or disposal capacity for special waste streams will be developed by the private sector, in accordance with all applicable Federal, State, and local laws and regulations. The County will review the need for additional facilities and the appropriateness of any proposed private facilities during the capital improvement plan process, and as required through permitting and zoning applications.

### 4.3 ESTABLISHMENT OF SOLID WASTE FACILITIES

Compliance with the County SWMP and the Zoning Ordinance is required in establishing a new collection or disposal facility or location. According to the Zoning Ordinance, landfills and solid waste collection sites are only permitted in certain zoning districts. Landfill disposal areas and collection sites are not permitted in areas where there are serious environmental constraints such as wetlands, high-water table conditions, tidal flood plains and the County Critical Area.

When a tentative site has been chosen that meets the criteria of compatible land use and is in accordance with the County Zoning Ordinance and SWMP, a detailed site investigation is necessary to determine if it is acceptable in terms of meeting adopted State criteria to protect the environment. Calvert County will continue to follow State guidelines and will implement regulatory requirements as imposed to operate sanitary and environmentally safe disposal facilities.

Calvert County, in conjunction with current State permitting reviews, has determined a review of the Solid Waste Ordinance and Zoning Ordinance shall be completed, at a minimum, to provide application requirements for those facilities that want to establish a landfill and/or transfer station facility in Calvert County. Once the application requirements are established, they will be incorporated into this Section of the SWMP.

The following is a summary of the recommended updates to the Local Ordinances and Plans:

- No private, for profit or non-profit entity shall develop or own a solid waste landfill or solid waste transfer station for use by others within the boundaries of Calvert County.
- No private, for profit or non-profit entity shall operate a solid waste landfill or transfer station within the boundaries of Calvert County for use by others except under a contract issued and awarded by the BOCC.

Key physical conditions and constraints in the County must be considered in evaluating sites for future solid waste facilities are described below.

#### 4.3.1 Topography

The topography of Calvert County is variable and rugged. An upland plain runs generally in a northwest - southwest direction and forms the central spine of the County. This ridge has a slope upward from the Solomons area (approximately 180 feet above sea level). A few flat-

topped narrow areas in the upland remain as the only remnants of the original plain which erosion has not yet destroyed. On the Chesapeake Bay (east) side of the County, the upland terminates in high Cliffs of clay, sand, and gravel rising from the water's edge to a maximum of approximately 125-137 feet in height. All streams in this area have eroded deep ravines in the Cliffs line. On the west, or Patuxent River Boundary, the upland areas slope toward the river in several long narrow divides. Along most of the Patuxent River there is a level terrace commonly called "bottom land" that varies in width and elevation. This "bottom land" is widest in the vicinity of Solomons Island and at the mouth of Hunting Creek. The elevation here varies from approximately ten to 40 feet.

#### 4.3.2 Soils

Southern Maryland is wholly underlain by unconsolidated sediments. The distribution of the Beltsville, soils which form three associations in Southern Maryland, approximates that of the Upland Deposits. These soils are characterized by a fragipan or "hardpan" 16 to 25 inches below the surface, essentially a dense compact subsoil which inhibits root penetration and water movement. Consequently, the Beltsville and associated soils are poorly adapted for agriculture. Westphalia soils are closely associated with outcropping Chesapeake Group sediments. As such, they blanket most of Calvert County as well as the eastern portions of Prince George's, Charles, and St. Mary's Counties – areas where the Upland Deposits are much dissected, thin, or absent, exposing the underlying Miocene rocks. Such soils are generally deep, well drained, and admirably suited to agriculture.

Probably the best correspondence among geology, topography, and soils is the case of the Othello soil association which is essentially confined to the lowland flats bordering the Potomac and Patuxent Rivers. Othello soils have generally developed on the fine-grained upper member of the Lowland Deposits. Due to the lithology and low elevation, surface drainage is relatively slow and water tables are elevated during much of the year. With adequate artificial drainage, soils of the Othello association are agriculturally useful.

The final association in Southern Maryland, composed of the Pope and related soils, is represented solely by the Bibb series – light-colored, poorly-drained soils developed on the alluvium flooring the larger stream valleys.

Those seeking more detailed soil mapping or statistical information on soil types should consult Soil Survey, Calvert County, Maryland, by U.S. Department of Agriculture Soil

Conservation Service and the Maryland Agricultural Experiment Station, U.S. Government Printing Office, Washington, D.C., July 1971 issue.

### 4.3.3 Geology

Southern Maryland is composed wholly of typically unconsolidated sedimentary deposits ranging in age from Early Cretaceous to Late Pleistocene. Bedding strikes generally northeast southwest and dips southeast at very low angles, mostly much less than 1°. The gross outcrop pattern is thus a succession of roughly arcuate bands which become younger to the southeast. The exceptions are the Plio-Pleistocene alluvial deposits, i.e. Upland and Lowland deposits, which are nearly flat-lying and uniformly blanket all of the older rocks.

Structurally, Southern Maryland lies very nearly on the axis of the Chesapeake-Delaware Embayment—a shallow open-ended east-plunging basin in the basement surface. Most of the Embayment fill is Cretaceous sediment, several thousand feet in thickness. Beneath Southern Maryland, only about 25% of the sediment column is Tertiary-Quaternary. Broadly viewed, stratigraphic units within the Embayment are slightly tilted planar sheets which thicken southeastward; in detail, however, minor structures in the form of broad shallow folds, expressed as strike rotations and local dip reversals, are not uncommon. An example of the latter is the Brandywine structure—an elongate domal warp centered in southern Prince George's County which is thought to involve all of the Coastal Plain rocks, at least through the Lower Cretaceous.

The oldest rock outcroppings in the survey area (Cretaceous) are confined to the northwestern portion of the region. Two units, the Patapsco and Monmouth Formations, totaling about 50 feet of exposed section, are represented. The Early Cretaceous Patapsco Formation, of which only the uppermost few tens of feet are exposed, is primarily a tough silty clay mottled in varying shades of red and gray. Minor amounts of yellowish argillaceous sand are interbedded with the clay. In contrast, the overlying Monmouth Formation consists of dark variably glauconitic fine sand and silt with a thin basal quartzose gravel. Immediately southeast of the Cretaceous rocks is a broad belt of Paleocene-Eocene sediments, mostly greensands, making up the Aquia and Nanjemoy Formations and the Marlboro Clay. These three units have an aggregate thickness of about 300 feet in outcrop. The Aquia and Nanjemoy Formations are similar dark greenish gray glauconitic sands separated by 20 to 30 feet of pale-reddish to silvery Marlboro Clay. Overlying the

Nanjemoy Formation, and in fact making up the bedrock over most of the Southern Maryland peninsula, is the Chesapeake Group nearly 300 feet of Miocene fine-grained sand, silt, and clay. Of the component formations of the Group, the Calvert is the thickest at 150 to 200 feet, the St. Mary's of intermediate thickness at about 80 feet, and the Choptank least thick at about 55 feet. Lithologically, the three units are somewhat similar, encompassing greenish to bluish-gray, fine argillaceous sand and silt; dark-gray clay; and highly-fossiliferous, fine to medium sand. The remaining sediments in Southern Maryland-Pleistocene sand, gravel, and subordinate silt-clay-constitute a thin veneer spread over the truncated edges of the older Tertiary and Cretaceous rocks.

#### 4.3.4 Location

Generally, assessment of location is performed upon siting a specific solid waste management acceptance facility. Consideration is also given to the remaining capacity of existing landfills in the County and region, the need for local versus a regional facility, site accessibility, screening from adjacent properties, the amount of material expected to be generated in the service area, the maximum height and depth to which materials can be placed, the rate of daily compaction and the period of time the site may remain in operation, among other factors.

#### 4.3.5 Aquifers and Ground Water Quality

Ground water is Calvert County's primary water source and is readily obtainable in sufficient quantities to supply current private and commercial requirements. Recent aquifer studies indicate that sufficient ground water should be available for County needs beyond the year 2030.

Calvert County is situated over a favorable geological formation of groundwater resources. Five major aquifers (Piney Point, Nanjemoy, Aquia, Magothy, and Lower Patapsco) supply nearly all of the County's potable water. In the central region of the County, these aquifers reside 150-250 (Nanjemoy), 400-500 (Aquia), 650-700 (Magothy), and 1200-1400 (Lower Patapsco) feet below sea level. The Piney Point aquifer develops further south in the County and around the Calvert Cliffs Nuclear Power Plant, it resides at about 150-300 feet below sea level. At this location, the Nanjemoy and Piney Point formations are hydrologically connected and difficult to distinguish (DNR, 1987).

Lower Cretaceous rocks underlying the County are another possible source of water for deep wells. Data concerning ground water resources of the County is contained in Maryland Geological Survey Basic Data Report No. 4 and USGS Hydrologic Atlas No. HA-365. The Maryland DSP Geology, Aquifers and Minerals Technical Report, dated December 1973 also contains useful analysis and descriptions of major geologic formations in the County.

#### *4.3.5.1 Magothy Aquifer*

A study of the Magothy aquifer was completed by the Maryland Geological Survey in 1977. The report indicates that the Magothy is a major ground water source for the northern two-thirds of the County. Quality is generally good, although mineral traces have been found at some locations.

#### *4.3.5.2 Piney Point Aquifer*

A study of the Piney Point aquifer was made by the Maryland Geological Survey. Basic field data was obtained from a review of existing well records, supplemented by a series of new test borings. A digital simulation of the aquifer model was prepared which provides data on the productivity of the Piney Point aquifer in Calvert County. Information currently available indicates that the Piney Point Formation is a major aquifer in Calvert County.

The formation consists of glauconitic medium to coarse grained sand and interspersed shell beds from ten to more than 100 feet thick, but generally only 50 to 60 feet thick. The Piney Point Formation has no known surface out-crop. The maximum altitude of its known occurrence is about 80 feet below sea level at a point along the Patuxent River. Locally the sands of the Piney Point Formation appear to be hydrologically connected with the sands of the underlying Nanjemoy Formation; therefore, the two formations may function as a single aquifer.

The yields of wells range from less than ten to about 1,200 GPM. The Piney Point Formation is a source of water for the Patuxent NAS and hundreds of domestic wells throughout the area. The chemical quality of the water is good and is relatively uniform, with water treatment seldom required.

#### *4.3.5.3 Aquia Aquifer*

The Aquia Aquifer, which underlies the Piney Point, is a more productive ground water source than the Piney Point. It supports the large municipal and industrial systems in

Calvert and St. Mary's Counties. It is believed that an important source of recharge for the Aquia is downward leakage of ground water from the Piney Point.

#### 4.3.5.4 Lower Patapsco

The Lower Patapsco aquifer is an important source of water supply on Maryland's western shore in Calvert County. This aquifer system is present throughout the Maryland Coastal Plain; however, correlation of the unit on the Delmarva Peninsula is problematic given the sparse borehole control. The altitude of the top of the aquifer system ranges from about 100 feet above sea level near its outcrop to more than 2,900 feet below sea level near Ocean City. The total thickness of the Lower Patapsco aquifer system along a line trending approximately parallel to strike from southern Maryland to the upper Eastern Shore ranges from about 250 to 350 feet. The 2008 withdrawal data showed the yields of the well located in southern Calvert County were less than 10,000 GPD.

Ground water usage in Calvert County is confined mainly to residential and small commercial units. Exceptions are the industrial demands of the Calvert Cliffs Nuclear Power Plant and the Cove Point LNG Plant. To date, the water reserve of the various aquifers has been more than sufficient to meet the daily requirements of the County. Specific capacities (gpm/ft) of the two major formations (Nanjemoy and Aquia Greensand) range from 0.6 in the north to 2.0 in the south. In the extreme southern tip of the County, specific capacity may range up to 5.0.

#### 4.3.6 Wetlands

Wetlands are identified by notation on maps of the National Wetlands Inventory and by location of hydric soils in the Soil Survey, which either follow criteria for hydric soils or are presented in the National Hydric Soil List. Accordingly, wetlands are located in narrow strips along most streams and rivers in the County, around ponds, lakes, estuaries, and in extensive areas of the lowland flats along the Chesapeake Bay. Landfills generally cannot and shall not be developed in or near wetlands.

#### 4.3.7 Surface Water Sources, Flood Plains, Watersheds and Water Quality

In Calvert County there is only one surface water impoundment of significant size, which is located in the Chesapeake Ranch Estates. This impoundment extends for a length of

650 feet and is used for recreational purposes only; the development relies on ground water for its potable water supply. The specifications for this reservoir are as follows:

Flood plains normally border the lower reaches of most streams and border virtually all marine and estuarine shorelines. The 100-year flood plain generally coincides with or is part of the Chesapeake Bay Critical Area in the County. Solid waste facilities shall not be located at or near surface water sources and flood plains and caution shall be applied within watersheds.

#### **4.3.8 Land Uses and Planning**

The SWMP addresses current and planned land uses in the County. An environmental impact analysis is conducted on proposed land uses within the County. These address the Chesapeake Bay Critical Area Protection Act, the County Critical Area Reforestation Program that developers can take advantage of, Floodplain Management in Calvert County, as well as the Forest Conservation Act and Regulations.

Areas that preclude development of landfills and solid waste facilities include: Agricultural Preservation Districts, Historic Preservation Districts; the Critical Area; recorded open space, power transmission lines, utility right-of-ways, and RC, MC, and EC Zoning Districts.

#### **4.3.9 Planned Long-term Growth Patterns**

The SWMP for Calvert County and the Calvert County Zoning Ordinance are written to ensure that solid waste facilities are located in suitable areas to avoid adverse impacts on adjacent land uses and to ensure compatibility with long term growth patterns. Code requirements further define specific site development requirements, such as setbacks and buffers, and operational requirements, such as vehicle traffic controls, established to minimize impacts on neighboring development. Applicable code/zoning regulations are discussed further in Chapter 2 of this SWMP.

#### **4.3.10 Areas of Critical State Concern**

Areas of critical concern relate to laws at the various levels that restrict or preclude certain types of development on designated acreage. Also, areas of critical State concern are areas designated by the Maryland Department of State Planning for restricted or no development.

#### **4.4 ESTABLISHMENT OF RECYCLING AND/OR PROCESSING FACILITIES**

Calvert County, in conjunction with current State permitting reviews, has determined a review of the Solid Waste Ordinance and Zoning Ordinance shall be completed, at a minimum, to provide application requirements for those facilities that have established or want to establish a recycling and/or processing facility in Calvert County. Once the application requirements are established, they will be incorporated into this Section of the SWMP.

The following is a summary of the recommended updates to the Local Ordinances and Plans:

- An application will be required to be submitted to the DPW for review and approval. Specific application requirements are under development. Conformance with the Comprehensive SWMP will be required.
- Facilities shall meet minimum recycling rates annually.
- Reporting requirements to the Calvert County SWD will be established.
- A copy of the State Tonnage Report or the County Recycling Tonnage Report shall be submitted annually to the Calvert County SWD, in conformance with reporting requirements.

#### **4.5 ASSESSMENT OF SPECIAL CONCERNS**

The State regulations that outline and detail development of this SWMP, request an assessment and evaluation of five areas which have not been adequately addressed in the past, including: source separation and source reduction programs; resource recovery options; public education programs to reduce and recover resources, when possible; programs and procedures to respond to emergency spillage or leaking of hazardous wastes; and disposal capacity for asbestos. Each of these areas is addressed in the sections that follow.

#### 4.5.1 Source Separation and Waste Reduction

Source reduction, or waste minimization, is considered to be a very important element of the County's waste management program, and a proactive rather than a reactive waste management strategy. Waste reduction activities typically have three aspects: (1) those aimed at consumers; (2) those directed at government, commercial and institutional establishments; and (3) those practices geared toward industry. The techniques of waste reduction range from educating citizens about considering environmentally sound packaging when making purchase choices to governmental procurement program changes and changes in manufacturing processes to minimize waste and increase recyclability of products. The County plans to focus on these areas during the succeeding ten year planning period. Calvert County is committed to meeting or exceeding the recycling goals established for the County by the MRA. The County's recycling program includes residential recycling at Convenience Centers, diversion of vehicle tires from municipal wastes, commercial recovery of cardboard, textiles and mixed office paper from selected facilities, white goods and scrap metal recovery, paper diversion from County schools, and wood waste, brush and yard waste processing (at the Appeal Municipal Landfill and private sites in the County). The County has in place a recovery program for magazines and other glossy paper. Further, there are privately contracted curbside recyclables collection programs established in selected subdivisions, and these are expected to increase in the future.

The County promotes source reduction through education efforts targeted at school-aged children and the general public in the County. The County plans to continue its existing recycling activities, while evaluating ways to increase source reduction and source separation initiatives.

Among the strategies the County intends to use to increase source reduction and recycling are:

- Posting of information on the County's website to inform residents of new or enhanced recycling programs being initiated in the County;
- Technical assistance programs for County haulers and businesses to promote waste reduction techniques, recycling, the entrepreneurial opportunities available in the recycling field, and other recycling and source reduction considerations;
- Increased public education to promote source reduction and source separation behaviors among residential, commercial, and institutional generators in the County by

hosting special presentations in schools and community groups, presence at community events, such as expos, trade shows and the Calvert County Fair, posting of source reduction material on the County website and mass mailing through the County utility or property tax bills;

- Working with other counties in the Southern Maryland region to evaluate handling, disposal and recycling strategies for hard to manage wastes generated in the County; and
- Encourage private entities within Calvert County who operate as a recycling facility/center to meet specified recycling percentages.

Based on the total amount of MRA waste (eligible waste) from residential, commercial and County sources disposed of at the Appeal Transfer Station and Appeal Municipal Landfill in 2016 and the reported 2016 MRA recycling quantities [see **Table 3-1**], it was calculated that the County achieved a 26.01% recycling rate in 2016. This rate exceeds the current requirement of 20%, which was to be achieved by 2015. The proposed programs, discussed in more detail in Chapter 5, will encourage residents and businesses to continue to increase recycling with a goal of working towards a 35% recycling goal by 2028. Because the County has implemented additional yard and wood waste recovery, mixed office paper recovery from schools, magazine and glossy paper recovery, and an E-cycling program, it is reasonable to expect that the County will continue to improve on its recycling goal. In addition, increased efforts on the part of County staff to document commercial recycling activities are expected to show greater recycling diversion in the commercial sector than had been reported in previous years.

#### 4.5.2 Feasibility of Resource Recovery

Due to the rural nature and relatively lower volumes of solid waste generated in Calvert County as compared to the larger, highly populated metropolitan counties in the Baltimore-Washington area, it has not been considered feasible to implement resource recovery. Indeed, the option of implementing resource recovery via WTE in the County has been studied in detail in a feasibility report issued in 1990, with findings and recommendations regarding this option.<sup>1</sup> Report recommendations indicated that the economics of a WTE project, in addition to various constraints to this development in the Tri-County Region (and thus, Calvert

---

<sup>1</sup>Tri-County WTE Feasibility Study, Phase II. Gershman, Brickner & Bratton, Inc., July 17, 1990.

County), limit the viability of this option. While that report was developed nearly 30 years ago, these conditions, viewed as limitations, still exist, and a County WTE facility is not deemed a viable option at the present time. However, the County may evaluate a regional WTE facility. Moreover, since that time, the County has entered into a long-term transfer and disposal contract with WM, and is committed under that contract through 2022.

Due to the high capital and operating costs of a WTE plant; the market, institutional and political constraints that were identified in the feasibility study; insufficient quantities of County generated solid waste; and the County's existing disposal contract with WM, it is not likely that this will be a feasible option during the succeeding ten year planning period.

#### **4.5.3 Public Education**

Calvert County is committed to educating residents and businesses about proper waste handling, recycling, and disposal. In addition, whenever possible, messages to promote source reduction are included in solid waste and recycling programs, presentations, and publications.

The County's education and promotion program for waste reduction is geared toward motivating changes in the volume of waste disposed through increasing citizen awareness of the need for and opportunities to minimize waste generation. Education is directed toward reducing the reliance of both residential and commercial/institutional consumers on disposable products, raising public awareness of excessive packaging and packaging recyclability/reusability issues, and promoting "buy recycled" and general waste consciousness.

County staff have maintained a high profile since the implementation of the County recycling program. Signs and banners at each of the Convenience Centers announce recycling opportunities. Residents are encouraged to visit the County website for a list of acceptable recyclable material prior to arriving at the Convenience Center. The County has worked with local media to encourage coverage of solid waste and recycling awareness, and County staff is frequently called upon to make recycling presentations to schools, community groups, and civic organizations. In fact, because of the effectiveness of County outreach efforts, County staff have been asked to make presentations or be present at community events, such as expos, Calvert County Fair and Citizens Academy, and at schools in neighboring counties. Brochures and flyers explaining the materials accepted in the County's recycling program,

delivery specifications, and other preparation requirements have been developed periodically and are updated as needed. The information contained on the County's website is continuously monitored and revised to provide current information and new recycling information. The website can be found here: <http://www.co.cal.md.us/index.aspx?nid=361>. Additionally, the County utilized several social media outlets, such as Facebook, to reach residents regarding recycling information.

The existing levels of public education will continue in future years, expanding as the need for additional promotion and education arises. Among the educational programs that the County will promote are:

- Backyard composting and "grasscycling";
- Waste reduction and "smart shopping" to reduce packaging waste and reduce the toxicity of the waste stream;
- Establish work or study groups, or "think tanks", with other jurisdictions and solid waste partners, to explore better and more cost effective ways to deliver recycling services;
- Waste reduction and recycling with the business community through seminars, expos, community events, workshops, direct mailing or other appropriate avenues;
- Regional strategies to improve the cost-effectiveness of outreach efforts and promote regional approaches to solid waste and recycling;
- Countywide mercury recovery program; and
- Electronics recycling program.

#### 4.5.4 Asbestos

Asbestos is not projected to be a major waste type needing large quantities of landfill capacity during the succeeding ten year planning period. This is largely due to the limited number of old buildings in the County containing asbestos. The number of new schools, government and commercial buildings, as well as new residential dwellings, built without asbestos materials have rendered this as having minimal impact.

#### 4.5.5 Emergency Spillage or Leakage of Hazardous or Radioactive Waste

##### 4.5.5.1 Hazardous Waste

The spillage or leakage of hazardous wastes within the County falls under the jurisdiction of the Calvert County Hazardous materials Response Team, MDE, and appropriate Federal agencies which regulate certain industrial hazardous substances.

Aside from the high level radioactive wastes produced at the Calvert Cliffs Nuclear Power Plant, there is no significant generation of hazardous waste in the County. The other industry that generates Hazardous Materials is the Dominion Liquefied Natural Gas Plant in Lusby. These materials are generated through the conversion of Natural gas to LNG. Dominion in conjunction with the Emergency Management Division have developed a Hazardous Materials Response Plan for any incident that might occur at the facility. If a Hazardous Materials Incident does occur in the county the Calvert County EOP in conjunction with the county's Hazardous Materials Response plan will be implemented.

The EOP was endorsed and promulgated by the Calvert County BOCC on July 16, 1991. This plan is reviewed annually and updated as necessary. The EOP addresses a wide range of natural and technological hazards within the County and contains procedures, organizations and responsibilities involved in the response and recovery phases of major emergencies and disasters, with flexibility sufficient to address any type of disaster which may occur.

The Hazardous Materials Response Plan will be implemented in the event of any hazardous materials incidents. The County has many businesses and industries that both store and create hazardous materials. These businesses are required to adhere to the Tier 2 reporting requirements as outlined in the Community Right to Know Act. These reports are accessible by the CCHMRT, Emergency Management staff and all Fire Departments in the county.

However, if a spill or leakage were to occur, the EOP will be implemented. In general, Calvert Control (telephone 911) will be notified, the Emergency Operations Center will be activated, and one or more of six fire companies located in the County, which are trained in hazmat awareness and Operations along with the CCHMRT, will respond to initially mitigate the situation. Concurrently, the County Sheriff and Maryland State Police will provide traffic control, personnel evacuation, and other services, if required. The first agency to arrive at the scene will begin to gather information from witnesses, transportation drivers, plant manager, and others.

The emergency response team from the MDE will be notified of the incident and respond to assist the CCHMRT. These teams will develop a Hazardous response plan for the incident and mitigate and contain the spill/release. The responsible party of the leak or spill will then be required to contract with an approved hazardous materials clean-up company to clean-up all hazardous materials and dispose of following all state and federal guidelines. MDE will oversee this process and ensure that all state and federal regulations are followed. If the responsible party is unable to or cannot be determined MDE will assume the responsibility for ensuring clean-up.

Depending on the magnitude or nature of the spill or leakage, personnel from the County SWD may pick up and store the material at the Appeal Municipal Landfill. Removal for ultimate disposal will be contracted to any of the certified haulers of CHS found on the list put out by MDE. If the nature of material precludes handling by the SWD personnel, the removal and disposal will immediately be performed by a certified contractor such as ACV Enviro (Clean Venture), ACE Environmental, or MSRC. A listing of cleanup companies may be found at [www.cleanupoil.com/Maryland](http://www.cleanupoil.com/Maryland).

The Standard Operating Guidelines for responding to a hazardous materials incident are in the Hazardous Materials response plan for the County.

#### 4.5.5.2 Radioactive Waste

Emergency operations for public utility and industry plants have been described in their respective response plans. The plans are required to describe the protocol, procedures, participating organizations and responsibilities involved in reacting to major emergencies or disasters at the plant. In the event of an emergency in which radioactive wastes may be generated, the plant will have responsibility to dispose of the material appropriately.

This material is not accepted at the Calvert County solid waste facilities.

If emergency services, such as the Fire Department, Haz-Mat Team etc. respond to a spill involving radioactive material, not associated with the Calvert Cliffs Nuclear Power Plant, the emergency services department will instruct the owner to contact a State approved hazardous waste company to properly take possession of the waste and ensure it is properly transported and disposed of at the expense of the owner/transporter of the material. The radioactive material shall never be moved from the location it is generated or spilled, unless by a certified Haz-Mat contractor.

#### **4.5.6 Adequacy of Local Zoning Plan**

As discussed in Chapter 2, Section 2.2 of this Plan, the Calvert County Zoning Ordinance is revised regularly to address the ongoing County needs. While the County wishes to preserve the rural quality of life in Calvert County through a policy of deliberate growth, the needs of residents and businesses for infrastructure and services is regularly evaluated.

It is a recommendation of this SWMP update that the County Zoning Ordinance be reviewed and potentially modified to include recycling percentage requirements for facilities and/or centers that operate as a recycling facility and/or center within Calvert County. This is discussed in greater detail in Chapter 5.

**(This Page Intentionally Left Blank)**

**Regulatory Topic Summary**  
**COMAR Title 26.03.03.03(F)**

**Chapter 5 – Plan of Action**

*“Chapter 5 shall contain:*

- 1. Chapter five shall contain the county's plan of action with respect to all types of solid waste and all phases of solid waste management.*
- 2. The plan of action in §F(1), of this regulation, shall cover at least the succeeding ten year period and, at a minimum, shall:*
  - a. Discuss the solid waste disposal systems and solid waste acceptance facilities, both public and private, which will be in use during the planning period, including proposed systems and facilities;*
  - b. Provide a mechanism for managing each of the waste streams identified in §D(1) of this regulation;*
  - c. Demonstrate, through tables, charts and graphs, that the sizing, staging, and capacity of all systems and facilities in §F(2)(a) and (b), of this regulation, will be adequate for the county's needs during the planning period;*
  - d. Establish schedules for placing new public or private solid waste disposal systems or solid waste acceptance facilities into operation, including a description of necessary actions and their timing, to bring the county's solid waste disposal systems into compliance with the mandates of pertinent federal and State laws, and any permits or orders issued under these laws;*
  - e. Describe provisions and methods for financing existing and proposed solid waste disposal systems, including planning and implementation;*
  - f. Include a projected closure date for each public solid waste acceptance facility which is scheduled to cease operations during the planning period, the projected use of each closed site, and the relationship of that use to the county's comprehensive land use plan; and*
  - g. Discuss changes in programs, plans, regulations, and procedures as a result of the assessment conducted under §E, of this regulation.”*

## CHAPTER 5 PLAN OF ACTION

### 5.0 INTRODUCTION

Chapter 5 demonstrates the County's goal to: maintain well-managed and effective solid waste and recyclable materials management systems in Calvert County. COMAR 26.03.03.03 requires the County to develop a plan of action to sustain its solid waste management and recycling system over the succeeding ten year planning period. This Chapter presents the plan of action for the planning period of 2019 through 2028.

### 5.1 GOAL OF THE COUNTY SOLID WASTE MANAGEMENT PLAN

From the goal to maintain well-managed and effective solid waste and recyclable materials management systems in Calvert County, five supporting objectives were developed. In coordination with the County DPW, B&L developed actions for each objective, which are detailed in Sections 5.1.1 – 5.1.5. Upon review and evaluation, DPW designated certain actions as priority actions that will be addressed during the succeeding ten year planning period, which are detailed in Sections 5.2 – 5.7.

#### 5.1.1 Protect public health and safety and preserve the natural environment.

- a. Maintain compliance with all applicable County, State (MDE) and federal regulations.
- b. Ensure conformity with the MDE permit conditions for State-permitted solid waste facilities.
- c. Enact a two-year review initiative to develop a matrix to update the Plan of Action.
- d. Follow the current SWMP, reviewing this plan every three years and update if necessary.
- e. Conserve land by minimizing land use for waste disposal through the promotion of solid waste diversion efforts including recycling, waste reduction and reuse of materials as well as through continuing the transfer of solid waste out of County.

#### 5.1.2 Implement and maintain programs that promote source reduction, material reuse, and recycling over disposal.

- a. Increase promotion and education of recycling, solid waste source reduction and reuse of materials, i.e. an alert system, awards program, website, community presence, etc.

- b. Research and implement new ideas for encouraging citizens and businesses to recycle, reduce and reuse materials
  - 1. Develop a community outreach program.
  - 2. Develop a business directory of waste and recycling services offered in areas of Calvert County.
  - 3. Research and potentially implement a mandatory recycling reporting program for businesses.
- c. Develop a C&D recycling and diversion program and evaluate potential incentives, such as asphalt shingles, aluminum siding, etc.
- d. Plan and implement programs to achieve the 30% recycling rate established by the County by December 31, 2028.
- e. Research and potentially implement PAYT programs and other means of waste diversion.
- f. Explore mandatory curbside recyclables collection, if economically feasible.
- g. Explore and potentially implement food waste composting.
- h. Modify the County Zoning Ordinance (as described in Chapter 2) to require recycling facilities/centers to recycle and report a minimum-specified percentage of material accepted.
- i. Continue to review existing recycling programs for improvement and explore new recycling markets for opportunities.
- j. Monitor existing recycling contracts to correct for changes in market conditions; and evaluate and implement the most cost-effective delivery of services.

**5.1.3 Ensure cost effective and sustainable MSW and recyclables management services for residential and commercial customers.**

- a. Improve the existing Convenience Center collection system for household wastes and recycling.
  - 1. Explore and potentially implement the use of critical Convenience Centers in times of inclement weather and emergencies.
  - 2. Explore and apply for federal and state grant funding opportunities for critical infrastructure.
- b. Maintain a budget structure that provides the framework to support the solid waste and recycling program as a self-sustaining enterprise.
  - 1. Analyze the management of DPW “no-fee” services to government and non-governmental entities.

2. Develop a true cost analysis for solid waste and recycling services.
3. Based on the true cost analysis, evaluate and revise as necessary, the fees assessed for solid waste and recycling services in the County to ensure adequate funding is available to support DPW programs, such as fluorescent lamps.
- c. Explore the expansion of recyclable materials accepted at the Convenience Centers.
- d. Explore and potentially implement the management of stormwater structure cleanout material and other hard-to-manage wastes.

**5.1.4 Ensure adequate facilities and infrastructure to accommodate current and future residential and commercial MSW and recyclables.**

- a. Design, build and operate safe and efficient facilities for solid waste and recyclables acceptance, processing, and/or disposal.
- b. Conduct regular reviews of existing facilities to ensure continual collection and transfer capacity as the population continues to increase.
- c. Develop a feasibility study for the development of a new Transfer Station.
- d. Evaluate, plan and schedule the construction of new public solid waste and recycling facilities according to a six-year capital improvements program. The evaluation shall include, but is not limited to: Sensitive Species Project Review Areas, Wetlands of Special Concern, and Environmental Impact Review.
- e. Provide continual disposal capacity for MSW by encouraging the transfer of solid waste generated by residents, commerce and industry out of Calvert County to ensure future landfill capacity through at least the year 2028.
- f. Explore waste mining at the Appeal Municipal Landfill, if necessary.

**5.1.5 Collectively plan future initiatives, to the greatest extent possible, with internal County Departments and regional County jurisdictions, councils, and other potential partnerships.**

- a. Promote source reduction by County residents, businesses, and institutions.
- b. Explore contracted and/or franchised curbside waste and recyclables collection, where appropriate and cost-effective.
- c. Explore regional solid waste management facilities and transportation (i.e. WTE, transfer station, composting, etc.).
- d. Explore biosolids management and processing.
- e. Explore the potential for electricity generation through the use of solar panels on County owned solid waste facilities.

- f. Explore the feasibility of material reuse programs and facilities.

## **5.2 PRIORITY ACTIONS OVER THE TEN-YEAR PLANNING PERIOD**

DPW is responsible for planning and implementing solid waste management and recycling initiatives, programs and systems in the County. Accordingly, DPW has developed priorities that build upon its successes and provide a roadmap for the succeeding ten year planning period while continuing to protect public health and the environment. These priorities support the visions, goals and objectives of the SWMP that are discussed in Chapter 1 and Section 5.1 above. The five priorities developed from the goals and objectives are as follows:

1. Public health and environmental protection
2. Feasibility study for a new transfer station
3. Explore PAYT programs and other means of waste diversion
4. Explore management of stormwater BMP waste and other hard to manage wastes
5. Maintain a budget structure that provides the framework to support the solid waste and recycling program as a self-sustaining enterprise.

## **5.3 TEN-YEAR PRIORITY ACTION 1**

### **5.3.1 Public Health and Environmental Protection**

As part of providing recycling and solid waste management services, the County recognizes the need to protect public health and the environment. All aspects of material collection, processing and disposal at in-County and out-of-County facilities involve measures to ensure that public health and the environment are safeguarded. These measures may include short-term and long-term planning, contractual arrangements, budget management, public outreach and education, facility operation, and closure and post-closure care monitoring and maintenance. The measures are utilized from the time recyclables and solid waste are placed curbside for collection and/or dropped off at a Convenience Center until their ultimate processing and disposal. These measures are also reviewed for effectiveness to meet the County's goals and objectives, and for efficiency to maximize the conservation of natural resources.

To manage recyclables and solid waste from its customers, the County operates six Convenience Centers, and the Appeal Municipal Landfill. Additionally, residents have access to the Appeal Transfer Station which is currently owned and operated by WM. To

protect public health and the environment, each facility is required to comply with specific regulatory requirements based on the acceptance of materials and its operations. Provided below is an overview of regulatory requirements and compliance for the County's facilities. Residential, commercial, industrial, institutional, CHS, dead animals, bulky or special wastes, vehicle tires, wastewater treatment plant sludges, septage and other wastes will be handled at the facilities listed below:

- Convenience Centers – These facilities do not require a state issued Refuse Disposal Permit.
- Appeal Municipal Landfill – This facility operates under a Refuse Disposal Permit No. 2017-WMF-0531 issued by MDE. An approved Environmental Monitoring Plan exists for groundwater sampling and landfill gas monitoring that specifies the requirements for sampling, analytical parameters, regulatory limits of parameters and reporting requirements. The County Landfill also maintains a Stormwater Pollution Prevention Plan, a Spill Prevention Plan and a secondary scrap tire hauler and collection license.
- Barstow Landfill (closed landfill) – The Barstow Landfill ceased accepting solid waste on March 6, 1993. It has been capped and is monitored by MDE and maintained by the County. An approved Environmental Monitoring Plan exists for groundwater sampling and landfill gas monitoring that specifies the requirements for sampling, analytical parameters, regulatory limits of parameters and reporting requirements.

Post-closure care of the Barstow Landfill is completed in accordance with MDE requirements. A third-part consultant performs the MDE required tests at the Landfill. The Calvert County SWD Chief insures MDE compliance. The groundwater wells on site require semi-annual testing. Gas well testing is performed quarterly. Visual surface inspections are performed weekly. Grass cutting is performed on an as needed basis. The data from these tests are kept at the Appeal Landfill and MDE is sent a copy. This data is available to the public. MDE reviews the data submissions from Calvert County SWD against the required compliance regulations. If a condition were to exist at the Barstow Landfill that did not meet the compliance regulations, MDE will require action by Calvert County SWD to meet compliance.

- Appeal Transfer Station (owned and operated by WM) – The Appeal Transfer Station is permitted through the MDE, Permit No. 2017-WTS-0519. It is currently a private facility owned and operated by WM.

Material collected by the County or its contractors is managed at the Convenience Centers, the Appeal Municipal Landfill, and the Appeal Transfer Station. Other facilities, independent state agencies and contractors that are referenced in this SWMP that provide services to manage County-generated recyclables and solid waste must comply with the specific federal, state and local regulatory requirements for their specific material acceptance, handling, processing or disposal operations.

Land clearing and demolition debris will be handled at the following facilities:

- Howlin Land Clearing Debris Landfill - The facility is permitted by MDE under a refuse disposal permit #2013-WLC-0577. Per the 2016 MDE Solid Waste Tonnage Report submitted by Howlin, no wastes were received in 2016.
- Hance Land Clearing Debris Landfill (a.k.a. T.L.H. Landfill) - The facility is permitted by MDE under a refuse disposal permit #2015-WLC-0252.

NWW such as stumps and tree limbs will be handled at the following facilities:

- A.H. Hatcher, operates a NWWRF at 7185 Sawmill Road in Lusby (Permit 2016-NWW-GP01, AI No. 37478), permitted under the name A & L NWWRF.
- 231 Materials & Recycling Products, LLC operates a NWWRF at 171 Skipjack Road in Prince Frederick (Permit 2016-NWW-GP01, AI No. 131800).

The following mulching sites will be utilized:

- A.H. Hatcher, Inc. NWWRF (Sawmill Road) in Lusby
- Hance Land Clearing Debris Landfill (Solomon' Road) in Prince Frederick
- 231 Farm Center (Skipjack Road) in Prince Frederick

The following processing facilities will be utilized:

- Southern Maryland Recycling and Processing Facility - The facility is permitted by MDE under a refuse disposal permit #2016-WPF-0597.
- Rubble Bee Recycling and Demolition, Inc. in Owings, Maryland
- Super Salvage, Inc. in Prince Frederick, Maryland

The County has a long-term transfer and disposal agreement with WM for the majority of MSW generated in Calvert County. Although the County does not anticipate a need to develop and expand into the second cell available at Appeal Municipal Landfill or explore the development of other publicly owned waste management facilities for LCD, C&D, and NWW that is an option over the ten-year planning period if the need arises. Based on the current

waste generation projections, the facilities listed above are capable of handling the anticipated waste generated in Calvert County. If municipal solid waste were to be disposed of at the Appeal Municipal Landfill instead of transferred out-of-County, the Appeal Municipal Landfill will reach capacity within the ten-year planning period (approximately 2027) without expansion.

Additionally, the SWD vehicles and equipment that is used to transfer solid waste to the WM facility in King George, VA, to MRFs and other recycling facilities is properly registered insured and inspected by the State of Maryland and the Health Department. All drivers are required to have a valid CDL.

### **5.3.2 Management of Commercial, Industrial and Institutional Wastes**

The commercial sector manages the collection, recycling, and disposal activities for commercially generated solid waste and recyclables. Commercial waste sources include waste from businesses, offices and industry. The vast majority of commercial waste generated in the County is collected by private haulers and disposed at a facility of the hauler's choosing. Due to this method, it is possible that commercial waste is being disposed at facilities outside of Calvert County. It is a priority over the succeeding ten year planning period to develop tipping fees and/or contracts that encourage haulers to utilize disposal facilities within the County. Calvert County may consider the concept of hauling contracts with local solid waste haulers, only if needed. Hauling contracts may require haulers that collect and transport waste, and potentially recyclables, to dispose of waste, and potentially recyclables, at a facility located within the County.

The County does not intend to interfere with commercial, institutional and industrial waste and recycling collection over the succeeding ten year planning period. There are sufficient outlets currently located within Calvert County to manage this material. Calvert County intends to continue to encourage the use of in-County facilities for the management and processing of this material. The County will continue to support school recycling and waste collection programs over the succeeding ten year planning period, by providing technical assistance and support. Additionally, Calvert County will continue to ensure that apartment and condominium complexes that meet the requirements of the ABCR program are included in the program, that the requirements of the law are communicated to the apartment and condominium officials, monitor the progress and performance of the program, and update plans and surveys, as needed.

### 5.3.3 Management of Controlled Hazardous Substances

Commercial, industrial and institutional facilities in the County that generate, store, handle, transport and dispose of CHS, including special medical wastes, are regulated by MDE. They maintain responsibility for complying with applicable regulations. The County neither accepts CHS or special medical wastes at any of its facilities nor at its HHW collection events.

### 5.3.4 Management of Other Wastes and Recyclables

The County manages a variety of miscellaneous or special wastes and recyclables. These wastes and recyclable materials are identified below.

- **Bulky Items** – The collection of bulky items will continue to be provided by the County at the Appeal Municipal Landfill as part of the residential drop-off program, and the County will continue to collect bulk metal through the Convenience Centers, as part of the drop-off program. Freon containing appliances will continue to be accepted at the Appeal Municipal Landfill for drop-off. Liquid refrigerants will continue to be removed from white goods prior to shipment to scrap metal recyclers. Additionally, Calvert County SWD offers county residents bulk item pick-up services of up to three items per scheduled pick-up. This service is provided for the collection of indoor furniture and large indoor appliances only.
- **Abandoned Boats** – The County will continue to partner with the State of Maryland to accept abandoned boats picked up from, in, or near Calvert County. The metal boats will be crushed at the landfill, while the wood and fiberglass boats will be broken down and inspected by the landfill staff to ensure they are free of metal and fluids prior to the transfer of the materials to the Transfer Station. If the boat is unable to be handled by the Transfer Station, it is landfilled at the Appeal Municipal Landfill.
- **Vehicle Tires** – Scrap tires will continue to be prohibited for disposal at the Appeal Transfer Station and the Appeal Municipal Landfill. The County will continue to accept vehicle scrap tires at the Appeal Municipal Landfill in accordance with the provisions of the County Recycling Guide. The County currently contracts with Emanuel Tire, Inc. to haul scrap tires from the Appeal Municipal Landfill to a permitted recycling or resource recovery facility.
- **Dead Animals** – The disposal of animal carcasses is largely handled by residents on private property or at the Appeal Municipal Landfill, as the majority are small animals. The County believes deceased pets will continue to be managed at veterinary hospitals

within or adjacent to the County. The Calvert County Highway Maintenance Department is responsible for the collection and disposal of animals found on the streets and highways. Most of these animals are buried along roadsides or delivered to the Appeal Municipal Landfill. Larger animals are only accepted at the Appeal Municipal Landfill by special arrangement. The vast majority of these animals are handled by Valley Proteins, Inc. These methods of handling dead animals will continue during the succeeding ten year planning period.

- **Used Oils and Antifreeze** – Waste oils, cooking oils, and automotive antifreeze will continue to be accepted for recycling at the Convenience Centers. Other private collection sites in the County are expected to continue this service as well.
- **Wastewater Treatment Biosolids, Sludges and Septage** – The DPW Water & Sewerage Division will explore bio-solids handling through a feasibility study with the goal of recycling materials and decreasing the carbon footprint created through hauling these materials.
- **Special Event Recycling** – Special event recycling will continue to be managed by event organizers in coordination with the County. The County will continue to develop SOPs to evaluate County public sites that host or may host special events to determine if they meet the criteria that requires recycling at their events.
- **HHW** – Currently HHW is managed through a contract between Calvert County and MES. MES is responsible for bidding for collection services for this type of material. The HHW material is then collected at two locations within Calvert County, the Appeal Municipal Landfill and the Mt. Hope Community Center, by the awarded bidder. During the ten year planning period, the County plans to evaluate the current locations for HHW collection to determine if there is sufficient space and parking for the HHW events to continue at these locations, if there are other locations within the County, better suited for the HHW collection events, or if the development of a new site for HHW collection events is necessary.
- **Illegal Dumping** – Currently, the County Health Officer is responsible for monitoring and enforcing illegal dumping/disposal regulations in Calvert County. During the ten year planning period, the County may evaluate how illegal dumps are reported, where they are occurring in the County, what can be done to reduce the number of occurrences in the County, etc.
- **Other Wastes Not Managed by the County** – There are other waste materials generated within the County that the County does not directly manage. Some of these materials include:
  - Agricultural Residues – The management of agricultural residues will continue to

be the responsibility of the farming community or the landowner that generated the material. These materials can be returned to the soil in an environmentally sound manner or managed through a nutrient management plan, which are both considered BMPs. The farming community can access services provided by the Soil Commission.

- Soils and other materials contaminated from spills or releases – MDE regulates the disposition of these materials on a case-by-case basis, and with written documented approval by MDE, these materials may be accepted for disposal at the Appeal Municipal Landfill.

The County is committed to providing a spectrum of services to its customers. As the County's programs expand or change, from collection and processing to recovery or disposal, the County's objectives and actions regarding such programs will be reevaluated. These objectives and actions are discussed above and will provide the basis for setting future objectives as well as evaluating future policy decisions.

## 5.4 TEN-YEAR PRIORITY ACTION 2

### 5.4.1 Feasibility Study for a New Transfer Station

The County is responsible for providing adequate recycling and solid waste management services and facilities to meet the present and future needs of its residents and customers. Regional approaches to recycling and solid waste issues can often supplement local efforts and has gained popularity in the United States. The advantages of economies of scale, large scale facilities, the limited number of available industrial use sites, and population growth that is not influenced by municipal boundaries makes regional partnerships for recycling and solid waste services attractive.

The County provides recycling and disposal services for dual stream paper and commingled food and beverage containers and source separated plastic bags and film, textiles and clothing, cooking oil and other recyclables (such as propane tanks, ink cartridges, and batteries) at the County's Convenience Centers and Appeal Municipal Landfill. Some of the Convenience Centers also accept electronics, fluorescent and incandescent lights, as well as scrap metal. Freon appliances, rigid plastics, thermostats and thermometers and yard waste may be dropped off at the Appeal Municipal Landfill. County-generated solid wastes collected from the Convenience Centers are transported to the Appeal Transfer Station and ultimately disposed at the King George County, VA landfill.

The Calvert County DPW has been under contract with WM for the management of Calvert County generated municipal waste at the Appeal Transfer Station, owned and operated by WM through the contract expiration in February 2022. During the succeeding ten year planning period, the County will continue to utilize the Appeal Transfer Station for the processing of waste and recyclables. Calvert County currently owns the land where the Appeal Transfer Station is located. WM leases the land from Calvert County to operate the Transfer Station. WM currently owns and operates the Appeal Transfer Station.

Due to the expiration of the contract within the ten year planning period, the County had developed a priority to conduct a feasibility study to evaluate the Transfer Station options. It is the intent of the County to continue to utilize a Transfer Station for the processing of waste and recyclables and to continue to transport this material out of County for final disposal.

It is believed that the current Transfer Station will require significant upgrades and expansions to continue its use. As part of the feasibility study, the County will investigate the capital costs required to purchase and upgrade the existing Transfer Station, the feasibility of releasing a bid for a private entity to develop, own and operate a new Transfer Station, as well as the feasibility of Calvert County developing a new Transfer Station to be either owned and operated by the County or operated by a private entity.

Due to the length of time necessary to complete the feasibility study and the approaching expiration of the current contract, it is recommended that the Transfer Station feasibility study become a top priority of the succeeding ten year planning period, to be started in Cyr 2019.

Permit modifications to existing facilities require a significant amount of effort, coordination and lead time. The same is true for selecting and locating new waste disposal facilities such as a local or regional landfill, transfer station or WTE facility. It is likely that the acceptance and approval process for such new facilities will take longer than the permit modification process for existing facilities.

The acceptance and approval process for a new solid waste facility, regardless of type, is very complex and consists of several key elements. A general description of these elements is provided below.

- Determination of Need – State and Local governments may require a determination of

need by an applicant. This determination would need to demonstrate that a deficiency exists within an existing solid waste disposal system and that there is not sufficient capacity to meet existing or emergent needs. This process often involves a local government's SWMP.

- Evaluating Technically Feasible Options – A technical review of the County's needs, available options, infrastructure and site requirements, socioeconomic impacts, financial requirements, political ramifications, and other factors are evaluated. Recommendations are made and vetted among the approving agencies.
- Public Involvement, Review and Outreach – The involvement of the public and other interested parties and stakeholders may be initiated during the Determination of Need and Siting processes. Public comment periods and public hearings are typical requirements for locating a new solid waste disposal facility. Public comments are also typically received during a jurisdiction's annual budget process. Public outreach also may occur for the entire process of planning, siting, designing, permitting, constructing and operating a new facility.
- Selection in the Best Interest of County – After an identified need is examined and confirmed, technically feasible and realistic options are listed and developed in concept, and the public has had the opportunity to be involved in the process through education, outreach, and public comment periods, a decision must be made in the interest of the County at-large.
- Siting – The siting process involves a detailed evaluation of a single or multiple potential sites for the potential facility. This evaluation includes, but is not limited to: a general description and basic design of the potential facility; the amounts and types of waste to be disposed; a proposed monitoring program; and an evaluation of facility's proximity and relationship to physical features such as water bodies, parks, roads, water supply systems, endangered or threatened species and their habitats, and historical structures. The siting process also considers local and regional land uses, geology and hydrogeology and the impacts that a facility may cause. Local and regional hydrogeologic investigations and groundwater monitoring may also be included in the siting process.
- Design and Permitting – Following the siting process and selecting a final location, the facility must be designed and permitted in accordance with all federal, state and local solid waste management, environmental and related requirements to protect public health and the environment. All environmental media are considered during the design and permit process including groundwater, surface water, air, soil and stormwater. Detailed design schematics, construction specifications, operational procedures,

monitoring requirements, a plan for constructing and financing the potential facility and measures to ensure its operation, long-term maintenance and potential closure or decommissioning must also be developed.

- Construction – Following design and the receipt of permit approvals, facility construction may begin. Construction would be continuously monitored for compliance with the design and permit documents and to ensure protection of public health and the environment.
- Operation – Upon completion of construction, the facility would begin operations in accordance with the refuse disposal permit. Operations are subject to monitoring and reporting requirements based in law and regulation to protect public health and the environment.

To open a new solid waste processing or disposal facility, the County will have to consider a new waste disposal strategy, obtain BOCC approval, gain public and community acceptance, develop supporting contractual arrangements, and employ qualified and skilled staff. Based on the expiration of the current WM contract for the ownership and operation of the Appeal Transfer Station, it is expected that the County will have to perform this investigation, to some extent, to determine the location of a new Transfer Station, as part of the recommended feasibility study within the succeeding ten year planning period.

## 5.5 TEN-YEAR PRIORITY ACTION 3

### 5.5.1 Explore PAYT Programs and Other Means of Waste Diversion

#### *5.5.1.1 Revisit and Modify Existing Sticker Program*

The County currently has an existing sticker program that has not been used as intended for several years. It is envisioned that the sticker program may be revisited and modified during the succeeding ten year planning period. The sticker program costs may be added into the already established user fee paid by County residents, or it may be a standalone cost to be paid by residents at the time of sticker collection. Typically stickers are issued on an annual basis, they are affixed with the year, may be color coded for year, municipality, etc., may be affixed with the registration or license plate number of the vehicle associated with the account, and often contain the logo or seal of the County. To obtain a sticker, a resident is often required to provide proof of residency with a copy of their paid utility bill, tax bill, renter or lease agreement. The stickers are required to be displayed on a certain part of the vehicle (often the corner of the front windshield).

Attendants at the Convenience Center will be required to check the sticker and the registration/license plate of the vehicle upon the vehicle entering the facility. Vehicles without stickers or expired stickers will not be allowed to enter the facility and may be directed to the Appeal Transfer Station. Often vehicles considered “commercial” are not allowed to access the Convenience Center or obtain a sticker unless documentation may be provided that proves the vehicle is acting in a residential manner. This system will allow the County to better track the use of the Convenience Centers by County residents, as well as require out-of-County residents to pay per use of the Convenience Center. This option may also establish a revenue from waste disposed at the Convenience Centers by out-of-county residents.

#### *5.5.1.2 Pay-As-You-Throw (PAYT)*

The majority of residential waste is disposed of at the Convenience Centers located throughout the County. One option the County may explore over the succeeding ten year planning period is pay as you throw options for residents utilizing the Convenience Centers. PAYT programs charge residents for the collection of municipal solid waste, based on the amount thrown away. For Calvert County residents, it is assumed this will be achieved by offering bags, for purchase, to residents. Residents will be required to use these purchased bags when disposing of MSW at the Convenience Centers. This option may also establish a revenue from waste disposed at the Convenience Centers by out-of-county residents. This method encourages more source separation and reduction of materials.

#### *5.5.1.3 Other Means of Waste Diversion*

The County has focused on developing effective methods of communication and outreach to better educate and share information with residents. These efforts are designed to:

- Educate residents and customers on how to maximize the capture of recyclables through segregation, collection and drop-off, in order to reduce the amount of solid waste that needs to be disposed of in landfills.
- Increase recycling participation.
- Maintain comprehensive and accurate data tracking and reporting.
- Evaluate the delivery of residential curbside collection services and ensure high-quality collection through monitoring contractor performance.

- Ensure the cost-effective management of collected recyclables.
- Manage the level of recycling services to create program-wide standards.

To further encourage citizens and businesses to recycle, reduce and reuse materials, the following programs will be developed over the succeeding ten year planning period:

- A community outreach program – The County is implementing a “Prepare Me Calvert” mobile app for emergency preparedness and information. It will put critical, real-time information at users’ fingertips. Additionally, residents can sign up for Calvert County Alert to receive timely information about various emergency and non-emergency events in the County.
- A business directory of waste and recycling services offered in areas of Calvert County is being considered.
- A construction/demolition debris recycling and diversion payback program – Currently, building permits are obtained by paying a designated Building Excise Tax. A portion of this tax is relinquished to the DPW to support the waste disposal requirements of new development and demolition. During this succeeding ten year planning period, it is recommended that the portion of the Building Excise Tax relinquished to the DPW be increased to establish a payback program. As part of this program, building permit holders will be required to submit waste and recycling receipts on an established timeframe or percentage of development. Building permit holders will be repaid a portion of their initial fees equivalent to their recycling rate. For example, if a building permit holder turns in a waste disposal receipt for 1 ton of material and a recycling receipt for 1 ton of material, they have recycled 50% of the waste generated. They will in turn receive 50% of their initial DPW fee back.
- Modification of Local Ordinances and Plans – To ensure that landfills, transfer stations, recycling and/or processing facilities within the County are conforming to Calvert County requirements, as it pertains to recycling rates, materials accepted, reporting requirements, etc., it is a recommendation that the Local Ordinances and Plans be modified to require entities currently operating or wanting to operate within Calvert County to meet certain requirements, such as recycling a specified percentage of the material accepted on an annual basis and reporting these quantities to the County. A fine or other means of compliance may be proposed as part of the Solid Waste and Recycling

Ordinance revision for facilities that do not meet the specified recycling percentage.

## **5.6 TEN-YEAR PRIORITY ACTION 4**

### **5.6.1 Explore the Management of Stormwater BMP Waste and Other Hard to Manage Waste**

With the development and implementation of more stringent requirements for erosion and sediment control and stormwater management in Maryland, particularly for the protection of the Chesapeake Bay and other watersheds within the State, the County will be exploring potential management options for stormwater BMP cleanout material in the succeeding ten year planning period. The efforts under this priority will include, but are not limited to the following:

- Characterize the type of potential locations with stormwater structures within the County for the cleanout activities (such as parking lots at various public and commercial office building; office complexes and shopping centers; industrial process facilities that handle recyclables, organics, wastes, asphalt, concrete, and other materials; and other high-traffic roadways and facilities).
- Characterize the type of potential stormwater structures within the County for the cleanout activities (such as pipes, culverts, inlets, outlets, forebays, stormceptors, aqua-filters, etc.).
- Characterize the type of potential contributing sources or pollutants that may be found within the stormwater structures that need to be managed within the County for the cleanout activities (such as sediments, leaves and other organics, fragmented stone, trash, oils, and other liquid materials).
- Identify potential measures to collect and maintain data as well as processes to collect, store, pretreat/treat liquids and solids, and disposal of waste materials.

## **5.7 TEN-YEAR PRIORITY ACTION 5**

### **5.7.1 Maintain a Budget Structure that Provides the Framework to Support the Solid Waste and Recycling Program as a Self-Sustaining Enterprise**

Operational costs and capital budgets for the County's recycling and solid waste management programs are funded through an Enterprise Fund. The Solid Waste Enterprise

Fund supports all recycling, waste diversion, and disposal programs. No general tax dollars are contributed to the Solid Waste Enterprise Fund. Revenues are generated from various sources:

- Annual Solid Waste User Fee – Billed fees to County residents for waste and recycling programs. As part of this planning period, this fee will be evaluated by determining the true cost of waste and recycling services offered to residents, as mentioned below. If needed, this fee will be increased to support the true cost of services offered to residents.
- Landfill Disposal Fees – Fees charged for the use of County facilities established in the County Code.
  - Charged to the commercial trash haulers using the County Landfill
  - Charged to any customers delivering waste in a dump truck, flatbed truck, stake body truck, box truck, rental truck/trailer, or double axle trailer
  - Charged to customers delivering certain types of wastes
- True Cost Analysis for Waste and Recyclables Service – During the succeeding ten year planning period, Calvert County will perform a true cost analysis to determine the current costs of waste and recycling programs offered to County residents. This includes, but is not limited to, the e-waste collection program, operation and maintenance of the Convenience Centers, tire recycling, HHW collection programs, management of the Appeal Municipal Landfill, and closure costs associated with the Barstow Landfill. The true cost analysis will determine an overall annual cost to provide waste and recycling services to residents of Calvert County. This overall annual cost may be divided by the number of occupied households in the County to determine a per household user fee. Once determined, the current user fee may be evaluated as compared to the true cost analysis to determine if the user fee requires adjustment.

---

**APPENDIX A  
SUPPLEMENTAL  
INFORMATION**

---

## Special Events Recycling Program

### *Materials and Obligations:*

Before issuing a permit for a special event, the State, County, Municipality, or any other Local Government Unit shall provide to the organizer of the special event a written statement that describes the requirements and penalties under this section.

Special events organizers are responsible for:

1. Providing and placing recycling receptacles immediately 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 a recycling facility providing a material, weight, date, market name and generator name;
2. Contracting with a recycling hauler to collect the materials and deliver them for recycling; or
3. Receiving prior written agreement from the site owner to use an existing recycling collection system available at the site.

The SERP must include collection of at least plastic bottles, jugs and jars, metal cans, glass bottles, paper and cardboard. The special events organizer must assess the availability of food scraps recycling services for the event. If services are available, the special events organizer must provide for food scraps recycling, including provision of separate containers for organic and non-organic recyclables. The Local Government Unit may optionally require that additional materials be recycled.

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.

*SERP Bond:*

All event organizers shall submit a SERP Bond at the time of establishing the use of the facility. The Bond shall be Cash or Certified Check in the amount of Three Hundred (\$300.00) Dollars per event, made payable to the Calvert County Treasurer, and submitted to the Federal, State, County or Municipal Agency of the facility. This Bond shall then be submitted to the Calvert County Solid Waste Division with a copy of the event permit. This Bond shall be refunded to the Event Organizer when copies of the weight receipts have been submitted to the issuing agency or to the Calvert County Solid Waste Division as indicated on the SERP Permit. Failure of the Event Organizer to submit weight receipts within thirty (30) days of the end of the event shall result in the forfeiture of the SERP Bond. The Bond forfeiture shall be divided equally between the issuing agency and the Calvert County Solid Waste Division. No Bond needs to be issued if the Issuing Agency permits the Event Organizer to use their trash and recycling services with or without funding.

*Stakeholders:*

The following stakeholders will be involved in the SERP:

1. County DPW: Responsible for overseeing the County Solid Waste Division activities and assuring that all properties that potentially host events falling under the recycling mandate in §9-1712 are included in the SERP.
2. Federal and State, in cooperation with County Solid Waste Division, responsible for special events permitting at sites within the County, if any. 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 may 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. The Federal and State agencies shall use a SERP recycling tonnage reporting form, provided by the County, to be used by special events organizers in reporting recycling activity to the County.

3. County Solid Waste Division, in cooperation with County agencies responsible for special events permitting at county sites, if any. Responsible for communicating the requirements of the law to prospective special events organizers and owners/operator of publicly owned sites in the County. This office may 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. The County Solid Waste Division shall provide a SERP recycling tonnage reporting form to be used by special events organizers in reporting recycling activity to the County.
4. Municipal Office of Town of Chesapeake Beach and Town of North Beach, in cooperation with County Solid Waste Division and agencies responsible for special events permitting at municipal sites, if any. Responsible for communicating the requirements of the law to prospective special events organizers and owners/operators of publically-owned sites in the Municipality. This office may 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 municipally-owned sites. The Municipal Office of the Town shall use a SERP recycling tonnage reporting form, provided by the County, to be used by special events organizers in reporting recycling activity to the County.
5. Special Events Organizer: Responsible for providing recycling bins and ensuring collection for recycling in accordance with the requirements, beginning on October 1, 2017. Perform recordkeeping and submit the SERP recycling tonnage reporting form to the County within thirty (30) calendar days following the closing of the event.

*Program Monitoring:*

The publicly owned facilities shall complete the SERP Permit prior to the event and submit a copy to the County Solid Waste Division. The County Solid Waste Division and Municipal Offices of the Towns 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 and municipal 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 respective agency.

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. If food scrap recycling is not provided at the event, a description of efforts made to identify available organics recycling services and the reasons organics recycling was determined to be unavailable;
4. The quantity, hauler or market of recyclables collected for recycling at the event;
5. The quantity, hauler or market of solid waste collected for disposal 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 County Office of Recycling the Special Event Recycling Report on a form provided by the Municipality or County.

*Program Enforcement:*

The County 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 \$300 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.

## Calvert County Public School Recycling Plan

### *Designation of School Recycling Program Implementation and Responsibility:*

1. CCBOE has the responsibility for securing a recycling contract for the County's public schools. This shall be awarded annually and become effective each July 1<sup>st</sup>. The current contract is for a single-stream program that accepts paper, newspaper, cardboard, glass bottles, steel and aluminum cans, and plastic bottles for recycling. This may or may not change based on market conditions and requirements. The Recycling Plan must include the recycling of paper, plastic, glass and metal.
2. The recycling contractor is responsible for the marketing of the collected recyclables. This is currently performed by Waste Management. This may or may not change based on market conditions and requirements.
3. The recycling contractor must report, by February 14<sup>th</sup> of each year, to the CCPS' Director of School Facilities or Supervisor of Operations, the amount and type of recyclables collected for the previous calendar year (*e.g.*, the February 14, 2018 contractor report will contain the totals for calendar year 2017).
4. The recycling contractor is responsible for supplying centralized recycling containers for each county public school.
5. The CCBOE has designated the Director as responsible for the development and implementation of a trash and recycling plan/program for each school. At a minimum:
  - a. The Director shall report to the CCBOE and the DPW, Solid Waste Division, by March 1<sup>st</sup>, on the amount and types of recyclable materials collected each calendar year in a format determined by the DPW, Solid Waste Division.
  - b. Each county public school shall collect all of the materials specified in the CCBOE awarded recycling contract (noted above in Item 1.) for recycling.
  - c. All county public schools shall also collect, but not be limited to, printer cartridges, electronics, metal, light bulbs, textiles, and vegetative material for recycling.
  - d. It is the responsibility of the custodial staff at each county public school to collect recyclables for transport to the contractor recycling bins from the school recycling bins throughout the educational facility.
  - e. The Director shall set a schedule for the collection of recyclables from each school by the recycling contractor.
6. The CCBOE is responsible for the purchase of recycling bins, and distribution of these bins throughout each facility (*e.g.*, in classrooms, by copiers, etc.).

7. Subject to approval by the CCPS Central Office, each county public school is free to pursue their own separate recycling contract for materials as a method of increasing their school's income to fund their school's programs. Any independent contract a school, or a club within the school, may enter into will not exempt the school from having to collect the materials identified in the CCBOE contract (noted above in Item 1.).
  - a. The School or club must report to the Director and the Department of Public Works, Solid Waste Division, by March 1<sup>st</sup>, on the amount and types of recyclable materials collected each calendar year, independent of the CCBOE contract.
8. The Director shall advise the CCBOE and the DPW, Solid Waste Division, of any recycling issues or non-compliance of any school within 30 days of the issue arising. Part of the briefing will include the steps needed to correct any issues.
9. Corrective actions must begin within 60 days of the issue arising.
10. The CCBOE may request to the BOCC, that their trash and recycling program be operated by another public agency (*i.e.*, Calvert County DPW, Solid Waste Division).
11. The BOCC has the responsibility to direct another public agency to operate the Calvert County Public School's trash and recycling program if deemed necessary by the BOCC or upon request from the CCBOE.
12. The BOCC must make the decision to assign a trash and recycling program to another public agency within 30 days of the CCBOE request.
13. Upon notification by the BOCC to the Calvert County DPW, Solid Waste Division, to perform collection, the DPW, Solid Waste Division will either prepare bid specifications for collection within thirty (30) days and award a contract for collection within sixty (60) days, or perform the collection itself within one (1) month or prepare bid specifications to acquire equipment to perform collection within nine (9) months of notification.
14. The Calvert County DPW, Solid Waste Division will review the CCBOE recycling plan annually, based upon the annual recycling totals reported in accordance with B.1.e., and recommend changes to the BOCC and CCBOE by May 1<sup>st</sup> of each year.

*School Facilities Participating in the Collection of Recyclables:*

1. The CCBOE shall direct the Director to bring all Calvert County public schools into compliance with the CCBOE trash and recycling plan. A list of participating schools can be found in Table 3-14.

## Community College of Southern Maryland Recycling Plan

The Community College of Southern Maryland Prince Frederick Branch (CCSMPFB) recycling plan was to be implemented and operational in compliance with State Law as of October 1, 2010. To date, the CCSMCPFB has a recycling plan in place and is participating in a recycling program.

The CCSMBOT oversees and funds the CCSMPFB of the CCSM. The CCSMBOT is responsible for the implementation of a recycling plan for the CCSMPFB.

### *Designation of School Recycling Program Implementation and Responsibility:*

1. CCSMBOT has the responsibility for securing a recycling contract for the CCSMCPFB. This shall be awarded annually and become effective each July 1<sup>st</sup>. The current contract is for a single-stream program that accepts paper, newspaper, cardboard, glass bottles, steel and aluminum cans, and plastic bottles for recycling. This may or may not change based on market conditions and requirements.
2. The recycling contractor is responsible for the marketing of the collected recyclables. This is currently performed by Southern Maryland Recycling, Inc. This may or may not change based on market conditions and requirements.
3. The recycling contractor must report, by February 14<sup>th</sup> of each year, to the College Maintenance Department Director (College Director) the amount and type of recyclables collected for the previous calendar year (*e.g.*, the February 14, 2018 contractor report would contain the totals for calendar year 2017).
4. The recycling contractor is responsible for supplying centralized recycling containers for each county college.
5. The CCSMBOT has designated the College's Director as responsible for the development and implementation of a trash and recycling plan/program for each college.  
At a minimum:

- a. The College Director shall report to the CCSMBOT and the Department of Public Works, Solid Waste Division, by March 1<sup>st</sup>, on the amount and types of recyclable materials collected each calendar year from each location in a format determined by the DPW, Solid Waste Division.
  - b. The CCSMCPFB shall collect all of the materials specified in the CCSMBOT awarded recycling contract (C.1.a., above) for recycling.
  - c. The CCSMCPFB shall also collect, but not be limited to, printer cartridges, electronics, metal, light bulbs, textiles, and vegetative material for recycling.
  - d. It is the responsibility of the custodial staff at CCSMCPFB to collect recyclables for transport to the contractor recycling bins from the college recycling bins throughout the educational facility.
  - e. The College Director shall set a schedule for the collection of recyclables from the CCSMCPFB by the recycling contractor.
6. The CCSMBOT is responsible for the purchase of recycling bins, and the distribution of these bins throughout the CCSMCPFB (*e.g.*, in classrooms, by copiers, etc.).
  7. The College Director shall advise the CCSMBOT and the Department of Public Works, Solid Waste Division, of any recycling issues or non-compliance of the CCSMCPFB within 30 days of the issue arising. Part of the briefing will include the steps needed to correct any issues.
  8. Corrective actions must begin within 60 days of the issue arising.
  9. The CCSMBOT may request to the BOCC that the CCSMCPFB trash and recycling program be operated by another public agency (*i.e.*, Calvert County DPW, Solid Waste Division).
  10. The BOCC has the responsibility to direct another public agency to operate the CCSMCPFB trash and recycling program if deemed necessary by the BOCC or upon request from the CCSMBOT.
  11. The BOCC must make the decision to assign a trash and recycling program to another public agency within 30 days of the CCSMBOT request.
  12. Upon notification by the BOCC to the Calvert County DPW, Solid Waste Division, to perform collection, the DPW, Solid Waste Division will either prepare bid specifications for collection within thirty (30) days and award a contract for collection within sixty (60) days, or perform the collection itself within one (1) month or prepare bid specifications to acquire equipment to perform collection within nine (9) months of notification.
  13. The Calvert County DPW, Solid Waste Division will review the CCSMBOT recycling plan annually, based upon the annual recycling totals reported in accordance with B.1.e., and recommend changes to the BOCC and CCSMBOT by May 1<sup>st</sup> of each year.

*College Facilities Participating in the Collection of Recyclables:*

1. The CCSMBOT shall direct the College Director to bring the CCSMCPFB into compliance with the CCSMBOT trash and recycling plan. The college included in this plan is the:

Community College of Southern Maryland Prince Frederick Branch  
115 W. William Rd., Prince Frederick 443-550-6000

## Apartment Building and Condominium Recycling (ABCR) Program

### *Apartment Building and Condominium Recycling Program:*

Through the cooperation of the County Office of Recycling and owners or managers of apartment buildings or councils of unit owners of condominiums (“apartment and condominium officials”), and other stakeholders involved in the implementation of this law, the County has identified twenty-three (23) apartment buildings and twelve (12) condominiums that currently fall under the scope of the law. The County Office of Recycling has met with the apartment and condominium officials and discussed the requirement of the law including the materials that must be recycled (i.e. aluminum and steel cans, glass and plastic bottles, jugs and jars and mixed paper including cardboard) at the identified locations.

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

1. Recyclables designated for recycling at a minimum:
  - a. Aluminum and steel cans;
  - b. Glass and plastic bottles, jugs and jars; and
  - c. Mixed paper.
2. Collection of designated materials:
  - a. Apartment and condominium officials are responsible for providing all containers, labor and equipment necessary to fulfill recycling requirements throughout their buildings.
  - b. Distinctive colors and/or markings to designate recycling containers should be provided to avoid contamination.
  - c. The apartment and condominium officials must ensure collection and transportation of recyclable materials from apartment and condominium locations to markets.
3. Marketing of Recyclable Materials:
  - a. Apartment and condominium officials are responsible for the marketing of their recyclables.
  - b. The apartment and condominium officials shall submit annual reports detailing the recycling tonnage removed from the apartment and condominium and the haulers and markets for the materials.

*Stakeholders:*

1. County Commissioners – Responsible for adopting the Maryland Department of the Environment (MDE) approved language of the ABCR Program for the Plan amendment.
2. County Department of Public Works (DPW) – Responsible for overseeing the County Office of Recycling activities and assuring that all apartment buildings and condominiums that fall under the requirements are included in the ABCR Program.
3. County Solid Waste Division – Communicate the requirements of the law to the apartment and condominium officials. Assist apartment and condominium officials in developing a recycling program, if so requested. 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 Comprehensive 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 the Condominium – Responsible for providing recycling to the residents of each apartment building or condominium by October 1, 2014. Indicate level of self-performance to provide recycling collection from residential building locations or secure and manage recycling contracts with a contractor. Perform record keeping and report to the County on an annual basis.

*Participating Apartment Buildings and Condominiums in ABCR Program:*

New apartment buildings and condominiums that will fall under the requirements of the law shall begin participating in the ABCR program within three (3) months of being notified by the County. A list of participating Apartment Buildings and Condominiums can be found in Table 3-8(a) and 3(b).

*Development and Implementation Schedule of the ABCR Program:*

1. On or about, October 31, 2013, the County distributed MDE approved language of the ABCR Program to apartment and condominium officials for their program development and implementation.

2. On or about, March 1, 2014, apartment and condominium officials began to educate their residents about their ABCR Program and discuss the requirements of the law.
3. On or about, May 1, 2014, apartment and condominium officials provided recycling information, training or assistance to their residents and advised them of the start date, and what materials the residents were to recycle at their building.
4. By October 1, 2014, apartment and condominium officials had in place a collection program for recycling, including at a minimum, the designated recyclables listed in Section A.1 above and provided a copy of their plan to the County Recycling Coordinator.

*Program Monitoring:*

The County Division of Solid Waste 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 staff to educate or review recycling practices and, if applicable, meet with and review compliance with the recycling contractor. 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 manager or owner. The apartment and condominium officials shall initiate actions to correct all deficiencies within sixty (60) days of being notified.

The apartment and condominium officials will also be available to conduct educational seminars and/or tours regarding new materials, practice 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 their apartment buildings or condominium.

*Program Enforcement:*

The County Solid Waste Division will ensure that the recycling at apartments and condominiums will be implemented in accordance with Section 9-1703 and 9-1711 of the Environment Article, Annotated Code of Maryland and enforcement will be performed in accordance with the County Code.

## Calvert County Recycling Plan Component Summary

### Article – Environment §9–1703.

*(a) Each county shall submit a recycling plan to the Secretary for approval when the county submits its county plan to the Secretary in accordance with the provisions of § 9–505 of this title.*

*(b) In preparing the recycling plan as required in § 9–505 of this title, the county shall address:*

*(1) Methods to meet the solid waste stream reduction;*

**See Section 4.5.1**

*(2) The feasibility of source separation of the solid waste stream generated within the county;*

**See Section 4.5.1**

*(3) The recyclable materials to be separated;*

**See Section 3.1.14 and Section 5.3.4**

*(4) The strategy for the collection, processing, marketing, and disposition of recyclable materials, including the cost–effective use of recycling centers;*

**See Section 3.1.14 and Section 3.4**

*(5) Methods of financing the recycling efforts proposed by the county;*

**See Appendix B, Table 1-1, and Section 5.7.1**

*(6) Methods for the separate collection and composting of yard waste;*

**See Section 3.1.14**

*(7) The feasibility of a system for the composting of mixed solid wastes;*

**See Section 3.1.14**

*(8) The feasibility of a system for the collection and recycling of white goods;*

**See Section 5.3.4**

*(9) The separate collection of other recyclable materials;*

**See Section 5.3.4**

*(10) The strategy for the collection, processing, marketing, and disposition of recyclable materials from county public schools;*

**See Appendix A and Table 3-14**

*(11) The strategy for the collection and recycling of fluorescent and compact fluorescent lights that contain mercury;*

**See Section 3.1.14**

*(12) The collection and recycling of recyclable materials from residents of apartment buildings and condominiums that contain 10 or more dwelling units by property owners or managers of apartment buildings and councils of unit owners of condominiums;*

**See Section 3.1.1, Appendix A, Table 3-8(a) and Table 3-8(b)**

*(13) If applicable, a method for implementing a reporting requirement for recyclable materials generated at apartment buildings and condominiums that contain 10 or more dwelling units;*

**See Section 3.1.1 and Appendix A**

*(14) The collection and recycling of recyclable materials from special events;  
and*

**See Appendix A**

*(15) Any other alternative methods of recycling that will attain or exceed the  
solid waste stream reduction goals determined by the county.*

**See Section 3.1.14**