Prepared for:

DORCHESTER COUNTY COUNCIL

County Office Building
501 Court Lane
Cambridge, Maryland 21613

SOLID WASTE MANAGEMENT PLAN
(2017 – 2026)

DORCHESTER COUNTY
MARYLAND

Prepared by:

Geosyntec consultants

10211 Wincopin Circle, 4th Floor
Columbia, Maryland 21044

Project Number: ME1384

25 September 2017

TABLE OF CONTENTS

TABLE OF CONTENTS
(continued)

TABLE OF CONTENTS
(continued)

TABLE OF CONTENTS
(continued)

TABLE OF CONTENTS
(continued)

TABLES

FIGURES

ATTACHMENTS

INTRODUCTION AND TERMS OF REFERENCE

The Dorchester County Council (Council) has overall responsibility for overseeing and implementing waste management practices in Dorchester County, Maryland in accordance with State of Maryland statutes and Dorchester County ordinances. However, specific responsibility for solid waste management planning, operations, and disposal lies with the Dorchester County Department of Public Works (DCDPW).

In January 1990, the Council adopted a comprehensive Solid Waste Management Plan (Plan) covering the succeeding 10-year period in accordance with Code of Maryland Regulations (COMAR) 26.03.03.02 through 26.03.03.04. The Plan was approved by the Maryland Department of the Environment (MDE) in December 1993. To comply with the requirement for periodic review and update under COMAR 26.03.03.02.A, DCDPW contracted Geosyntec Consultants (Geosyntec) of Columbia, Maryland to prepare a comprehensive revision of the 1993 Plan. The Council adopted the revised Plan in December 2006. The 2006 Plan, which covered the planning period January 2007 through December 2016, was subsequently revised in July 2007 and March 2009, and approved by MDE in June 2009. To comply with new Maryland statutes and to update information on solid waste facilities and planning in the county, the 2006 Plan was again revised on two occasions: November 2010 (adopted by Council November 2010; approved by MDE January 2011) and September 2014 (adopted by Council June 2016; approved by MDE July 2016).

To comply with the requirement for periodic review and update under COMAR 26.03.03.02.A, in 2016 DCDPW again contracted Geosyntec to prepare a comprehensive revision of the 2006 Plan to include the most up-to-date information on solid waste facilities and planning in the county. The revised Plan covers the planning period January 2017 through December 2026. A draft Plan was submitted to MDE for review in September 2016; MDE's comments and tentative approval of the draft Plan were received in a letter dated 11 January 2017. These comments were addressed in preparation of this final Plan. Additionally, in accordance with Section 9-503(d) of the Environment Article and COMAR 26.03.03.05.C, the final Plan was presented for discussion at a public hearing held during a Council meeting on 15 August 2017. Following the hearing, a 30-day period for submission of written comments was extended to 15 September 2017. Substantive issues requiring resolution raised at the hearing and/or received via written comments were addressed in this final Plan. This final Plan has been officially adopted by the Council, as stated in the Resolution included as Attachment 1. A letter from the County Planning and Zoning Office certifying the Plan's consistency with local zoning and land use ordinances and planning is provided in Attachment 2. Finally, a letter from MDE to the Council signifying approval of this Plan is included as Attachment 3.

PROFESSIONAL CERTIFICATION

I hereby certify that this document was prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, **License No. 41859** and **Expiration Date 10 May 2018**.

_____

Jeremy W.F. Morris, Ph.D., P.E.

_____

Date

1. GOALS AND REGULATORY BACKGROUND

1.1 Goals and Objectives

1.1.1 Statement of County Goals

The County's overall goal in developing this comprehensive Plan is to provide for an organized and efficient system of solid waste management and resource recovery to handle the current and anticipated future volume of municipal solid waste (MSW), construction and demolition debris (CDD), and other residential, commercial, industrial, and institutional waste streams generated in the county over the next ten years. In keeping with the updated Recycling Rate and Waste Diversion – Statewide Goals Act (2012) and the County's own recycling goals, the County also aims to continue promoting the reuse of secondary materials by maintaining a recycling rate of 20% or better. This Plan is intended to provide the County with an environmentally sound and cost effective solid waste management and recycling system, while protecting public health and safety and preserving the quality of life within the county.

1.1.2 Objectives and Overview Plan of Action

Establishing and maintaining appropriate county and local control over the permitting and operation of solid waste management facilities to preserve and maintain public health and environmental quality are important priorities for the Council and DCDPW. Based on this, the specific objectives of this Plan are to:

1. Ensure that all solid waste generated in the county will be processed and disposed of by such means as will effectively protect the quality of ambient air, groundwater, and surface water resources, including the Chesapeake Bay, and to minimize the potential for pollution arising from the management and disposal of such wastes;

2. Effectively and efficiently serve existing and future land uses and development within the county, including residential, agricultural, institutional, industrial, commercial, and marine;

3. Develop and promote waste reduction, reuse, and recycling programs, specifically focusing on recycling in public schools and raising public awareness and increasing the percentage of waste recycled in order to continue to meet or exceed the County's recycling goal of 20% as mandated by 2012 Recycling Act;

4. Continue active landfill operations at the existing Beulah site; and

5. Effectively communicate the near- and long-term goals of the Plan to county residents and users of solid waste facilities, in order to enhance participation in recycling activities and minimize the potential for pollution arising from the mismanagement and illegal dumping of waste, especially in rural areas of the county.

Over the succeeding ten years, the following primary actions will enable the County to continue meeting the objectives listed above using its existing waste management infrastructure:

1. Developing and implementing recycling and other targeted waste management programs enacted by the State of Maryland Legislature and MDE;

2. Evaluate enhancing participation in other recycling activities by county residents through development of an electronics recycling program, installation of additional recycling drop-off stations throughout the county, and/or provision of public awareness grant opportunities;

3. Continue operation of waste acceptance convenience centers and recyclable drop-off facilities;

4. Continue provision of waste disposal to county residents and businesses as a public service through ongoing operation of the existing Beulah Municipal Landfill until filled to approved capacity followed by development of a new landfill (Dorchester County Municipal Landfill) located at the Beulah site such that it will continue to use much of the existing on-site infrastructure (e.g., access controls, scales, etc.);

5. Continue environmental performance monitoring and maintenance at the Beulah site;

6. Continue post-closure care at the County's three closed landfills (Secretary Sanitary Landfill, Golden Hill Sanitary Landfill, and Old Beulah Sanitary Landfill);

7. Maximize landfill disposal airspace utilization at the Beulah site by increasing rates of onsite beneficial waste reuse (e.g., through improving construction and demolition debris recycling or use as alternative daily cover) and/or improved site operations (e.g., through increased waste compaction and use of an approved tarp in lieu of daily cover soil);

8. Work to improve the monitoring and diversion of waste flows from outside the county; and

9. Develop restrictions, regulations, and bond amounts for commercial waste generators or processors to promote recycling.

1.1.3 Policies

It is the County's policy to promote public participation in and enthusiasm for environmentally sound solid waste management through continued communication and ongoing public input. In addition to continued support and promotion of voluntary programs to meet state and county recycling mandates, the County actively restricts and regulates disposal of out-of-county waste at the Beulah site.

1.2 Structure of Dorchester County Government

1.2.1 County Departments

The structure of the Dorchester County Government relating to solid waste management, as illustrated on Figure 1-1, is as follows:

1. Dorchester County Council, the county's governing body, has overall responsibility for overseeing and implementing solid waste management activities in the county;

2. Responsibility for solid waste management planning, collection, operations, recycling, and disposal has been designated to the Dorchester County Department of Public Works (the County's Solid Waste Division is the agency with specific responsibility in this regard);

3. The Dorchester County Health Department is the agency responsible for assuring compliance with State of Maryland COMAR regulations and Section 131 of the Dorchester County Code related to protection of public health and safety; and

4. The Dorchester County Office of Planning and Zoning is responsible for ensuring that zoning requirements are met and that proposed land uses comply with the Comprehensive Land Use Plan for the county.

The Solid Waste Division operates the Beulah site as well as three convenience centers and two drop-off facilities as illustrated on Figure 1-1.

1.2.2 Municipalities

There are nine incorporated municipalities within the county. These are: (i) the City of Cambridge, the county seat; (ii) Brookview; (iii) Church Creek; (iv) East New Market; (v) Eldorado; (vi) Galestown; (vii) Hurlock; (viii) Secretary; and (ix) Vienna. All municipalities provide curbside collection of solid waste to their residents (Figure 1-1).

1.3 Regulatory Framework

1.3.1 Federal Regulations

A number of federal statutes affect solid waste management in all jurisdictions within the United States. In particular, the legal controls for solid waste were established as an Act of Congress that resulted in the Resource Conservation and Recovery Act of 1976 (RCRA). RCRA requires that responsibilities for solid waste management be clearly delineated and calls upon the United States Environmental Protection Agency (U.S. EPA) to monitor and approve State management of landfills. Subtitle D of RCRA, as codified under 40 CFR Part 258, governs management and disposal of MSW (non-hazardous waste) and specifies criteria for planning, permitting, establishment, operation, and closure of MSW landfills. Hazardous waste management is regulated under Subtitle C of RCRA, within which the U.S. EPA has developed a comprehensive program to provide safe management of hazardous waste from the moment it is generated to its final disposal (a "cradle-to-grave" approach). Subtitle C regulations set criteria for hazardous waste generators and transporters, and for treatment, storage, and disposal facilities. This includes permitting requirements, enforcement, and corrective action or cleanup. The regulations governing hazardous waste identification, classification, generation, management, and disposal are found in 40 CFR Parts 260 to 273.

1.3.2 State Laws and Regulations

1.3.2.1 Annotated Code of Maryland and Code of Maryland Regulations

The Annotated Code of Maryland, as amended, includes all state laws passed by the legislature. Laws addressing solid waste management are included in the Environment Article, which contains many of the laws affecting the location, design and operation of solid waste disposal facilities. Under the authority of Title 9, Subtitle 5, the Maryland Department of the Environment (MDE) is the State's principal regulatory agency with respect to solid waste management and serves as the State's lead agency for implementation of RCRA.

State regulations are compiled into a document entitled Code of Maryland Regulations (COMAR). The requirements for facilities that accept and dispose of solid waste within the State of Maryland are defined in COMAR Title 26. Two subtitles have specific importance:

1. Planning requirements for solid waste management facilities is regulated under Subtitle 03 "*Water Supply, Sewage Disposal, Solid Waste, and Pollution Control Planning and Funding*" (COMAR 26.03); and

2. Design, operation, monitoring, and closure of solid waste management facilities is regulated under Subtitle 04 "*Regulation of Water Supply, Sewage Disposal, and Solid Waste*", Chapter 07 "*Solid Waste Management*" (COMAR 26.04.07).

Specific to development of this Plan is Title 26, Subtitle 03, Chapter 03 "*Development of County Comprehensive Solid Waste Management Plans*" (COMAR 26.03.03) and Section 9-503 of the Environment Article, Annotated Code of Maryland, which require that each county adopts and submits to MDE a 10-year comprehensive Plan that deals with solid waste management. After submission to MDE for review, public hearing, and adoption of any required changes, the Plan is revised as necessary and resubmitted to MDE for approval. Approved Plans are required to be reviewed at least every three years and updated or amended as necessary. Plans are required to undergo comprehensive revision at least every ten years.

1.3.2.2 State Laws Affecting Solid Waste Management

A summary of the state laws affecting solid waste management that are of specific relevance to preparation of this Plan is as follows:

1. Maryland Recycling Act (1988): The Maryland Recycling Act (MRA) established a requirement for Maryland counties, based on a population of less than or exceeding 150,000, to reduce the County's waste stream by 15% or 20%, respectively;

2. Medical Waste Legislation (1988): Regulates identification, recordkeeping, treatment, transport, and disposal of special medical wastes and prohibits landfill disposal of infectious wastes;

3. Scrap Tire Law (1992): Prohibits the disposal of tires in landfills after 1 January 1994 and creates a licensing system for the management of scrap tires;

4. Composting Act (1992): Includes composting in the definition of recycling, requires that county recycling plans address composting issues, and bans clean loads of yard waste from landfills effective in 1994;

5. Sludge Application (1993): Regulates land application of sludges to protect the public health;

6. Public School Recycling Plans (2010): Requires Counties to revise their Plans to address collection, processing, marketing, and disposition of recyclable materials from public schools;

7. Fluorescent and Compact Fluorescent Light Recycling (2011): Requires Counties to revise their Plans to include a strategy for collection and recycling of fluorescent and compact fluorescent lights that contain mercury;

8. Recycling – Apartment Buildings and Condominiums Act (2012): Requires Counties to revise their Plans to address collection and recycling at apartment buildings and condominiums as well as a method for implementing a reporting requirement, and requires building owners, managers, and councils with ten or more dwelling units to provide for recycling for residents on or before 1 October 2014;

9. Recycling Rates and Waste Diversion – Statewide Goal Act (2012): A revision to the 1988 MRA, this act requires Counties to revise their Plans to achieve an increase in the countywide recycling rate to 20% (counties with populations below 150,000) or 35% (counties with populations above 150,000) of the county's solid waste stream by 1 July 2014, with full implementation by 31 December 2015; and

10. Recycling – Special Events Act (2014): Requires Counties to revise their Plans to address collection and recycling by organizers of certain special events, with implementation required before 1 October 2015.

1.3.3 County Codes and Ordinances

Finally, specific county ordinances governing or affecting solid waste management are as follows:

1. Chapter 125 of the Dorchester County Code (DCC) regulates solid waste collection and disposal;

2. Chapter 129 of the DCC regulates sanitary landfills;

3. Chapter 155, Section 40 outlines zoning requirements for solid waste disposal facilities; and

4. Section 131 relates to protection of public health and safety.

The Council is empowered to adopt local rules and regulations addressing solid waste and protection of public health and safety.

2. BACKGROUND INFORMATION

2.1 Population Characteristics

Table 2-1 shows historical and projected data from the U.S. Census Bureau and Maryland Department of State Planning on the population and number of households in the county in ten-year intervals from 1970 through 2000, and five-year intervals from 2000 through 2040. Historical data are available through 2010. The current population of Dorchester County is significantly less than 150,000, an important threshold value for State recycling targets.

Examination of existing data in the table shows that the county's population grew by only 3,213 persons (from 29,405 to 32,618) between 1970 and 2010, representing an average growth rate over the 40-year period of about 80 persons per year, or approximately 0.3% per year on average (using 1970 data as a baseline). Looking at changes on a decade-by-decade basis, the population actually fell by an average 0.1% annually between 1980 and 1990. Thereafter, the population grew slowly but at a steadily increasing pace, averaging about 0.1% annually between 1990 and 2000 but 0.8% annually between 2005 and 2010. The number of households increased steadily during the 40-year period between 1970 and 2010, with an average of almost 100 households added per year, or about 1% annually (again using 1970 data as a baseline).

Based on projected data for 2010 through 2040, the county's population is expected to grow at about 185 persons per year, or about 0.6% annually (using 2010 data as a baseline). Again, the number of households is expected to increase steadily over this 30-year period at a rate of about 0.7% a year (using 2010 data as a baseline). The average persons per household is expected to remain between 2.3 and 2.4 for the duration.

As noted in previous versions of this Plan, the county's population varies during the year, with increases occurring in the boating/fishing season and summer holiday period (May through September) as well as the hunting season (October to January). As a result, an increasing number of homes in the county are used as vacation/seasonal homes. Although the exact number of such homes is not known, temporary seasonal population increases are estimated to be about 10% of the number of permanent county residents.

2.2 Map of Dorchester County

A map of the county showing major roads, incorporated municipalities, locations of waste acceptance and disposal facilities, and facilities owned/operated by the Federal Government and its agencies is provided as Figure 2-1. Dorchester County has nine incorporated municipalities. The oldest and most populous of these is Cambridge, the county seat, incorporated in 1793. Thereafter, East New Market was incorporated in 1832, followed by

Vienna in 1833, Church Creek in 1867, Hurlock in 1892, Secretary in 1900, Eldorado in 1947, Galestown in 1951, and Brookview in 1953.

As indicated in Figure 2-1, most population centers (and thus solid waste and recycling services) are located in the central and northeastern areas of the county. Western and southern areas of the county are highly rural, with significant reaches of low-lying land owned or administered by the federal and state governments.

2.3 Zoning Requirements

Subject to Federal and State regulations, zoning ordinances and requirements for solid waste disposal facilities in the county are controlled via Chapter 155, Section 40 of the Dorchester County Code (DCC). In accordance with the DCC, there are three major district classifications: Primary, Overlay, and Floating. Table 2-2 further breaks down each of these three major districts into its individual designations. As shown in the table, a Solid Waste District is designated "SW" under major district classification "Floating."

Except by special exception pursuant to the DCC, a Solid Waste District (SWD) may only be established if all of the following criteria are satisfied:

1. The SWD is in an Agricultural Conservation (AC), Light Industrial (I-1) or Heavy Industrial (I-2) District;

2. The SWD has a minimum area of 100 acres;

3. The SWD has direct access to a limited access or collector road; and

4. The SWD will be compatible with the existing and proposed uses and development of adjacent and vicinal properties.

The SWD establishes conditions precedent to the siting of a commercial rubble landfill or land-clearing debris landfill. There is no provision in the zoning code for the establishment of a sanitary landfill. Private rubble landfills and land-clearing debris landfills are regulated through the County Board of Zoning Appeals. It is recommended that the County reviews any proposed establishment of a SWD and that an additional special exception criterion be included for establishment of a SWD based on a proven need to create a new landfill facility.

An important purpose of reviewing local planning and zoning requirements in this Plan is to note that Chapter 155, Section 40 of the DCC provides the appropriate controls. As such, this

Plan cannot and shall not be used to create or enforce local land use and zoning requirements in Dorchester County.

2.4 Comprehensive Planning and Land Use

The Dorchester County Comprehensive Plan (DCCP), which was originally adopted in November 1974 was updated in 1988 and 1996. The current version of the DCCP, which was adopted on 24 September 1996, provides the basic policy guidance for shaping future decisions relating to growth and development in the county. The County's goals, objectives, and policies for solid waste management over the next ten years as described in this Plan (see Section 1.1) are fully consistent with the current version of the DCCP.

3. EXISTING SOLID WASTE MANAGEMENT SYSTEM

3.1 Definitions of Wastes Handled at County Facilities

3.1.1 Acceptable Wastes for Landfill Disposal

The types of waste accepted by DCDPW for disposal at the Beulah site are defined as follows:

1. Residential: Household refuse and small furniture that are collected by municipalities or commercial haulers, or brought in by county residents to the drop-off facilities.

2. Commercial: Non-hazardous solid waste that is generated by businesses operating within the county and collected by haulers that are privately owned and operated or by the business, itself, and transported to the disposal facilities.

3. Industrial: Non-hazardous solid wastes (not liquids or sludges) that are received primarily from commercial haulers. Haulers providing this service are similar to those described in the commercial section.

4. Institutional Wastes: DCDPW facilities accept waste from Board of Education schools and colleges, county hospitals (although hospitals operate incinerators to dispose of their contaminated and hazardous hospital wastes), and refuse that is generated by federal, state, and local government facilities and agencies located within the county.

5. Land Clearing and Construction/Demolition Debris (CDD): Land clearing debris includes brush, tree limbs, soils, free stumps, root mats, logs, rocks, grass clippings, and leaves that are generated from the land clearing activities. CDD includes shingles, wallboard, non-refractory bricks, insulation materials, used lumber generated from the remodeling or demolition of buildings, new lumber and scrap material that is generated from construction, and concrete, stone, and dirt that are generated from remodeling, replacement, or excavation.

6. Dead Animals and Carcasses: Dead animals generally include those that have been killed on the road and collected by the State Highway Administration or Dorchester County Highway Department. Dead chickens from county poultry farms can be brought to the Beulah site for disposal, but many farms compost their dead chickens along with poultry litter. Destroyed animals from a local shelter are accepted for landfill deposal, but carcasses resulting from medical research activities or destruction of diseased animals harboring diseases transmittable to humans are not acceptable,

except as specified in Section 3.1.3, Item 8 below.

7. Litter and Street Sweepings: This includes indiscriminate scatterings of paper, bottles, cans, packaging materials, and other solid waste upon roadways, residential properties, parking lots, wooded areas, ravines, waterways, and abutting lands. Litter collected from within the county by the State Highway Administration, County Highway Department, or county residents may be disposed of in the landfill.

8. Bulky Items: Miscellaneous items such as furniture, mattresses, carpeting, etc.

9. Sewage Sludge: Stabilized sewage sludge from the municipal wastewater treatment plant in Cambridge.

10. Other Wastes: A number of other waste streams, which generally require disposal on an intermittent rather than continual basis, are generally accepted for disposal at the landfill, although at DCDPW's discretion. These include: (i) mining wastes; (ii) dredge material and residues from pollution control device; (iii) recreational waste; (iv) dust; and (v) grease and oil contaminated soil.

3.1.2 Recyclables and Other Acceptable Wastes

The following types of waste are handled at DCDPW waste acceptance facilities but, wherever possible, are separated for recycling or beneficial reuse (i.e., removed from the waste stream going for disposal at the Beulah site):

1. Scrap Tires: Scrap tires, as defined under COMAR 26.04.08.02.B(17), from State- and County-owned vehicles and private cars, trucks, and tractors. Scrap tires are required to be handled in accordance with the "*Scrap Tire Law (1992)*", Section 9-228 of the Environment Article, Annotated Code of Maryland, which states that no tires shall be landfilled after 1 January 1994.

2. Recyclables: Including paper, plastics, glass, cardboard, newspapers/magazines, metals, used oil, lead-acid batteries, and clean concrete.

3. Fluorescent and Compact Fluorescent Light (CFL) Bulbs: In Accordance with Section 9-1703(b)(11) and Section 9-1703(g) of the Environment Article, Annotated Code of Maryland (2011), DCDPW has implemented collection of fluorescent and CFL bulbs that contain mercury.

4. Bulky Items: White goods and metal appliances. Any refrigerant is required to be removed from appliances before burial and handled in accordance with Section 608 of

the federal Clean Air Act.

3.1.3 Unacceptable Wastes

The following types of waste are not accepted and are therefore not included in the County's annual reported or projected solid waste quantities:

1. Controlled Hazardous Substances: As defined in COMAR 26.13.02, including friable asbestos.

2. Liquid Waste: Including waste containing free liquids, as determined by the EPA Method 9095 "*Paint Filter Liquids Test*", as outlined in the EPA Publication SW-846 "*Test Methods for Evaluating Solid Waste, Volume One, Section C: Laboratory Manual Physical/Chemical Methods*", Third Edition, dated November 1986, except for small containers contained in household waste only;

3. Radioactive Materials: As defined in COMAR 26.15.02.

4. Infectious Wastes: Including wastes from hospitals or clinics as defined in Environment Article Section 9-227 and special medical waste as defined in COMAR 26.13.11.02.B(10).

5. Automobiles: Junked motor vehicles, including major components such as engines or body panels.

6. Untreated Septage or Sewage Scavenger Waste: All septage pumped out from septic tanks in the county is treated at the Cambridge Wastewater Treatment Plant and is not accepted for direct landfill disposal.

7. Drums and Tanks: These may only be accepted if empty and flattened or crushed with the ends removed; drums or tanks that have held hazardous waste shall be emptied properly in accordance with COMAR 26.13.02.07.

8. Animal Carcasses: Carcasses resulting from medical research activities or destruction of diseased animals harboring diseases transmittable to humans are not acceptable, unless acceptance of such carcasses is authorized by the Dorchester County Health Department and the carcasses are covered with soil immediately upon deposition at the working face of the landfill.

9. Chemical or Petroleum Cleanup Material: These materials may not be accepted,

unless the nature of the spilled substance is known, the spilled material is not a controlled hazardous substance as defined in COMAR 26.13.02, the spilled material is not likely to adversely affect the landfill liner, and the spilled substance is contained in an absorbent material of sufficient excess volume so that the material deposited at the landfill does not exhibit free liquids as defined in Item 2 above.

3.1.4 Control of Unacceptable Wastes

All incoming loads of waste material, whether intended for disposal or temporary storage/processing as recyclables, will be inspected at the Beulah site to ensure that no unacceptable waste types are included in the load. This inspection will be conducted by landfill employees by inspecting incoming waste loads at the landfill scale-house and/or as they are transferred or stored at the Beulah site or disposed of at the landfill working face. All landfill employees shall be trained by DCDPW to consistently monitor incoming waste and identify unacceptable and hazardous material. All incidents of discovery of unacceptable material in a waste load will be immediately reported to MDE in accordance with the protocols defined in the current operating permit. All unacceptable waste such as liquids (paints, oils, etc.) that are removed in this way shall be disposed of off-site in a manner consistent with applicable laws and regulations.

3.2 Existing and Projected Waste Generation and Disposal

3.2.1 Waste Quantities Generated

Table 3-1 shows estimated tonnages of total waste handled, landfilled, and recycled/diverted from landfill in three-year increments (i.e., 2017, 2020, 2023, and 2026) over the 10-year planning period covered by this Plan, based on actual data for 2014 (baseline). Tonnage data in the table are separated into MRA and non-MRA wastes and recyclables in accordance with the methodology used by MDE to track solid waste management. The distinction between MRA and non-MRA materials is discussed in Section 3.2.3.

Actual quantities of solid waste handled at the Beulah site in 2014 are known from the County's "*Solid Waste Tonnage Report for Calendar Year 2014*" and "*Maryland Recycling Act (MRA) Tonnage Reporting Survey, Forms A and B for 2014*," both of which are public records submitted to MDE by DCDPW. Additional small quantities of solid waste originating in Dorchester County were also reported to MDE by other out-of-county facilities and corporations, including 149 tons of CDD at the Bennett Processing Facility in Fruitland, Wicomico County and 25 tons of special medical waste transported out of the county for processing by Stericycle Waste Services, Inc. Based on this, the total quantity of MRA and non-MRA waste handled in 2014 was 48,148 tons, while the total MRA and non-MRA

recycling in 2014 was 12,715 tons. The total waste generated in Dorchester County in 2014 was 60,862 tons.

Projected values for waste generation in 2017 through 2026 in Table 3-1 were based on annual growth of 1.0% in the rate of solid waste generation in the county between 2014 and 2026. This value is based on projected growth in the county population and number of households between 2015 and 2020 (0.9% and 1.1%, respectively) and 2020 and 2025 (1.0% and 1.1%, respectively), as previously shown in Table 2-1. Overall, historical growth in total waste generation in the U.S. and other industrialized countries has tended to outpace residential growth rates. However, positive drivers for waste generation and disposal requirements are expected to be countered by a number of factors, including the impact of countywide recycling efforts on reducing solid waste for disposal and heightened consumer awareness of available waste reduction programs. Overall, an annual growth rate of 1.0% is considered conservative but realistic. Based on this, the total annual quantity of waste generated in Dorchester County is expected to increase to about 68,581 tons by 2026.

3.2.2 Solid Waste Disposal

The annual quantity of solid waste (both MRA and non-MRA waste) disposed of by DCDPW at the Beulah site is reported annually in the County's "*Solid Waste Tonnage Reports*," which are public records submitted to MDE by DCDPW. Figure 3-1 presents actual waste placement data for 2000 through 2014 (blue markers) as well as projected values for waste disposal between 2015 and 2026 (red markers) based on annual increase of 1.0% in the rate of solid waste disposal. The total quantity of waste landfilled is expected to increase to about 54,600 tons by 2027, short of the peak disposal rate of over 65,000 tons in 2006 prior to the global recession in 2008. As indicated in the figure, waste disposal fell each year between 2006 and 2010, before increasing at an average rate of about 1.2% between 2011 and 2014.

3.2.3 Recyclable Materials Separated

To allow fair comparison between different counties, only certain materials can be included when calculating a county's MRA recycling rate, which must be reported to MDE each year. These include paper, plastic, glass, metal, compostables, and a broad category of miscellaneous materials. Specific materials that are excluded from the calculation of the recycling rate include antifreeze, asphalt and concrete, coal ash, construction and demolition debris, land clearing debris, scrap automobiles, sewage sludge, soils, and waste oil. Although the tons of these materials recycled are not counted when calculating the MRA recycling rate, they are nevertheless reported to MDE each year. Division of waste and recyclables into MRA and non-MRA materials is important in the context of understanding reported recycling

and waste diversion rates for counties in Maryland versus local jurisdictions in other states or countries.

Actual quantities of MRA and non-MRA materials recycled in Dorchester County in 2014 are reported in the "*Solid Waste Tonnage Report for Calendar Year 2014*" and "*Maryland Recycling Act (MRA) Tonnage Reporting Survey, Forms A and B for 2014,*" which is a public record submitted to MDE by DCDPW. MRA recycling data are summarized in Table 3-2, which shows that the total countywide quantity of MRA recycling amounted to 12,543 tons in 2014, representing an MRA recycling rate of 28.8%. No source reduction credits were obtained. These data include private sector recycling activities in the county that contribute towards the overall MRA recycling target. The recycling rate for 2014 exceeds the goal of 20% established under the MRA for counties with population under 150,000 starting 31 December 2015.

3.3 Solid Waste Entering or Leaving Dorchester County

3.3.1 Types and Quantities of Waste Imported

In order to preserve permitted airspace at the Beulah site to serve the needs of county residents and businesses, DCDPW actively discourages acceptance of MSW, CDD, sewage sludge, or other waste generated from outside the county for disposal at the facility. DCDPW also discourages acceptance of any recyclables generated from outside the county for processing at their facilities. However, where a formal approved agreement is in place, some county farmers accept relatively small quantities of out-of-county sewage sludge deemed suitable for field application (i.e., beneficial reuse as fertilizer). Because application of sludge to agricultural land requires a permit, DCDPW is able to quantify such imports though an inspection of the permit history for this activity.

3.3.2 Types and Quantities of Waste Exported

The County's solid waste acceptance and disposal facilities are adequate to handle the waste generated within its borders; therefore, the County does not export waste for disposal. Disposal fees are appropriately priced such that very little solid waste is thought to leave the county for disposal. However, because there is no dedicated CDD/rubble landfill in the county, an undefined quantity of CDD and rubble may be leaving the county for lower-priced disposal in lieu of paying for disposal at the Beulah site. Data reported to MDE suggest this is not the case, however: in 2014, only about 220 tons of waste generated in Dorchester County were reportedly handled by facilities or corporations outside of the county. This equates to less than 0.4% of the 60,862 tons of waste generated in 2014.

No permitted facilities for disposal of controlled hazardous wastes exist in Dorchester County. Any such, all hazardous waste generated within the county must be exported for legal disposal at a permitted RCRA Subtitle C facility. DCDPW is not responsible for keeping records of such waste movements.

3.4 Existing Waste Collection Systems

3.4.1 Solid Waste Collection Systems

3.4.1.1 Municipal Collection

This is available to residents of Cambridge, East New Market, Hurlock, Secretary, Vienna, Church Creek, Galestown, Eldorado, and Brookview. A description of these collection systems and the status of collection services provided are summarized in Table 3-3.

3.4.1.2 Private Hauling and Residents' Drop-Off

Many residents and commercial establishments not located in one of the above service areas pay a private hauler to transport their waste to the Beulah site. In addition, many commercial establishments in the above municipalities require more frequent collection than that offered and therefore choose to pay a private hauler.

Residents and businesses not utilizing either of the above collection methods must haul their own waste to the Beulah site or one of the convenience centers operated by DCDPW.

3.4.2 Recyclable Materials Collection

Due to financial constraints prevalent in Dorchester County, no curbside recycling programs are currently available or planned by DCDPW or any municipality. However, DCDPW provides manned convenience centers and unmanned drop-off facilities that accept recyclable materials as discussed in Section 3.5.3.

Collection and handling of recyclable materials under the various state-mandated recycling programs in place in the county is described separately in Section 3.6.

3.5 Existing Waste Acceptance and Disposal Facilities

3.5.1 Waste Acceptance Facilities

DCDPW currently operates the following four facilities at which solid waste may legally be discarded in Dorchester County:

1. Beulah Municipal Landfill (Maryland Grid Coordinates 308,500N, 1,116,500E);

2. Golden Hill Convenience Center (Maryland Grid Coordinates 200,000N, 1,037,500E);

3. Secretary Convenience Center (Maryland Grid Coordinates 279,500N, 1,100,000E); and

4. Neck District Convenience Center (Maryland Grid Coordinates 279,607N, 1,014,830E).

The locations of these four facilities is shown on Figure 2-1. All are manned by DCDPW personnel while in operation. The Beulah site accepts solid waste from private haulers and county residents in addition to collection vehicles. The three convenience centers are classified as residential convenience centers and do not accept waste from collection vehicles or private haulers. The Secretary site is owned by the County, while the Golden Hill facility is located on privately-owned property leased to the County. The Neck District facility is operated on a part-time basis for two days per week only and located in the parking lot of the Neck District Volunteer Fire Department.

The Golden Hill and Secretary facilities feature drop-off areas for solid waste and transfer areas for separate collection of certain recyclables. Waste acceptance areas at the Beulah site include the active landfill cell (working face) and the residents' drop-off area. The drop-off area comprises two distinct sub-areas for acceptance and processing of waste: (i) roll-off boxes for collection of unrecoverable refuse; and (ii) recycling transfer area for separate collection of certain recyclables. Acceptance, processing, marketing, recovery, and use of recyclables are discussed in Section 3.5.3. The Neck District facility accepts commingled solid waste only. Unrecoverable solid waste deposited at all facilities is collected in roll-off boxes and transferred for disposal at the Beulah site.

These four facilities listed in this section handled the following quantities of MSW in 2013: (i) Golden Hill, 497 tons; (ii) Beulah, 654 tons; (iii) Secretary, 546 tons; and (iv) Neck District, 272 tons.

3.5.2 Waste Disposal Facilities

DCDPW is responsible for the Beulah site, which is the only operational solid waste landfill unit in the county. The site is located east of Maryland Route 16, midway between the Towns of Preston and Hurlock, approximately half a mile southeast of the Community of Beulah, and about 20 miles northeast of Cambridge. The site is accessed from Maryland Route 16. The

active Beulah Municipal Landfill has been operational since 1996, and is currently operated under Refuse Disposal Permit No. 2015-WMF-0628. The original design for a four-cell landfill was laterally expanded to include a fifth cell in 2011, increasing the total lined footprint of the landfill to 26.2 acres (Maryland Grid Coordinates 308,500N, 1,116,500E). A permit application to vertically expand the landfill disposal capacity over the existing lined footprint is currently in review and expected to be approved by MDE in 2017. The vertical expansion extends the operating life of the landfill through about 2024.

As illustrated schematically on Figure 1-1, the Beulah site receives in-county solid waste for disposal from: (i) curbside pickup operations run by the municipalities of Cambridge, East New Market, Hurlock, Secretary, Vienna, Church Creek, Galestown, Eldorado, and Brookview; (ii) the three off-site convenience centers and the on-site waste drop-off area previously described; and (iii) direct delivery of acceptable solid wastes by private haulers and waste collection vehicles.

3.5.3 Waste Recycling Facilities

3.5.3.1 Acceptance Facilities

DCDPW operates the Beulah site and two manned convenience centers that accept both refuse and recyclables. DCDPW also operates two unmanned recycling drop-off centers, which handle separated, clean recyclable materials only. The locations of all facilities is shown on Figure 2-1.

Convenience Centers: The Golden Hill and Secretary facilities feature drop-off areas for solid waste and transfer areas for separate collection of white goods, scrap metal, scrap tires, clean recyclables (i.e., paper, cardboard, certain plastics, glass, steel and aluminum cans), clean concrete, oil, anti-freeze, and brush and yard trimmings.

Beulah Drop-Off Facility: The drop-off facility comprises two distinct sub-areas for acceptance and processing of waste: (i) roll-off boxes for collection of unrecoverable refuse; and (ii) recycling transfer area for separate collection of white goods, scrap metal, scrap tires, clean recyclables, clean concrete, used oil, and anti-freeze.

Drop-Off Centers: The two drop-off centers are located in Cambridge and Hurlock. The facility in Cambridge has been moved from its old location at the Wal-Mart parking lot at Dorchester Square Shopping Center and is now located off Chesapeake Drive. Containers for cardboard, glass, newspaper, steel and aluminum cans, and plastics are provided at both the Cambridge and Hurlock facilities.

A facility layout map and recycling instructions is provided at all convenience centers and drop off facilities.

3.5.3.2 Materials Accepted

Paper and Cardboard: Recycling drop-off areas generally have bins for separate collection of corrugated cardboard, newspapers, and magazines. Telephone directories are also accepted in the magazine bin at recycling stations. White office paper is collected separately in the Dorchester County Government office building. Cardboard is recycled by the County Detention Center.

Glass: Recycling drop-off areas provide receptacles for clean glass bottles and jars.

Metal Cans: Recycling drop-off areas provide receptacles for clean steel and aluminum cans.

Plastics: Recycling drop-off areas provide receptacles for clean Type 1 (i.e., PETE, polyethylene terephthalate) and Type 2 (i.e., HDPE, high density polyethylene) narrow-neck plastic bottles and containers.

Other Compostables: Recycling drop-off facilities do not provide separate collection of food waste or other compostable materials. DCDPW does not operate any composting facilities. Limited small-scale, private composting operations exist in the county, mainly for treating chicken litter and residues at poultry farms. A small private enterprise, Environmental Recycling Company, runs a small-scale crab chum recycling operation in the southern part of the county.

White Goods: There is a program for separate collection and storage of white goods at the two convenience centers and the Beulah site.

Fluorescent and Compact Fluorescent Light (CFL) Bulbs: DCDPW currently accepts unbroken 2-ft, 4-ft, and 8-ft bulbs as well as CFL bulbs for recycling at the Beulah drop-off facility. Bulbs are required to be transported to the landfill in packing so as to prevent breakage. This service is free of charge to county residents and is for residential use only.

Other Materials: Clean concrete is recycled at the Beulah site. Spent lead-acid batteries, used oil, and antifreeze are collected separately at the convenience centers and Beulah drop-off facility. Due to financial constraints, the County does not currently have programs for household hazardous waste (HHW) or electronics recycling. However, the County may develop an electronics recycling program during the 10-year period covered by this Plan (see Section 5.1.3).

3.5.3.3 Processing, Marketing, Recovery, and Use of Recyclables

Separated/Commingled Recyclables: Separated recyclables (i.e., glass, aluminum, mixed paper, and plastics) are accepted free of charge from county residents at the Beulah drop-off facility, convenience centers, and other drop-off centers. In addition, both separated and commingled recyclables are accepted from private haulers at the Beulah site. Due to the lack of local markets for recyclables, DCDPW currently contracts a private recycling vendor to haul away these materials. Due to high equipment purchase prices for materials recovery facility (MRF) components, separation of recyclables from mixed refuse loads delivered to the landfill is not economically feasible at the present time.

Scrap Tires: In compliance with §9-228, Environment Article, Annotated Code of Maryland, all scrap tires received are processed by methods other than landfilling. Currently, scrap tires are temporarily stored at the Beulah site. DCDPW contracts a private vendor to haul away scrap tires for recycling or reuse.

White Goods and Scrap Metal: These items are collected separately at the Beulah drop-off facility and convenience centers and temporarily stored at the Beulah site. DCDPW currently has a contract in place for the removal of used large appliances with Freon and other scrap metals for recycling. A private vendor is responsible for the safe removal of Freon from refrigerant-containing appliances and pays DCDPW for each ton of scrap metal hauled from the site.

Batteries, Oil, and Antifreeze: As with metals, DCDPW has contracted a private recycling vendor to haul away batteries. Used motor oil and antifreeze can be brought to the Beulah drop-off facility and convenience centers and disposed of in clearly identified holding tanks. Recycling of oil and antifreeze is provided through a contract with Maryland Environmental Service (MES) who collects and processes the used materials at no cost to DCDPW.

Land Clearing and Construction/Demolition Debris: Where possible, clean concrete is recycled at the Beulah site, mainly for use as an alternative aggregate material for on-site projects (e.g., rip-rap protection for slopes). Other suitable land clearing material or debris (e.g., mixed loads of grub mulch, soil, stones, broken bricks, etc.) that can be used as alternative daily landfill cover, provided it is approved by MDE, or for other on-site projects is also diverted at the scale house.

Food Waste and Organics: DCDPW does not currently have a program for composting food waste and other organics, nor does it have the financial means to consider providing such composting over the 10-year planning period covered by this Plan.

Poultry Litter and Crab Chum: Currently, poultry litter and crab chum generated from within the county are routinely composted and applied to farm fields (i.e., beneficially reused as agricultural fertilizer). However, management, disposal, and/or beneficial reuse of these waste residues are identified as issues of concern to county residents. DCDPW does not have the financial means to provide solid waste composting over the 10-year planning period covered by this Plan. However, in order to avoid landfill disposal of these wastes at the Beulah site, DCDPW will encourage private enterprise to develop alternative methods (e.g., forced-air aerobic composting; in-vessel anaerobic digestion) of converting these wastes to energy and/or marketable end products. DCDPW intends to make use of their Waste Reduction, Resource Recovery, and Public Education Programs (as discussed in Section 4.3) to achieve these goals.

Fluorescent and Compact Fluorescent Light (CFL) Bulbs: Used fluorescent products collected at the Beulah drop-off facility are stored in recycling boxes that are labeled according to their contents (i.e. "Universal Waste – Fluorescent Lamp") until full. Full boxes are then shipped to the designated recycling facility:

Veolia Environmental Services
230 Canton St.
Stoughton, Massachusetts

Landfill personnel follow applicable regulations associated with Universal Waste and General Management Standards. All items are bulked into boxes specially designed for tubes and CFLs. The boxes, which contain a special liner system so as to prevent contamination or the spread of material should the bulbs breaks, are ordered from Easy Pak, a recycling processor, and arrive with prepaid return shipping by FedEx. Recycled totals are included in the Annual Recycling Report to MDE. Information on the purchase of the recycling boxes can be provided for commercial use if requested.

3.5.4 Other Permitted Waste Management Facilities in Dorchester County

3.5.4.1 Closed County-Owned Landfills

DCDPW is responsible for three closed landfills, the current status of which is as follows:

1. Secretary Sanitary Landfill, which was certified closed in 1982.

2. Golden Hill Sanitary Landfill, which ceased waste placement operations in 1991. A closure plan for the site was submitted to MDE for approval in 1994, although construction of the final cap was not completed until 1999. However, MDE did not certify site closure at that time due to concerns about the ability of the installed cap's

performance in accordance with the closure plan. Subsequent field investigations and laboratory analyses of cover soil properties were undertaken in 1999, 2001, June 2005, and April 2006, and a cap performance modeling evaluation was carried out in June 2005 and May 2006. Based on these, in June 2006 MDE has accepted the adequacy of the installed soil cap and approved leaving the existing cap in place subject to certain agreed conditions for cover maintenance.

3. Old Beulah Sanitary Landfill, which ceased waste placement operations in 1996. Design and permitting of a final cover for this historical unlined landfill was delayed while various feasibility analyses for full/partial waste relocation and site redevelopment were conducted. However, in 2012 the County elected to cap the waste in place. Construction of the final cover system was completed in September 2016.

DCDPW will continue providing post-closure care and monitoring for these sites as appropriate to the extent required by MDE, as described in Section 5.4.3.

3.5.4.2 Closed Private Landfills

Waste Management of Cambridge, Inc. is responsible for the Hunting Ridge Landfill, a closed rubble and construction and demolition debris (CDD) disposal facility adjacent to the Beulah site. This unlined landfill operated from 1990 until 1993. MDE requires that post-closure monitoring of the Hunting Ridge Landfill continue for a minimum of 30 years; monitoring reports are submitted to MDE and are available for inspection.

Beginning in 1976, Adho, Inc. (aka Messick & Parks) operated a private rubble landfill on a 12.5-acre property located on Handley Road near Cambridge (as identified on Dorchester County Tax Map 31, Parcel 13). The landfill was closed in the early 1990s and there are no known environmental issues related to the facility.

3.5.4.3 Other Facilities

No other permitted waste acceptance or disposal facilities, materials recovery facilities (MRFs), Controlled Hazardous Substance (CHS) facilities, injection wells, or industrial waste liquid holding impoundments) exist in the county.

A number of solid waste and recycling convenience centers or drop-off facilities are operated in the county; however, these do not accept waste from collection vehicles. Therefore, they do not require a permit.

3.6 Existing Recycling Programs

3.6.1 Requirements for Public Schools Recycling Program

Developing a Public Schools Recycling Program (PSRP) for inclusion in this Plan is required under Sections 9-1703(b) and (g) of the Environment Article, Annotated Code of Maryland, "*Environment – Recycling – Public School Plans,"* issued in 2010. To this end, the Dorchester County Board of Education (BOE) and the Chesapeake College Cambridge Center (CCCC) developed and implemented the PSRP at all schools and institutions within their respective jurisdictions. The Council directed the DCDPW Division of Solid Waste (DSW) to help develop the PSRP for the BOE and CCCC, as described in Sections 3.6.2 and 3.6.3. All individual plans and programs previously in place at schools, other BOE facilities, and the CCCC were superseded and replaced by the more comprehensive PSRP, which was implemented on 1 January 2011.

3.6.2 Dorchester County Board of Education Recycling Program

3.6.2.1 Development and Implementation

Designation of Responsibility: The Director of the Dorchester County School Maintenance Department (Director) is responsible for the development and implementation of refuse collection and recycling plans and programs at each public school within their jurisdiction. Within this overall framework, the BOE designated the responsibility of developing and implementing the PSRP to the Director.

Recycling Contract and Marketing of Recyclables: The BOE is responsible for securing a recycling contract for all public schools. This contract is awarded annually and becomes effective on 1 July each year. The recycling contract is for a single-stream program that accepts paper, newspaper, cardboard, glass bottles, steel and aluminum cans, and plastic bottles for recycling outside the county limits. The recycling contractor is also responsible for the marketing of all collected recyclables. The terms of the current contract will be reviewed annually and may change in the future based on market conditions and requirements.

Collection of Recyclables: The recycling contractor is responsible for supplying centralized recycling containers at each public school. The Director sets the schedule for the collection of recyclables from each school by the recycling contractor consistent with the specific needs of each school and the size of the recyclables stream. The BOE is responsible for purchasing sufficient recycling bins for distribution throughout the school premises (e.g., in classrooms, by copiers, etc.) as appropriate. It is the responsibility of the custodial staff at each public school to collect recyclables for transport to the contractor recycling containers from the school recycling bins. At a minimum, each public school collects all of the materials

specified in the BOE awarded recycling contract. Public schools may also collect other recyclables including, but not be limited to, printer cartridges, electronics, metal, light bulbs, textiles, and compostable vegetative material.

Reporting: By 14 February each year, the recycling contractor must report to the Director the amount and type of recyclables collected for the previous calendar year. Thereafter, the Director summarizes and reports these data to the BOE and DSW in an agreed format.

Out-of-Contract Recycling: Each public school is free to pursue their own separate recycling program for materials (for example, as a method of increasing their income to fund extracurricular programs). However, any independent contract entered into by a school, or a club within a school, does not exempt the school or club from having to collect the materials identified in the BOE recycling contract. Further, consistent with the reporting obligations outlined above, the school or club must report, by 14 February each year, to the Director and DSW the amount and types of recyclable materials collected independently in the previous calendar year.

Non-Compliance and Corrective Actions: The Director is required to brief the BOE and DSW on any recycling issues or non-compliance with any schools recycling program within 30 days of the issue arising. Part of the briefing includes advice on steps needed to correct the issue. Corrective actions are required to begin within 60 days of the issue first arising. In the event of being notified of a serious non-compliance issue requiring corrective actions to be taken, the BOE may immediately terminate the current recycling contract. In this case, the BOE has the responsibility for securing a new recycling contract. The BOE shall prepare bid specifications for reissue of the recycling contract within 30 days of termination of the previous contract and award the new contract within 60 days. Once the recycling contract has been reassigned, the BOE is required to notify the Council and DSW of its decision.

3.6.2.2 Participating Public Schools and Facilities

The PSRP applies to the 12 schools listed in Table 3-4 as well as the two facilities listed below. In addition, any newly constructed public schools in the county shall be included in the PSRP within three months of opening.

1. Board of Education
   700 Glasgow Street, Cambridge, MD 21613
   410-228-4747

2. Judy Center
   1405 Glasgow Street, Cambridge, MD 21612
   410-221-5268

3.6.2.3 Schedule for Review and Modification

DSW reviews the BOE's recycling program at least annually, based upon the annual recycling reports provided by the Director, and presents their findings and recommendations to the BOE by 1 May each year.

3.6.3 Chesapeake College Cambridge Center Recycling Program

3.6.3.1 Development and Implementation

Designation of Responsibility: To provide consistency across college campuses, the Chesapeake College Board of Trustees (CCBOT) governs development and has responsibility for implementation of the PSRP for all campuses, including the CCCC based in Cambridge. However, specific responsibility for developing and implementing the PSRP at the CCCC campus was designated to the Chesapeake College Director of Facilities (College Director). To help the College Director meet this responsibility, CCCC has established a "Green Team" composed of Administration, Faculty, and Students to assist with collecting, transporting, and properly disposing of recyclables from the CCCC, along with other opportunities for sustainable practices.

Recycling Contract and Marketing of Recyclables: The College Director is responsible for ensuring the collection, transporting, and disposing of collected recyclables. To date, the CCCC has not entered into a commercial recycling contract and does not anticipate doing so for the PSRP. The decision on whether to award a recycling contract will be reviewed periodically. Under the PSRP, recycling is performed by the Green Team and CCCC custodial staff. Recyclable materials separated out for collection and handling are paper, newspaper, cardboard, aluminum cans, and plastic bottles. This may change in the future based on market conditions and requirements.

Collection of Recyclables: The College Director is responsible for supplying centralized recycling containers at the CCCC and is also responsible for purchasing sufficient recycling bins for distribution throughout the CCCC campus (e.g., outside lecture halls, by copiers, etc.) as appropriate. The College Director has set a schedule for the collection of recyclables from the CCCC. The CCCC custodial staff is responsible for emptying the recycling bins as needed into the centralized containers. In accordance with the schedule set by the College Director, it is also the responsibility of the CCCC custodial staff to transport collected recyclables to the college's main campus at Wye Mills, Maryland, where all recyclables are sorted and deposited in the recycle igloos located at the rear entrance of the campus.

Reporting: The Green Team reports, by 14 February each year, to the College Director the type of recyclables collected for the previous calendar year. Thereafter, the Director summarizes and reports these data to CCBOT and DSW in an agreed format.

Non-Compliance and Corrective Actions: The College Director is required to brief the CCBOT, CCCC, and DSW on any recycling issues or non-compliance with the PSRP within 30 days of the issue arising. Part of the briefing includes advice on steps needed to correct the issue. Corrective actions are required to begin within 60 days of the issue arising.

3.6.3.2 Participating College Facilities

Only the Chesapeake College Cambridge Center located at 416-418 Race Street, Cambridge, Maryland 21613 (Phone: 410-228-5754) is currently included in the PSRP. Any newly constructed facilities shall be included in the PSRP within three months of opening.

3.6.3.3 Schedule for Review and Modification

DSW reviews the CCCC recycling plan at least annually, based upon the annual recycling reports provided by the College Director, and presents their findings and recommendations to CCBOT and CCCC by 1 May each year.

3.6.4 Apartment Building and Condominium Recycling Program

In April 2012, the Maryland General Assembly passed House Bill 1, "*Environmental Recycling – Apartment Buildings and Condominiums Recycling (ABCR) Program*," requiring recycling in all apartment building and condominiums that contain 10 or more dwelling units. The law became effective on 1 October 2012 (amending Section 9-1703 of the Environment Article, Annotated Code of Maryland). Section 9-1703 (b) (12) of the Environment Article, Annotated Code of Maryland required that Dorchester County revise its Plan accordingly by 1 October 2014. Similarly, apartment building and condominium (ABC) officials (e.g., owners or managers of an apartment building or councils/associations representing unit owners of condominiums) must implement a recycling plan by 1 October 2014.

The Council directed the DCDPW Division of Solid Waste (DSW) to develop the ABCR Program for inclusion in this Plan. DSW has identified 53 apartment building and condominium properties within Dorchester County (ZIP Code 21613) as falling under the scope of the ABCR Program. These properties are presented in Table 3-5.

3.6.4.1 Collection of Materials

ABC officials directly, or through contracting with a private sector company, are responsible for providing all container, labor, and equipment necessary to fulfill recycling requirements

throughout their buildings. Distinctive colors and/or markings of recycling containers should be provided to avoid cross contamination unless the ABC official contracts with a private company to provide single stream recycling. ABC officials must ensure collection and transportation of recyclable materials to secondary materials markets or other legal recycling destinations. Materials collected through the ABCR Program will not be accepted at the landfill or convenience centers. Residents will be responsible for placing recyclables in recycling containers prior to their removal on the scheduled collection day.

3.6.4.2 Marketing of Materials

ABC officials are responsible for the marketing or other legal disposition of their recyclables. ABC officials shall submit an annual survey form to DCDPW Division of Solid Waste Division (DSW) detailing the recycling and waste tonnages removed from the apartment and condominium and the markets or legal recycling destinations for the materials.

3.6.4.3 Materials required to be Recycled

Recycling of plastic, metal, glass, and paper is required under the ABCR Program.

3.6.4.4 Responsible Parties

Three entities will be involved in implementing the ABCR Program.

Dorchester County Council: The Council is responsible for adopting the MDE-approved language for the ABCR Program within an updated or amended Plan, as described herein.

Division of Solid Waste: DSW will provide information of the ABCR Program received from the MDE to ABC officials to facilitate their development and maintenance of a recycling program for residents. DSW will also stay up-to-date with ABCR Program requirements and update/amend the Plan as necessary to include new properties in the ABCR Program. DSW will provide a copy of the annual survey form to be used by ABC officials in reporting their recycling activities at the end of each year, and also monitor the progress and overall performance of the ABCR Program.

Apartment Building and Condominium Officials: ABC officials are responsible for: (i) providing recycling services to the residents of each apartment building or condominium by 1 October 2014; (ii) securing and managing recycling contracts for providing material collection and recycling services from building locations; (iii) providing material collection bins and containers of suitable quantity and size for occupants to collect and transfer recyclables to designated areas on site for transporting of the materials from the buildings to recycling markets; and (iv) recordkeeping and submission of a survey form to DSW on an annual basis.

3.6.4.5 Development and Implementation Schedule

Prior to 1 July 2014, the Council were required to make the approved language for the ABCR Program available to ABC officials via the Dorchester County Government website. Prior to 1 August 2014, ABC officials were required to provide training or assistance to the residents and advise them of the date when recycling would be available. Arrangements for transportation of collected recyclables to acceptable recycling markets were required to have been made prior to 1 September 2014 such that residents could start recycling on or before 1 October 2014.

3.6.4.6 Newly Established Apartment Buildings and Condominiums

New apartment building and condominiums that meet the ABCR Program requirements shall begin participation in the program within three months of being notified by DSW.

3.6.4.7 Monitoring and Enforcement

ABC officials are responsible for keeping residents current on new regulations, laws, and mandates affecting recycling and provide new materials, practices, and procedures when needed. DSW are responsible for monitoring the progress and performance of the ABCR Program and have the right to inspect properties for compliance and containers utilized as well as review records.

DSW are tasked with ensuring that recycling at apartment buildings and condominiums is implemented in accordance with the requirements of the ABCR Program. Upon receiving a complaint or report of violation, DSW will institute an investigation, and if a violation exists, issue a written notice to the responsible ABC offical requiring them to correct deficiencies and perform other tasks as necessary to achieve compliance. ABC officials are required to initiate actions to correct deficiencies and perform other tasks necessary to achieve compliance within 60 days. Failure to correct a violation within the specified time will result in citation for a civil infraction in accordance with Section 9-1711 of the Environment Article, Annotated Code of Maryland, which is punishable by a fine not exceeding $50 for each day after the violation occurred. Each day a violation is permitted to persist constitutes a separate offense. If the fine is not paid in a timely manner, DSW may enforce the fine through a court action.

3.6.5 Special Events Recycling Program

In 2014, the Maryland General Assembly passed Senate Bill 781, "*Environment – Recycling – Special Events*." The law requires organizers of special events meeting certain criteria to

provide a recycling receptacle adjacent to each trash receptacle, ensure recycling receptacles are clearly distinguished from trash receptacles, and ensure that recyclable materials are collected for recycling. Special event organizers must conduct recycling in accordance with the Special Events Recycling Program (SERP) as described herein at all events subject to the law after 1 October 2015.

The Council directed the DCDPW Division of Solid Waste (DSW) to develop the SERP for inclusion in this Plan.

3.6.5.1 Special Events and Facilities/Sites Subject to the Recycling Program

Special events organizers are required to provide for recycling at special events that meet the following three criteria: (i) includes temporary or periodic use of a public street, publicly-owned site or facility, or public park; (ii) serves food or drink; and (iii) is expected to have 200 or more persons in attendance. Projected attendance may be estimated based on past attendance, number registered to attend, the venue's seating capacity, or other similar methods.

In consultation with municipalities, DSW identified a number of publicly-owned sites within the county that host or may host special events meeting the above criteria. These sites are listed in Table 3-6. In addition to the sites listed individually, special events taking place at County Schools (see Table 3-4), the Chesapeake College Cambridge Center, on any local, State, or Federally-owned streets are also included in the SERP.

Recycling at special events held at a state-owned facility/site must follow the appropriate state agency's recycling plan, if available. Recycling at special events held at a federally-owned facility/site must follow the applicable federal recycling plan(s). If no state or federal recycling plan is available, the special event organizer must set up a recycling program in accordance with this SERP. Special events recycling at municipally-owned facilities or sites must follow any additional regulations established by the municipality.

3.6.5.2 Materials required to be Recycled

At a minimum, recycling at special events must include collection of plastic containers, metal containers, glass containers, and paper. The special events organizer must also 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.

3.6.5.3 Collection of Materials

Special events organizers are responsible for providing and placing recycling receptacles adjacent to each trash receptacle at the event (except where already existing on site), ensuring that recycling receptacles are clearly distinguished from trash receptacles by color or signage, providing any other labor and equipment necessary to carry out recycling at the event, ensuring that materials placed in recycling receptacles are collected and delivered for recycling, and 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: (i) self-hauling the materials to one of the DCDPW recycling drop-off sites, if approval is sought and provided in writing by DSW at least 14 days prior to the special event; (ii) contracting with a recycling hauler to collect the materials and deliver them for recycling; or (iii) receiving prior agreement from the site owner to use an existing recycling collection system if available at the site.

3.6.5.4 Oversight and Monitoring

DSW is responsible for overseeing the SERP and ensuring that all properties that potentially host events falling under the recycling mandate in Section 9-1712 are included. DSW is also responsible for communicating the requirements of the SERP to prospective special events organizers and persons responsible for publicly-owned sites in the county. To the extent possible, DSW will offer assistance to special events organizers in setting up recycling programs and developing and communicating any additional requirements for recycling under the SERP. DCDPW is responsible for monitoring progress and performance of the SERP.

Special events permits issued for sites listed in for inclusion in the SERP will include a statement on the permit application that recycling is required. The special event organizer is responsible for monitoring the implementation of recycling at the event and ensuring that the event complies with the requirements of the SERP. Special event organizers must oversee placement and labeling of recycling receptacles and collection and recycling of recyclables. The 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.

3.6.5.5 Enforcement

DSW or a designated office of the municipality in which an event is located may conduct inspections of the event to ensure compliance with the SERP. If a violation of the SERP is detected, DSW or the municipality may pursue an enforcement action against the special

event organizer. Violation of the SERP is subject to a civil penalty not exceeding $50 for each day the violation exists. Any penalties collected for violation of the SERP must be paid to Dorchester County Government or the municipality that brought the enforcement action.

4. ASSESSMENT OF NEEDS AND CONSTRAINTS

4.1 Assessment of the County's Needs

4.1.1 Requirements and Existing Capacities

Guidelines for operation at the solid waste facilities are set and regulated by federal, state, and local laws, ordinances, regulations, and permits. This section provides an assessment of the need to alter, extend, modify, or add to existing solid waste acceptance and disposal systems in the county during the next ten years.

4.1.1.1 Waste Acceptance

In addition to regular curbside collection of solid waste in nine municipalities, the County operates a solid waste drop-off facility at the Beulah site and two full-time and one part-time solid waste convenience centers for use by county residents. Because these facilities do not serve as disposal centers (i.e., they do not have finite capacities), it is anticipated that with proper maintenance and care they will remain in service for the entire 10-year duration of this Plan. Therefore, no additional waste acceptance facilities are planned.

4.1.1.2 Waste Disposal

Currently, the only active landfill for MSW disposal in Dorchester County is the Beulah Municipal Landfill. According to the County's "*Solid Waste Tonnage Report for Calendar Year 2014*," about 47,974 tons of waste was landfilled in 2014, which equated to 66,014 cubic yards. The remaining permitted disposal capacity in the existing landfill was estimated at approximately 282,360 cubic yards or 269,750 tons. Based on the current waste acceptance rate and observed changes in the waste disposal rate in recent years, DCDPW projects 2018 as the calendar year in which the landfill will reach capacity. This aligns with modest annual growth expectations for waste generation in the county of about 1.0% as outlined in this Plan (see rationale in Section 3.2).

A permit application to increase the waste disposal capacity at the Beulah Municipal Landfill by vertically expanding the landfill over the existing lined footprint is currently under review by MDE and expected to be approved in 2017. By increasing the maximum elevation of the landfill from the current limit of 107 feet above mean sea level (ft-msl) to a new limit of 175 ft-msl, it is estimated that about 450,000 cubic yards of additional capacity can be realized. Assuming this capacity is needed starting in 2018, along with a 1.0% annual increase in waste generation and stable rates of recycling and waste diversion, the vertical expansion should provide approximately six years of additional disposal capacity. Therefore, it is expected the expanded landfill can provide waste disposal capacity through about 2024.

Notwithstanding the above, it is noted that DCDPW is sensitive to local residents' aesthetic and environmental concerns over the final height of Beulah Municipal Landfill. For these reasons, DCDPW plans to proceed with design and permitting of new landfill disposal capacity as soon as is practicable, and thus may elect not to utilize the full permitted vertical expanse of Beulah Municipal Landfill. During the course of the 2017 through 2026 planning period covered by this Plan, therefore, DCDPW plans to cease active operation of the Beulah Municipal Landfill and develop a new 67-acre landfill facility (Dorchester County Municipal Landfill) collated with the existing landfill at the Beulah site (see Section 4.1.2).

Dorchester County does not have specific definitions or specifications pertaining to disposal of wastes at rubble landfills, because no dedicated rubble landfill currently exists in the county or is planned to be constructed over the next 10 years. For this reason, the Plan does not take a position on development of such landfills. However, if pursuant to zoning criteria (per Section 2.3) and subject to approval by the County Board of Zoning Appeals a rubble landfill is planned in the future, Section 9-210(b) of the Environment Article, Annotated Code of Maryland requires that specific wastes authorized for disposal at such a facility be defined in the Plan. If this occurs, DCDPW will revise this Plan to include such definitions and specifications.

4.1.1.3 Recycling and Composting

In addition to the manned drop-off facilities at the Beulah site and convenience centers, which accept both refuse and recyclables, DCDPW operates two unmanned drop-off centers handling separated, clean recyclable materials. It is anticipated that these facilities will remain in service for the foreseeable future. As of September 2017, DCDPW is in the process of establishing a new recycling convenience center directly across from the City of Cambridge Public Works Department at 705 Leonards Lane. The unmanned facility will not accept solid waste, but will have containers for cardboard, glass, newspaper, steel and aluminum cans, and plastics. DCDPW also plans to coordinate with Planet Aid to set up clothing donation boxes. This facility is intended to improve county residents' access to recycling, but is not being installed due to an identified shortfall in recycling capacity. Other than this facility, therefore, no additional recycling facilities are currently planned over the 10-year planning period covered by this Plan.

Recycling in accordance with the various state-mandated recycling programs in place in the county was described separately in Section 3.6. DCDPW does not intend expanding these programs over the next ten years unless directed to do so by MDE, in which case a revision to this Plan will be required.

DCDPW does not currently have a solid waste composting program, nor does it have the financial means or intention of providing solid waste composting over the 10-year planning

period covered by this Plan. However, diversion of organics from landfill disposal would contribute meaningfully towards increasing the County's MRA recycling rate, conserving landfill disposal capacity, and improving environmental performance at the landfill operation. Therefore, if technically and financially feasible, DCDPW may consider entering into a private-public partnership (P3) for development of a facility for aerobic composting or anaerobic digestion of food waste, yard waste, and other organics collected in the county. Development of such a facility could also be considered in partnership with municipalities or neighboring counties.

Outside of a countywide composting program, a few small-scale and material-specific private composting operations exist in the county, most notably some poultry farms, which compost chicken litter and residues, and the crab chum composting operation run by Environmental Recycling Company in the southern part of the county. DCDPW is generally supportive of such composting efforts as long as operators provide adequate environmental safeguards, protect public health and safety, and minimize odors and other nuisances.

4.1.2 Proposed Facilities

As discussed in Section 4.1.1, no additional waste acceptance, recycling drop-off, or composting facilities are proposed during the next ten years. However, it is expected that additional landfill disposal capacity will be needed within the ensuing ten-year period covered by this Plan to avoid hauling waste to out-of-county facilities. To continue serving the solid waste management needs of county residents and businesses, DCDPW will need to laterally expand the existing landfill, provide an alternative site or landfill unit for waste disposal, or develop an alternative waste conversion facility (e.g., waste-to-energy incinerator). The most practical and cost-effective option identified by DCDPW is to extend landfill operations by developing a new 67-acre landfill unit (Dorchester County Municipal Landfill) at the Beulah site (Figure 4-1). Utilizing the existing site is cost-effective as landfill infrastructure (e.g., site access controls and roads, scale house, offices facility, utilities, and communication systems) can remain in place to serve the new operation. In addition, the existing environmental monitoring network can be expanded to include the new landfill.

Based on the conceptual design layout depicted on Figure 4-1, Dorchester County Municipal Landfill could provide as much as 8,000,000 cubic yards of additional waste disposal capacity if developed to its full geometrically-feasible extent. This will be sufficient to serve the needs of county residents and businesses for over 50 years. However, it is noted that DCDPW is sensitive to local aesthetic and environmental concerns that may limit the final size of the landfill. For these reasons, and to conserve its capital improvement budget, DCDPW plans to develop the landfill as a series of cells, with the cell construction schedule implemented as

slowly as practicable, and may elect not to utilize the full permitted vertical and/or lateral expanse of the facility.

4.1.3 Description of Regional Solid Waste Management Agreements

With respect to regional planning, the Council supports and fosters cooperation with adjoining counties and states and intends to interface with neighboring jurisdictions to the extent possible to periodically review potential cooperative plans on specific projects for solid waste disposal and recycling. DCDPW and other County officials have occasionally met with representatives from Maryland Environmental Service (MES), private waste management companies, as well as public works and municipal officials from neighboring counties. However, Dorchester County is not currently party to any regional solid waste management agreements and no refuse generated outside the county is knowingly collected for processing or disposal within the county (and vice versa).

4.2 Consideration of Potential Limitations on Development

For the 2017 to 2026 planning period cover by this Plan, geographic, geologic/hydrogeologic, and hydrologic considerations for developing a new sanitary landfill will be described "site specific" to the existing Beulah site, based on the assessment in Section 4.1 that proposed development of the Dorchester County Municipal Landfill on a property parcel adjacent to the existing Beulah Municipal Landfill operation is optimal. This, along with other existing waste and recycling acceptance and processing systems, will more than adequately serve the county's solid waste management needs for the foreseeable future.

4.2.1 Geographic Considerations

4.2.1.1 Location and Topography

The Beulah site is located east of Maryland Route 16, midway between the Towns of Preston and Hurlock, approximately half a mile southeast of the Community of Beulah, and 15 to 20 miles northeast of the City of Cambridge. The location of the facility is shown on Figure 2-1. Natural elevations at the site range from about 17 to 40 ft-msl. Site access from Maryland Route 16 is provided at the southwestern corner of the property. A scale house is located to the west of the gravel pits near the gated entrance to the site. This scale house is used to control access to the Beulah site as well as access to and disposal of waste in the active landfill. The site is bounded as follows (Figure 4-1): (i) to the north by Gravel Run and its tributaries (stream banks are buffeted by wetlands and floodplains); (ii) to the northeast by a state-owned inactive rail line previously operated by the Maryland and Delaware Railroad; (iii) to the south by Hunting Ridge Rubble Landfill, a closed unlined rubble landfill owned by Waste Management of Cambridge, Inc., and privately-owned parcels of property used

primarily for agriculture; (iv) to the west by the Maryland Veterans Cemetery (a 300-ft setback is required between any landfill and the cemetery boundary); and (v) to the southeast by other County-owned parcels of property.

The Beulah site was opened in 1972 under Refuse Disposal Permit No. 72-09-12-03A and currently comprises two distinct waste disposal units: (i) closed Old Beulah Landfill, which was an old style cut-and-fill operation lacking an engineered liner system; and (ii) active Beulah Municipal Landfill, currently operated under Refuse Disposal Permit No. 2015-WMF-0628. The active landfill unit is located to the east of the closed unit on the opposite side of a branch tributary which bisects the site running in a south-north direction. The Old Beulah Landfill consists of an approximately 45-acre unlined disposal cell that received MSW and other approved wastes from early 1973 until November 1995. Rubble waste was placed in the landfill during 1996. The maximum landfill elevation is approximately 52 feet above mean sea level (ft-msl). Old Beulah was closure capped in 2016. The currently active Beulah Municipal Landfill has been operational since 1996 and was constructed having a geomembrane liner system. The landfill currently comprises five cells constructed over 26.2 acres. A permit application for vertical expansion of the landfill to a peak elevation of 175 ft-msl is currently under review by MDE and expected to be approved in 2017.

4.2.1.2 Land Use

Dorchester County Tax Assessment Map 5, compiled by the Maryland Department of Planning Property Mapping Section, shows that the Beulah site comprises portions of four parcels of property owned by the Dorchester County Commissioners: (i) 170-acre P.10, on which the Old Beulah Landfill is sited; (ii) 259-acre P.62, on which Cells 1-4 of the existing Beulah Municipal Landfill are sited; (iii) 11-acre P.216, on which Cell 5 of the existing Beulah Municipal Landfill is sited, and (iv) 30-acre P.140, which was previously subdivided from but is fully enclosed within P.62. The proposed 67-acre Dorchester County Municipal Landfill is located within P.140 and P.62 (Figure 4-1).

After exhausting available road fill and gravel resources in P.10, the County purchased the 60-ac. P.15, which is located directly east and south of P.62. This parcel of land, which is termed the “Soil Safe Area” in reference to the land’s previous owner (Eastern Shore Concrete), is currently used for sourcing soil and gravel materials for DCDPW, including soil used in ongoing landfill waste disposal operations at the Beulah Municipal Landfill. Therefore, continued use of the site area for landfill operations is fully consistent with the original planned use of the properties. (It is noted that approximately 11 acres of land formerly within P.15 were transferred to create P.216 in 2008 to allow for the construction of Cell 5 during lateral expansion of the Beulah Municipal Landfill.)

4.2.1.3 Zoning

The Dorchester County Office of Planning and Zoning designates the Beulah site, as well as all surrounding parcels of property as "AC – Agricultural Conservation District." A Solid Waste District (i.e., zone in which a solid waste disposal facility may be sited) may be established in this type of zone, pursuant to Chapter 155, Section 40(A) of the Dorchester County Code. The site also satisfies the additional criteria necessary for zoning a Solid Waste District as outlined in Section 2.3.

4.2.1.4 Defined Critical Areas

The existing and proposed sanitary landfill units at the Beulah site are more than 2,000 feet away from tidal waters, which is outside the 1,000 foot buffer zone required by the State of Maryland's Critical Areas Law. Therefore, the site is not a defined critical area.

4.2.2 Geologic and Hydrogeologic Considerations

4.2.2.1 Soil Types and Characteristics

Soils at the site belong to the Sassafras-Galestown-Woodstown Association and are characterized as moderately coarse to coarse textured, well drained soils. Soils listed on the site by the Soil conservation are Downer sandy loam, Fort Mott loamy sand, Runclint sand, and Fluvaquents (floodplain). In general, site soils are well drained sands with some lenses of silt/clay found in the subsurface.

4.2.2.2 Geologic Conditions

Dorchester County is located on the Coastal Plain Physiographic Province. The Coastal Plain is general characterized as a series of unconsolidated Cretaceous to Quaternary deposits. The deposits lie on a basement of crystalline rock which dips to the Southeast in a gentle homoclinal structure. The formations overlying this basement rock form units which thicken to the southeast or direction of dip. The unconsolidated formations overlying the basement in the proposed site area are the Patuxent, Arundel, Patapsco, Raritan, Magothy, Matawan, Monmouth, Brightseat, Piney Point, Calvert, Choptank, St. Mary's, Pensauken and Beaverdam Formations. The combined thickness of these units is about 3,000 feet.

The surface geologic formations at the Beulah site location consist of an outcrop of the Beaverdam Formation, a late Pliocene or early Pleistocene sand deposit which forms a relatively thin cap over the underlying Pensauken Formation. These deposits consist of tan to brown sands with some pebble to gravel sized material. Thin layers of silt are also present in this formation. The sands of the Beaverdam Formation range from 0 to 5 feet in thickness at the site and cover most of the area to be used for cell construction. The Pliocene Pensauken

Formation underlies the Beaverdam at the proposed site. The soils of this formation consist of red and tan gravely sands with occasional small lenses of silt and clay. The soil deposits are about 50 feet thick and unconformably overly the St. Mary's Formation. The soils of the St. Mary's Formation consist of fine grained sediments (i.e., clays, silts, and fine sands). This layer acts as a confining unit, separating the unconfined Columbia Aquifer in the Beaverdam and Pensauken Formations from a series of confined underlying aquifers.

4.2.2.3 Aquifers

Aside from the surficial Columbia Aquifer, which serves limited local use for farming purposes (i.e., livestock watering and agricultural irrigation) but is not used as a source of drinking water, the following aquifers of the Chesapeake Group underlie the site:

Patuxent Aquifer:	Depth: Greater than 1200 feet Use: None
Patapsco Aquifer:	Depth: Greater than 1200 feet Use: None
Magothy Aquifer:	Depth: 1200 feet Use: Primarily used for irrigation
Monmouth Aquifer:	Depth: Less than 1200 feet Use: None
Aquia Aquifer:	Depth: Less than 1200 feet Use: None
Piney Point Aquifer:	Depth: 350 feet Use: Potable water source (primary drinking water source for Dorchester County)
Calvert/Choptank Aquifer:	Depth: 50 feet Use: Potable water source

4.2.3 Hydrologic Considerations

4.2.3.1 Site Water Management

Runoff from the active Beulah Municipal Landfill is directed to three small retention ponds located around the landfill. Similarly, runoff from the proposed Dorchester County Municipal

Landfill will be directed to on-site retention ponds. Runoff from closed landfill units (i.e., existing Old Beulah Landfill and future Beulah Municipal Landfill and Dorchester County Municipal Landfill) is or will be properly controlled using appropriately scaled sideslope benches, swales, downchutes, and other appropriate stormwater management features and ponds. Rainfall runoff not associated with the existing or former landfill operations also accumulates in two other ponds located at the site, one at the southwest corner and the other near the north-northwest corner.

4.2.3.2 Surface Water

The primary surface water feature in the vicinity of the Beulah site is Gravel Run and its tributaries (stream banks are buffeted by wetlands and floodplains). Gravel Run is a tributary to Hunting Creek, which flows westward of the property and is itself a tributary to the Choptank River. The primary source of surface water that is located on or around the site is rainfall. The largest quantity of rainfall occurs during the winter/early spring months.

4.2.3.3 Wetlands

Dorchester County has both tidal and non-tidal wetlands. However, no tidal wetlands exist at the Beulah site. The site is bounded to the north by the Gravel Run stream and/or its tributaries, and a branch tributary bisects the property running in a south-north direction. Stream banks are buffeted by non-tidal wetlands and associated floodplains. Disturbance of wetlands should not occur as a result of site development.

4.2.3.4 Floodplains

Floodplains are located to the north and west of the Beulah site. These vary from 250 feet to 350 feet in width, and 15 feet to 25 feet in depth. Disturbance of the floodplain should not occur as a result of site development.

4.2.3.5 Watersheds

The total drainage area of the watershed system associated with the Beulah site is approximately 1,900 acres. Currently, 26 acres of this large watershed have been developed as the active landfill area and 45 acres were previously developed as the Old Beulah Landfill. The maximum combined watershed area covered by both active and closed landfills is 71 acres, less than 4% of the watershed's total drainage area. Adding Dorchester County Municipal Landfill would increase coverage to 138 acres, about 7% of the watershed's total drainage area. As discussed above, stormwater management is already provided for the 26-acre active Beulah Municipal Landfill and 45-acre Old Beulah Landfill. Stormwater

management will be provided for the new landfill unit. Therefore, the current and future impact of site development on the watershed should be minimal to none.

4.2.4 Existing Water Quality

A network of six groundwater monitoring wells is in place around the active Beulah Municipal Landfill on P.62, including one new well installed during construction of Cell 5 in 2011. Eleven wells are located around the existing Old Beulah Landfill on P.10, including three wells installed in July 2006. A further six wells are currently located in the area of P.140/P.62 proposed for development of Dorchester County Municipal Landfill. These will be replaced or supplemented with new monitoring wells as part of site development.

Routine groundwater monitoring at the Beulah site since 1991 has shown some low levels of contaminants in the monitoring well network associated with the unlined Old Beulah Landfill, although no exceedances of maximum contaminant level (MCL) standards for drinking water established by the U.S. EPA have occurred. Groundwater data from the six wells in the P.140/P.62 area have shown some exceedances in the concentrations of nitrogen compounds, most likely due to the former Bay Organics composting operation that existed on the property until 2008. The Bay Organics operation has been fully dismantled and the site cleaned up such that the residual pollution potential is very low. The Old Beulah Landfill was capped with a low permeability final cover system in 2016, which should reduce the rate of infiltration into the waste and, by association, the rate of leakage from the landfill base. In addition, due to the site's hydrogeological isolation from the confined aquifers used as drinking water supply for local homesteads and the fact that surface water sampling shows minimal to no impacts, groundwater contaminant levels are not considered to pose a current or future threat to human health or the environment.

The Beulah Municipal Landfill has a composite geomembrane liner and leachate collection system, as will the proposed Dorchester County Municipal Landfill, which means the potential for future groundwater contamination as a result of leachate leakage from ongoing landfilling operations is low. Due to the network of groundwater monitoring wells at the site, leakage of leachate through the liner system will be detected by downgradient wells, allowing proper remedial action to be promptly taken. Any potential leakage will most likely only influence the upper Columbia Aquifer because the vertical movement of the contaminants to deeper aquifers will be inhibited by the confining St. Mary's Formation. Because local drinking water supply wells are typically screened at the lower aquifers from the Chesapeake Group, any potential leakage will not pose an immediate threat to nearby populations utilizing groundwater.

4.2.5 Planned Long-Term Growth Patterns

As previously described in Section 4.1.2, development of the Beulah site as planned will provide additional waste disposal capacity for over 50 years, thus adequately providing for the future waste disposal needs in the county. Nevertheless, for environmental, conservational, and economic reasons, the County will continue to investigate providing additional composting, waste reduction, reuse, and/or recycling options to reduce reliance on landfilling.

The County has and will continue to consider the following prior to making any commitments for the construction of alternative municipal solid waste facilities:

- Public health and environmental concerns;
- Energy conservation; and
- Competition with recycling programs for resources.

With respect to recycling and source reduction, the County has routinely exceeded its MRA recycling goal. The expected slow increase in population in the county is not expected to significantly change the overall recycling rate, in particular because the demographics affecting the economics of increasing recycling efforts are not expected to change substantially (i.e., Dorchester County is largely rural, with relatively large land area and low population density). New programs designed to divert more of the waste stream (e.g., development of an electronics recycling program or building additional recycling drop-off centers) will continue to be investigated, and will be developed and implemented should they be deemed to be economically feasible. However, budget constraints, the rural nature of most of the county, and the lack of a dependable market for secondary materials continue to hinder expansion of recycling programs beyond those already established.

4.3 Reducing the Quantities of Waste for Disposal

4.3.1 Source Separation and Recycling Programs

In accordance with the Maryland Recycling Act (1988), Dorchester County was required to recycle 15% of its total waste stream by January 1994. In response, an exhaustive study was carried out from 1989 to early 1990 to determine the most cost effective method for source separation of solid waste. The results from this study were presented in the "*Dorchester County Recycling Plan*" dated 30 December 1993 which was included as Appendix A to the previous 1993 Plan. Adoption of that recycling plan was therefore incorporated into the Dorchester County Commissioners' original adoption of the 1993 Plan. The 1993 Recycling Plan targeted four major fractions of the waste stream:

1. Scrap tires;

2. Bulky Items such as white goods and scrap metal appliances;

3. Compostable materials such as agricultural wastes and brush and yard waste, including wood chips, grass clippings, and leaves; and

4. Recyclables such as aluminum and steel food and beverage cans, plastic food and beverage containers, glass, paper, cardboard, newspapers, and magazines.

The recycling program has been continually expanded since 1993 to include a number of additional materials such as clean concrete, spent batteries, oil, and antifreeze. The County-operated recycling program is partially financed through tipping fees at the Beulah site, currently $60 per ton. There is a $15 surcharge on CFC-containing items (e.g., refrigerators). Scrap tires also have a surcharge based on size.

It is the County's ongoing policy to enhance participation in and enthusiasm for waste reduction, reuse, and recycling activities by county residents and minimize the potential for pollution arising from the mismanagement and illegal dumping of waste, especially in rural areas of the county. DCDPW, as the department responsible for implementing and administering waste management programs, has actively responded to concerns over potential illegal dumping by lowering barriers to responsible waste disposal. In this regard, DCDPW has focused on two key areas: (i) minimizing the cost of solid waste disposal (no charge is assessed to individuals for disposal of recyclable materials or mulched wood); and (ii) improving the ease of public access to convenience centers or drop-off facilities. Although there are no immediate plans to extend curbside collection programs or increase the number of convenience centers, DCDPW will continue to monitor the situation and reassess the current waste management program if necessary.

DCDPW also implements and administers recycling programs throughout the county and promotes public education, awareness, and participation in voluntary recycling programs to meet State recycling mandates and the County's policy goals. Over the coming years, the County plans to achieve these mandates and goals primarily through:

1. Investigating development of an electronics recycling program;

2. Investigating the benefits of reopening the former drop-off center at Vienna (this was closed as a result of misuse and vandalism);

3. Investigating the potential for accepting separate recycling as well as comingled solid waste at the Neck District Convenience Center, as well as the benefits of expanding operation from two to five days per week;

4. Installing additional drop-off stations throughout the county, particularly by encouraging larger retail businesses to host such, in order to increase residents' access to recycling facilities; and/or

5. Development of other programs and goals for recycling waste streams that are likely to be a growing concern over the ensuing 10 years such as household hazardous waste (HHW).

4.3.2 Composting Program

DCDPW does not currently have a solid waste composting program, nor does it have the financial means or intention of providing solid waste composting over the 10-year planning period covered by this Plan. However, if technically and financially feasible, DCDPW may consider entering into a private-public partnership (P3) for development of a facility for aerobic composting or anaerobic digestion of food waste, yard waste, and other organics. Development of such a facility could also be considered in partnership with neighboring counties.

Outside of a countywide program, a few small-scale and material-specific private composting operations exist in the county, most notably some poultry farms, which compost chicken litter and residues, and the crab chum composting operation run by Environmental Recycling Company in the southern part of the county. DCDPW is generally supportive of such composting efforts as long as operators provide adequate environmental safeguards, protect public health and safety, and minimize odors and other nuisances. DCDPW also actively encourages private enterprise to develop reliable supply chains and/or alternative methods (e.g., in-vessel anaerobic digestion) for converting poultry litter, dead chickens, crab chum, and other suitable wastes to energy, biogas, and/or marketable end products.

4.3.3 Waste Reduction Programs

The County supports a waste management hierarchy of "reduce, reuse, recycle" before disposal of a waste material should be considered. The County thus understands and takes seriously the need for waste reduction programs through promotion of waste reduction and reuse as alternatives to disposal or recycling. Although the County's level of direct influence is often limited, the following are examples of approaches considered:

1. Promotion of conservation through habit change;

2. Promotion of change in attitude with regard to disposable items and packaging;

3. Promotion of consumer awareness to increase consumer demand for changes in marketing techniques to advocate the "less is more" attitude;

4. Promoting the purchase of durable and repairable goods rather than disposal products; and

5. Promotion of efforts to reduce the use of products containing environmentally harmful or toxic substances.

4.3.4 Resource Recovery Programs

Along with the newly developed public schools recycling program (PSRP), apartment buildings and condominiums recycling (ABCR) program, and special events recycling program (SERP), the convenience and drop-off centers operated by DCDPW will be the primary means of recovering recyclable and reusable materials in the county during the period covered by this Plan. DCDPW will continue to assess potential economic incentives (e.g., eliminating tipping fees for in-county haulers of recyclables, giving credits for yard waste and commingles, and/or offering county residents an economic incentive for recycling). However, the County's financial constraints and the low current volume of recoverable materials do not justify a dedicated resource recovery facility at current market rates for secondary materials. The continuing unstable market for recyclable materials, lack of market development, distance to markets, and transportation costs also preclude the economic feasibility of adding materials to the current recycling program.

Notwithstanding the above, DCDPW will continue to promote and emphasize recycling in order to reduce the demand for waste disposal at the Beulah site. Where appropriate, DCDPW will investigate improving access to recycling containers at existing drop-off centers, provision of homeowner composting kits, addition of recycling drop-off centers, and/or changes to the number, size, and schedule for emptying and replacing recycling containers. DCDPW will also encourage participation by private enterprise in all recycling activities. Where possible, DCDPW will seek to encourage or create a local or regional market for secondary materials, although, again, being a small, mostly rural county does not provide a lot of scope or economy of scale in this regard. Nevertheless, DCDPW will continue to foster cooperation with appropriate suppliers for the purchase of recycled products and take measures to support the recycling market by purchasing recycled copier paper, computer paper, other office supplies, toilet paper, paper towels, etc. and avoiding non-recyclables such as Styrofoam cups.

Finally, under agreement with DCDPW, a third-party developer has installed an active landfill gas (LFG) collection system in Beulah Municipal Landfill. Collected LFG is combusted at an on-site blower/flare station, which is effective at controlling greenhouse gas emissions from the landfill. Once economically feasible, the developer plans to install a landfill gas-to-energy facility at the Beulah site. The renewable energy derived from the LFG (methane) resource would offset carbon emissions from fossil energy production. The developer plans to cooperate with DCDPW to expand LFG collection at the landfill units by installing additional LFG wells and piping infrastructure as appropriate.

4.3.5 Public Education Programs

The County promotes public education, awareness, and participation in recycling programs. The County intends providing the following in order to keep the public informed and to clarify issues concerning waste recycling and minimization programs:

1. Education through school events, service learning opportunities, public involvement projects, field trips and facility 'open days', presentations by solid waste personnel, and staffing of booths at county fairs and public events;

2. Press releases to local news media and meetings with community and civic organizations;

3. Public distribution of educational pamphlets (e.g., via tax bills or other inclusion with other informational mailings); and

4. Public information meetings may be held at various times to explain aspects of the County's recycling program and recycling issues;

The County will investigate providing modest public awareness grant opportunities to initiate new ideas for public communication or school contests where prizes are given to young students producing advertising posters and slogan depicting proper solid waste management practices. Local businesses could also be surveyed once per year to document recycling efforts so that the County can advise them on current waste reduction and recycling opportunities.

4.4 Asbestos Disposal Capacity

Friable asbestos is not accepted at the Beulah site or at any of the County's convenience centers.

4.5 Emergency Response Procedures for Hazardous Leaks and Spills

If prohibited hazardous waste is found and/or has leaked or been spilled in the county, the following emergency response procedure should be followed:

1. Call 911 to alert Civil Defense, state and local police, and/or county fire companies. State and local police will coordinate rerouting of traffic where necessary.
2. Alert MDE for hazardous material and oil spills on 410-537-3318 (daytime) and 800-633-4686 (nights & weekends). MDE has legal authority to take charge of the situation when they arrive at the scene.
3. Once the type and quantity of hazardous waste is determined, Civil Defense may set up a command center to determine what areas, if any, need to be evacuated.
4. Until MDE/Civil Defense arrives to take charge of the situation, local Health Department officials may be called in to recommend a temporary containment site.

4.6 Adequacy of Local Zoning and Master Plan

Section 155-40 of the Dorchester County Code (DCC) outlines adequate zoning requirements for solid waste disposal sites. Present requirements include: (i) 100-foot setback from all property lines and right-of-ways; (ii) vegetative screen and six-foot high security fence around site; (iii) no burning allowed; and (iv) apply for special exception to existing property zoning. Additional local zoning requirements also exist, such as landfill height restrictions (currently 107 ft-msl) and landfill sideslope grades which must be flatter than 3H:1V. However, zoning laws which govern the maximum height of private landfills and rubble fills do not apply to County-owned landfills.

The Dorchester County Comprehensive Plan (DCCP) was originally adopted in November 1974 and updated in 1988 and 1996. The current version of the DCCP, which was adopted in September 1996, provides the basic policy guidance for shaping future decisions relating to growth and development in the county, and is adequate for the purposes of planning solid waste management and recycling in the county. This Plan is in compliance with the current DCCP.

5. PLAN OF ACTION FOR THE COUNTY

5.1 Existing and Proposed Solid Waste Management and Recycling Practices

5.1.1 Acceptance of Solid Waste and Recycling Materials

5.1.1.1 Definitions

The definitions of acceptable and unacceptable wastes for disposal at the Beulah site, and materials suitable for recycling or reuse, were detailed in Section 3.1. Existing and projected waste generation and recycling rates were detailed in Section 3.2. No changes to existing definitions are proposed, although this Plan will be updated to include new definitions and requirements for recycling as specified by MDE.

5.1.1.2 Data Collection and Recordkeeping

The solid waste that is collected by commercial haulers is weighed upon entering the Beulah site. The data from each hauler are tabulated monthly and bills are sent out to haulers. From this data, statistics are kept and are used to manage the solid waste program. The solid waste collected from the homeowners at the convenience centers is also weighed upon delivery to the landfill. All recyclable materials are transferred to the recyclables transfer area at the Beulah site, and then loads are weighed before leaving the site. No changes to existing data management and recordkeeping practices are proposed.

5.1.1.3 Existing Waste and Recycling Acceptance Facilities

The County owns and operates two full-time manned convenience centers (Golden Hill Convenience Center and Secretary Convenience Center), a full-time manned drop-off area at the Beulah site, and the part-time manned Neck District Convenience Center. All these facilities are designed to receive wastes that can be disposed of at the landfill. These facilities are classified as residential convenience centers and do not accept waste from collection vehicles. Refuse is deposited in roll-on, roll-off containers for easy transported to the landfill. Outsized waste that will not fit into the containers is not accepted. Except at the Neck District facility, which accepts waste only, separate containers are provided to receive recyclables that are regularly taken to the Beulah site for load consolidation prior for ultimate transfer to recycling markets. The facilities are each manned by one attendant who collects fees and keeps the facility neat and clean as well as performing routine equipment maintenance.

In addition, DCDPW operates two recycling drop-off centers in Cambridge and Hurlock, and is in the process of establishing another recycling convenience center in Cambridge. These facilities only accept clean recyclables and do not accept solid waste for disposal. Separate

containers are provided for different categories of recyclables. These are regularly taken to the Beulah site for load consolidation prior for ultimate transfer to recycling markets.

No privately-owned solid waste or recycling facilities exist, beyond small-scale private composting operations as previously described.

5.1.1.4 Proposed Waste and Recycling Acceptance Facilities

No new waste or recycling acceptance facilities are currently planned. However, the County will continue to monitor use of the residential trash drop-off service for the Neck District and design a more permanent convenience center with recycling containers should it be deemed necessary.

5.1.2 Solid Waste Disposal Systems

5.1.2.1 Existing Facilities

The County owns and operates the only solid waste landfill in the county, the Beulah Municipal Landfill, which is permitted by MDE as a lined, regulatory-compliant sanitary landfill. County employees operate this facility from 7:00 am to 4:30 p.m., Monday through Friday and from 7:00 am to 12:00pm on Saturday. Private and commercial vehicles, after stopping at the scale house, are directed to a working face in the active disposal cell.

5.1.2.2 Proposed Facilities

During the planning period covered by this Plan, DCDPW plans to expand landfill operations at the Beulah site by developing a new 67-acre landfill facility (Dorchester County Municipal Landfill) located at the Beulah site as previously described in Section 4.1.2.

5.1.2.3 Landfill Operating Practices

The current solid waste management practices and landfill operating procedures used at the existing Beulah Municipal Landfill, as set out in the approved Operating Plan for the facility, are adequate to meet the current and future goals of Dorchester County and continue compliance with federal and state regulations. Similar practices will be specified during permitting of the new Dorchester County Municipal Landfill facility. Therefore, no significant operational changes are currently planned. However, new methods and technologies are constantly being reviewed and will be periodically assessed by DCDPW to evaluate the need for change.

5.1.3 Recycling and Composting Programs

5.1.3.1 Existing Programs

Specific details regarding state-mandated recycling at public schools, apartment buildings and condominiums, and at special events in the county are provided in Section 3.6. The existing recycling methods used by DCDPW to meet the County's current MRA recycling goal of 20% were previously described in Section 3.5.3. DCDPW keeps abreast of recyclable markets and current trends, and will pursue other recycling efforts as appropriate. This Plan will be updated to include new requirements for recycling as specified by MDE.

DCDPW does not currently have a solid waste composting program, nor does it have the financial means or intention of providing solid waste composting over the 10-year planning period covered by this Plan. Outside of a countywide program, a few small-scale and material-specific private composting operations exist in the county, most notably some poultry farms, which compost chicken litter and residues, and the crab chum composting operation run by Environmental Recycling Company in the southern part of the county. DCDPW is generally supportive of such composting efforts as long as operators provide adequate environmental safeguards, protect public health and safety, and minimize odors and other nuisances.

5.1.3.2 Proposed Electronics Recycling Program

DCDPW does not currently provide electronics recycling, although several local businesses within Dorchester County provide battery and limited electronics recycling. If economically and logistically feasible, the County plans to develop a plan for electronic waste recycling in accordance with Maryland's eCycling Program. If enacted, this service would be provided free of charge to county residents. A program to separate all eligible electronic waste generated by Dorchester County Government offices, agencies, and institutions for recycling will also be established. DCDPW will provide appropriate facilities and suitably trained personnel for electronics recycling drop-off by county residents as well as storage, handling, and transfer of recyclable electronics to a processing contractor. The processing contractor will break down electronic waste into components with resale value such as wire, precious metals, plastic, lead, etc. which will then be marketed. Responsibilities and financial commitments will be defined in accordance with an MDE-approved work plan.

5.1.3.3 Proposed Solid Waste Composting Program

If technically and financially feasible, DCDPW may consider entering into a private-public partnership (P3) for development of a facility for aerobic composting or anaerobic digestion of food waste and other organics. Development of such a facility could also be considered in partnership with neighboring counties.

5.2 Planning Period

The planning period for this Plan is 10 years, January 2017 through December 2026.

5.3 Management of Waste Streams Identified

Users of the programs and facilities identified in this Plan are subject to the Dorchester County rules and regulations pertaining to solid waste management and disposal. The convenience centers and the Beulah site are open to all county residents. The Council is assigned the responsibility of establishing rules, regulations, and any other requirements necessary to control the collection, management, recycling, and disposal of refuse in the county.

Because of the possibility of environmental impacts and contamination of groundwater due to land-based waste disposal, DCDPW is required by MDE to build landfill cells that conform to the requirements of COMAR 26.04.07 and the federal RCRA Subtitle D regulations codified under 40 CFR Part 258. A composite geomembrane liner and leachate collection system beneath the active Beulah Municipal Landfill directs leachate to onsite storage tanks from where it is transported offsite for treatment and disposal at the Cambridge Wastewater Treatment Plant. All new landfill units constructed at the site will include similar leachate collection systems. Presently, no leachate collection system exists beneath the waste deposits in Old Beulah Landfill; however, this landfill is closure-capped with a low permeability final cover system that meets the prescriptive requirements of COMAR 26.04.07.

The Council is committed to providing the most cost-effective methods for management and disposal of solid waste generated in the county that are consistent with the requirements of state and federal regulations. DCDPW is similarly committed to continually evaluating the latest technology to assist them in this goal. By extending landfill operations at the Beulah site, DCDPW will be able to continue managing its solid waste in an environmentally protective manner well beyond the 10-year planning period of this Plan.

5.4 Revenues and Costs

5.4.1 Revenues

Projected revenues are calculated based on the amount of waste received at the landfill (in agreement with projected increases in waste generation in the county), tipping fees, and the expected ratio of chargeable to non-chargeable waste for disposal throughout the planning period. The projected expenses for operation of the landfill units should not exceed the revenue projection for the same period. Known budget constraints will limit any proposed financing to funds that include monies to purchase equipment cover construction and planning

and design costs. Because the facility is user-fee based, it is necessary to control debt services. Daily maintenance and operating costs consume much of the revenue generated. The Council is assigned the responsibility of establishing fees and any other related requirements for provision of cost-effective waste disposal in the county.

Municipal and commercial refuse haulers, businesses, and industries are charged for using DCDPW disposal sites in accordance with a fee schedule based on weight and/or size of hauling vehicle. The current tipping fee is $60.00 per ton for bulk loads, which is directly competitive with facilities in neighboring counties such as the Midshore II Landfill in Caroline County and the Newland Park Landfill in Wicomico County. The tipping fee is also based on a number of other factors such as: (i) maintenance, operating, and equipment replacement costs for the facilities; (ii) potential closure costs for active landfill operations; and (iii) annual sampling and monitoring costs.

Annual permit stickers for bagged trash are charged at $100.00 for county residents ($65.00 for senior citizens aged 62 years and older). The County-operated recycling program is partially financed through tipping fees at the Beulah site. No charge is assessed to individuals for disposal of recyclable materials or mulched wood at the landfill or any of the convenience centers or drop-off facilities. There is a $15 surcharge on refrigerants and other CFC-containing items. Scrap tires also have a surcharge based on size.

5.4.2 Capital and Operating Costs

Solid waste capital expenses and operating costs were developed during preparation of the permit application for the existing Beulah Municipal Landfill in 1993, minor permit modification for construction of Cell 4 in 2005, permit application for construction of Cell 5 in 2009, and vertical expansion of the landfill in 2016. Projected costs for closure and the provision of post-closure care (PCC) after the landfill is filled to capacity were also developed as part of each permit application (see Section 5.4.3). As DCDPW is a self-funded enterprise for which monies from the general fund are not used, the projected expenses for construction and operation of the landfill over a given timeframe should not exceed the revenue projection for the same period.

5.4.3 Closure and Post-Closure Care Costs

In accordance with the allowances under 40 CFR Part 258 for provision of financial assurance for closure and post-closure care (PCC) by county governments and other public entities, DCDPW provides such assurance by means of an enterprise fund supported by tipping fees at the Beulah site.

5.4.3.1 Waste Acceptance Facilities

The costs associated with closing convenience centers and drop-off facilities are assumed negligible and would be provided through DCDPW's annual operation/maintenance budget. No PCC would be required.

5.4.3.2 Secretary Landfill (Closed)

The County spends approximately $15,000 per year in PCC at this 20-acre site. The costs of PCC activities are borne through the County's existing funds for PCC. No significant remediation expenditure is anticipated. No definitive plans for future use of the site have been formulated.

5.4.3.3 Golden Hill Landfill (Closed)

The County spends approximately $18,000 per year in PCC at this 8-acre site. The County plans to maintain the Golden Hill Landfill in compliance with the agreed conditions set forth by MDE in June 2006. No definitive plans for reuse of the site have been formulated.

5.4.3.4 Old Beulah Landfill (Closed)

Routine cover maintenance costs for this site are estimated at $15,000, with an additional $15,000 per year for the duration of groundwater assessment monitoring. The costs of PCC activities are borne through the County's existing funds for PCC. No definitive plans for reuse of the site have been formulated.

5.4.3.5 Beulah Municipal Landfill (Operating)

Vertical expansion of Beulah Municipal Landfill is expected to begin after 2017 and provide up to six years of additional capacity. Although the final cost of closing the 26-acre landfill is difficult to estimate precisely because it will occur somewhat in the future, updated estimates of closure and PCC costs were prepared for submission to MDE as part of the permit application for vertical expansion (currently in review) based on experience at similar facilities. Based on this:

1. Capital costs for closure of the landfill are estimated at about $110,500 per acre, depending on the type of final capping system selected. This equates to about $2.9 million. An additional one-time cost of up to $500,000 may be incurred for installation of LFG extraction wells and associated expansion of the existing LFG collection system. Engineering fees and administrative/inspection costs are typically estimated at about five and ten percent of the closure construction cost, respectively.

2. PCC costs are estimated at about $173,500 per year over 30 years, based on assumed levels of groundwater and gas migration monitoring, leachate and stormwater management, erosion/vegetative control, and routine maintenance and repairs. This equates to about $6,700 per acre annually and will be borne through the County's accruing funds for PCC.

All costs are presented in 2016 dollars.

5.4.3.6 Dorchester County Municipal Landfill (Proposed)

Construction of this new landfill unit will be required to provide ongoing waste disposal capacity after 2024, when the existing Beulah Municipal Landfill is expected to be filled to capacity. Preliminary work on preparation of a permit application for the new landfill is already underway. As planned, the facility will have a lined area of 67-acres and provide over 50 years of additional disposal capacity. Costs for constructing and closing this landfill are difficult to estimate precisely because they will occur far in the future. However, landfill liner construction typically costs about $250,000 to $350,000 per acre. Closure and PCC costs are likely to be comparable to those for Beulah Municipal Landfill at $110,500 per acre and $6,700 per acre, respectively. All costs are presented in 2016 dollars.

5.5 Modification as a Result of Assessment

Ongoing changes in the interpretation of federal and state regulations may affect waste management and disposal within Dorchester County. At the time of writing this Plan, the effect of these changes is obviously unknown. However, if the current and anticipated future waste volume were to be significantly reduced, this would alter the current pricing structure and significantly affect the County's ability to continue providing waste management services.

As an example, the following anticipated expenses could have an impact on the ability of the existing price structure to provide the revenue necessary to operate the solid waste facilities:

- The additional need to replace capital equipment required to operate the landfill;
- The addition of source reduction opportunities, and/or
- The cost of marketing recyclable materials (including equipment, man hours and transportation) for which limited, if any, market opportunities exist;

The County will continue to closely monitor their waste disposal rate structure. In order to continue complying with the State mandated recycling goal, the following elements apply:

- Effective public education;
- Ongoing implementation of state-mandated recycling program and continued promotion of recycling by county residents on a voluntary basis;
- Promotion of private-public partnerships, independent private enterprise, or non-profit organizations with respect to recycling activities;
- Federal, state, or local stimulation and promotion of markets for recyclable materials and/or goods made from recycled materials; and
- Continued commitment to investigating economically feasible recycling opportunities.

TABLES

TABLE 2-1
Historic and Projected Population and Households in Dorchester County

2017-2026 Solid Waste Management Plan
Dorchester County, Maryland

Year[1, 2]	County Population		Number of Household		Average Persons Per Household
	Total	Annualized Rate of Change[3]	Total	Annualized Rate of Change[3]	
1970	29,405	-	9,752	-	3.02
1980	30,623	0.4%	11,329	1.6%	2.70
1990	30,236	-0.1%	12,117	0.7%	2.50
2000	30,674	0.1%	12,706	0.5%	2.41
2005	31,422	0.5%	13,225	0.8%	2.38
2010	32,618	0.8%	13,525	0.5%	2.41
2015	33,250	0.4%	13,975	0.7%	2.38
2020	34,800	0.9%	14,725	1.1%	2.36
2025	36,550	1.0%	15,550	1.1%	2.35
2030	37,850	0.7%	16,275	0.9%	2.33
2035	39,100	0.7%	16,925	0.8%	2.31
2040	40,000	0.5%	17,375	0.5%	2.30

Notes:
1. The figures for 1970 through 2010 are actual data recorded by the U.S. Census Bureau.
2. The figures for 2015 through 2040 are projections based on census data prepared by the Maryland Department of State Planning (http://planning.maryland.gov/MSDC/County/dorc.pdf).
3. Percentage increase over preceeding time period.

TABLE 2-2
Dorchester County Zoning District Designations

2017-2026 Solid Waste Management Plan
Dorchester County, Maryland

District	Designation Code	Description
Primary	AC	Agricultural Conservation District
	AC-RCA	Agricultural Conservation - Resource Conservation Area District
	RC	Resource Conservation District
	RR-C	Rural Residential-Conservation District
	RR	Rural Residential
	RR-RCA	Rural Residential - Resource Conservation Area District
	SR	Suburban Residential District
	SR-RCA	Suburban Residential - Resource Conservation Area District
	V	Village District
	B-1	Neighborhood Business District
	B-2	General Business District
	I-1	Light Industrial District
	I-2	Heavy Industrial District
Overlay	AP	Airport Protection District
	CA	Critical Area Protection District
	FP	Floodplain District
	HP	Historic Preservation District
	MH	Manufactured Home Overlay District
Floating	EE	Economic and Employment District
	SW	Solid Waste District

TABLE 3-1
Annual Waste Generation in Dorchester County

2017-2026 Solid Waste Management Plan
Dorchester County, Maryland

Waste Category	Material	Actual Tons	Estimated Tons[2]			
		2014	2017	2020	2023	2026
MRA Waste	MSW (Residential and Commercial)	30,976	31,915	32,882	33,878	34,905
	SUB-TOTAL	**30,976**	**31,915**	**32,882**	**33,878**	**34,905**
Non-MRA Waste	Construction and Demolition Debris	13,445	13,852	14,272	14,705	15,150
	Sewage Sludge	3,701	3,813	3,929	4,048	4,170
	Other	25	26	27	27	28
	SUB-TOTAL	**17,171**	**17,691**	**18,227**	**18,780**	**19,349**
TOTAL	**MRA and Non-MRA Waste**	**48,148**	**49,606**	**51,110**	**52,658**	**54,254**
MRA Recycling[1]	Compostables	1,443	1,486	1,531	1,578	1,626
	Recyclables	10,884	11,214	11,553	11,903	12,264
	Tires	216	223	229	236	243
	SUB-TOTAL	**12,543**	**12,923**	**13,314**	**13,718**	**14,133**
Non-MRA Recycling	Concrete	37	38	39	41	42
	Other	135	139	144	148	152
	SUB-TOTAL	**172**	**178**	**183**	**189**	**194**
TOTAL	**MRA and Non-MRA Recycling**	**12,715**	**13,100**	**13,497**	**13,906**	**14,328**
TOTAL WASTE GENERATED		**60,862**	**62,707**	**64,607**	**66,564**	**68,581**

Notes:
1. See Table 3-2 for detailed breakdown of MRA recycling materials.
2. Estimated assuming 1% annual growth across all waste and recycling streams, based on projected population and household data presented in Table 2-1.

TABLE 3-2
Recyclable Materials Recovered in Dorchester County, 2014

2017-2026 Solid Waste Management Plan
Dorchester County, Maryland

Maryland Recycling Act (MRA) Recyclable Materials	MRA Recycling Tons	Percentage of MRA Waste Stream Recycled[1]
Metals		0.2%
Aluminum Cans	6	
Lead Acid Batteries	26	
Mixed Cans	26	
White Goods	14	
Paper		1.7%
Newspaper	193	
Old Corrugated Cardboard	527	
Plastic		0.4%
Mixed Plastic	172	
Glass		<0.1%
Mixed Glass	0.33	
Compost/Mulch		3.3%
Brush and Branches	484	
Grass	27	
Wood Materials	932	
Tires		0.5%
Scrap Tires	216	
Other		22.8%
Animal Protein/Fat	9,918	
Electronics	1	
TOTAL	**12,543**	**28.8%**

Note 1: Based on MRA waste disposal of 30,976 tons in 2014.

TABLE 3-3
Solid Waste Collection Systems

2017-2026 Solid Waste Management Plan
Dorchester County, Maryland

Municipality	Collection Frequency	Collection Entity	Method of Payment
Cambridge	Twice weekly (residential) Weekly (commercial)	City	Property Taxes plus Collection Fee
East New Market	Weekly	Private Contractor	Town Taxes
Hurlock	Twice weekly	Private Contractor	Property Taxes plus Collection Fee
Secretary	Twice weekly	Town	Property Taxes plus Collection Fee
Church Creek	Weekly	Private Contractor	Town Taxes
Vienna	Weekly	Private Contractor	Property Taxes plus Collection Fee
Galestown	Twice weekly	Private Contractor	Town Taxes
Eldorado	Weekly	Private Contractor	Individually Arranged
Brookview	Biweekly	Private Contractor	Town Taxes

TABLE 3-4
Dorchester County Board of Education Schools included under the PSRP

2017-2026 Solid Waste Management Plan
Dorchester County, Maryland

School	Address	Phone No.
Choptank Elementary	1130 Maces Lane, Cambridge, MD 21613	410-228-4950
Hurlock Elementary	301 Charles Street, Hurlock, MD 21643	410-943-3303
Maple Elementary	5225 Egypt Road, Cambridge, MD 21613	410-228-8577
Sandy Hill Elementary	1503 Glasgow Street, Cambridge, MD 21613	410-228-7978
South Dorchester K-8	Church Creek Road, Church Creek, MD 21622	410-397-3434
Vienna Elementary	4905 Ocean Gateway, Vienna, MD 21869	410-376-3151
Warwick Elementary	155 Main Street, Secretary, MD 21664	410-943-8151
Maces Lane Middle School	1101 Maces Lane, Cambridge, MD 21613	410-228-2111
North Dorchester Middle School	5745 Cloverdale Road, Hurlock, MD 21643	410-943-3322
Cambridge South-Dorchester High	2475 Cambridge Bypass, Cambridge, MD	410-228-5200
Dorchester School of Technology	2465 Cambridge Bypass, Cambridge, MD 21613	410-228-3457
North Dorchester High	5875 Cloverdale Road, Hurlock, MD 21643	410-943-4511

TABLE 3-5
Properties Under the ABCR Program

2017-2026 Solid Waste Management Plan
Dorchester County, Maryland

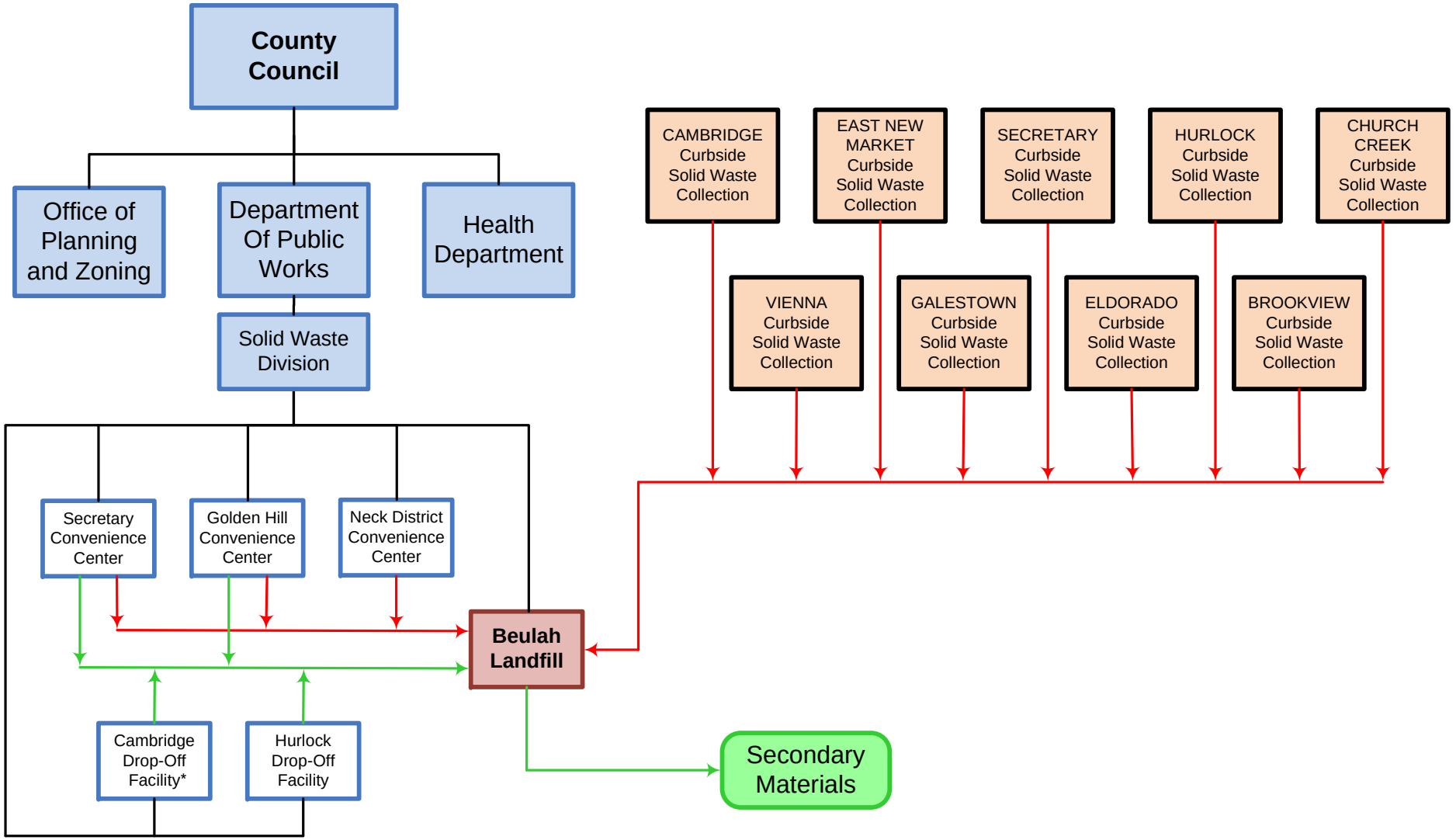
Owners Name	Mailing Address	City	State	Zip code	Premise Number	Premise Name	Type of Premise	Premise City	Dwelling Units
2006 Beaver Run Md Llc	31200 Northwestern Hwy	Farmington Hills	MI	48334		Karen Circle			30
2006 Beaver Run Md Llc	31200 Northwestern Hwy	Farmington Hills	MI	48334		Cinnamon-sunflower	Ln		33
Amber Meadows Limited Partnership	3423 Olney Laytonsville Rd, Ste 7	Olney	MD	20832		N/s Md. Rt. 16	Rd	Cambridge	32
Amick Farms Llc	Attn Marcus L. Milleer, Cfo 2079 Batesbury Hwy	Batesburg	SC	29006	274	Nealson	St	Hurlock	10
Blackwater Land Company Llc	216 Dorchester Ave	Cambridge	MD	21613	612	Race	St	Cambridge	18
Bradford Housing Associates Llc	C/o The Wishcamper Co Inc, 3 Canal Plz Ste 501	Portland	ME	4101	701	Race	St	Cambridge	121
Cambridge Apt Limited Partnership	C/o T.m. Associates, Inc, 15825 Shady Grove Rd Ste 55	Rockville	MD	20850		Muir	St	Cambridge	32
Cambridge Club Associates Limited	722 Yorklyn Rd Ste 350	Hockessin	DE	19707		W/s Woods	Rd	Cambridge	76
Cambridge Commons Lllp	1220 Chestnut Place	Cambridge	MD	21613		Chestnut	Pl	Cambridge	96
Cambridge International Inc	105 Goodwill Ave, Po Box 399	Cambridge	MD	21613	105	Goodwill	Ave	Cambridge	12
Carlton Court Associates Limited	Po Box 1510	Seaford	DE	19973		Moore & Hubbard	St	Cambridge	26
Ce Leonards Grove Ltd Partnership	410 Severn Ave Ste B413	Annapolis	MD	21403		Hudson	Rd	Cambridge	32
City Of Cambridge	C/o Cambridge Yacht Club, P.o. Box 287	Cambridge	MD	21613		Leased Camb. Yacht Cb		Cambridge	61
Collier William J Trustee Under	Po Box 82	Rhodesdale	MD	21659	303	Taylor	Ave	Hurlock	12
Conifer Village At Cambridge Llc	183 E Main St Fl 6	Rochester	NY	14604	1040	Foxtail	Dr	Cambridge	76
Crusader Arms Associates	410 Severn Ave Ste B413	Annapolis	MD	21403		Crusader	Rd		80
Crusader Housing Partner Lp	C/o Arthur W. Edwards, Jr., 410 Severn Ave Suite B-413	Annapolis	MD	21403		Meteor	Ave		32
Crusader Housing Partners Lp	C/o Arthur W. Edwards, Jr, 410 Severn Ave, Suite B-413	Annapolis	MD	21403		Meteor	Ave		25
Crusader Housing Partners Lp	C/o Arthur W. Edwards Jr., 410 Severn Ave, Suite B-413	Annapolis	MD	21403		N&s/s Meteor	Ave		32
Cse Cambridge Realty Llc	C/o Omega Healthcare Investors, 200 International Cir Ste 3500	Hunt Valley	MD	21030	520	Glenburn	Ave	Cambridge	160
D H B Land Company Llc	5233 Ragged Point Rd	Cambridge	MD	21613	403	Sunburst	Hwy	Cambridge	116
East West Inn L L C	2917 Ocean Gateway	Cambridge	MD	21613	2917	Ocean Gateway		Cambridge	50
Fox-glen Apartments Llc	1701 Brannocks Neck Rd	Cambridge	MD	21613	502	Glenburn	Ave	Cambridge	12
Foxtail Crossing Llc	183 E Main St 6th Fl	Rochester	NY	14604	781	Foxtail	Dr	Cambridge	46
Glen Oak Llc	Po Box 505	Cambridge	MD	21613	201	Academy	St	Hurlock	10
Glenburn Associates Limited	C/o Glenburn House, 518 Glenburn Ave	Cambridge	MD	21613		Se/s Glenburn	Ave	Cambridge	24
Glessner Ray J Jr And	Po Box 478	Federalsburg	MD	21632	301	Nealson	St	Hurlock	203
Greenwood Avenue Dev Lp	175 Admiral Cochrane Dr, #201	Annapolis	MD	21401		Greenwood	Ave	Cambridge	36
Greenwood Avenue Development Lp	175 Admiral Cochrane Dr, #201	Annapolis	MD	21401		Greenwood & Park	Ln	Cambridge	108
Greenwood Village Ii Limited	C/o T. M. Associates, Inc., 15825 Shady Grove Rd Ste 55	Rockville	MD	20850		Cosby	Ave	Cambridge	20
Handley James F Et Al	5465 Handley Rd	Cambridge	MD	21613	5409	North Skipjack	Dr	Cambridge	115
Handley James F Et Al	5465 Handley Rd	Cambridge	MD	21613		Bucktown	Rd		30
Harrison Ferry Limited Partnership	410 Severn Ave Ste B-413	Annapolis	MD	21403	43	Delaware	Ave	Hurlock	32
Homes For Cambridge Limited	318 Sixth St Ste 2	Annapolis	MD	21403		Leonards	Ln	Cambridge	30
Homes For Cambridge Limited	318 Sixth St Ste 2	Annapolis	MD	21403		Greenwood	Ave	Cambridge	22
Homes For Hurlock Limited	C/o Homes For America, Inc, 318 Sixth St, Ste 2	Annapolis	MD	21403	6206	Shiloh Church	Rd	Hurlock	30
Housing Authority Of Cambridge	700 WEAVER AVE	Cambridge	MD	21613		Greenwood	Ave		71
Housing Authority Of Cambridge		Cambridge	MD	21613		Pine	St	Cambridge	20
Hurlock Meadow Limited Partnership	3423 Olney Laytonsville Rd	Olney	MD	20832	45	Delaware	Ave	Hurlock	30
Hurlock Village Assoicates	112 South Tull Drive	Seaford	DE	19973		Main	St		20
Jensens Southside Landing Llc	Po Box 608	Southington	CT	6489		W/s Woods	Rd	Cambridge	61
Jones Ethel M	C/o Debbie Behlke, 27950 Substation Rd	Denton	MD	21629	2	Oakley	St	Cambridge	11
Meridian Healthcare Inc	C/o Health Care Reit, Inc., 4500 Dorr Street	Toledo	OH	43615	525	Glenburn	Ave		98
Powell Charles C	C/o Charles C. Powell, 200 Trenton St	Cambridge	MD	21613	1441	Taylors Island	Rd		14
Rambler Assoc Limited Partnership	112 S. Tull Drive	Seaford	DE	19973		Crusader	Rd		20
Robbins W Stephen & Melissa J	2234 Church Creek Rd	Cambridge	MD	21613		Roslyn	Ave		20
Smith Lori W And	4715 Taylor Ave	Hurlock	MD	21643	6233	Rossing	St	Hurlock	56
Tombstone Land Company	14201 Sullyfield Cir #500	Chantilly	VA	20151	311	Glenburn	Ave		35
Vy Realty Associates Llc	Po Box 4483	Wilmington	DE	19807		Cosby	Ave		218
W Group Llc The	6 Hatsawap Rd	Cambridge	MD	21613	113	Somerset	Ave	Cambridge	14
Warwick Corporation	C/o J. Edward Powell, Po Box 219	East New Market	MD	21631	3903	Lee	Ct	East New Market	26
Willey Bruce D & Elaine D	24979 Lin St	Seaford	DE	19973	800	Travers	St	Cambridge	12
Woods Road Cambridge Llc	29516 Canvasback Dr # 200	Easton	MD	21601	5236	Primrose	Ct	Cambridge	35

TABLE 3-6
Public Sites in Dorchester County Subject to the SERP

2017-2026 Solid Waste Management Plan
Dorchester County, Maryland

Facility	Address	Owner/Responsible Party	Phone No.
Cambridge Central Library - Dorchester County Public Library	303 Gay Street, Cambridge, 21613	Dorchester County	410-228-7331
Hurlock Branch - Dorchester County Public Library	222 South Main Street, Hurlock, 21643	Dorchester County	410-943-4331
Snows Turn Park	Egypt Road, Cambridge, 21613	State	410-228-1000
Taylors Island Wildlife Management Area	Church Creek, 21669	Maryland DNR	410-376-3236
Great Marsh Park (Hambrooks Bay)	Somerset Avenue, Cambridge, 21613	City of Cambridge	410-228-4020
Bill Burton Fishing Pier State Park	29761 Bolingbroke Point Drive, Trappe, 21673	State	410-820-1662
Blackwater National Wildlife Refuge	2145 Key Wallace Drive, Cambridge, 21613	U.S. Fish & Wildlife	410-228-2692
American Legion Park (J. Edward Walter Park)	434 Willis Street, Cambridge, 21613	Dorchester County Recreation & Parks	410-228-5578
Long Wharf Park and Municipal Yacht Basin	2 Mill Street, Cambridge, 21613	City of Cambridge	410-228-4031
Hurlock Town Park and Athletic Complex	300 Poplar Street, Hurlock, 21643	Town of Hurlock	410-228-5578
East Cambridge Park	Lecompte Street, Cambridge, 21613	Dorchester County Recreation & Parks	410-228-5578
Christ Rock Park	Church Creek Road/Dailsville Road, Cambridge, 21613	Dorchester County Recreation & Parks	410-228-5578
Vienna Waterfront Park	114 Water Street, Vienna, 21869	Town of Vienna	443-239-0813
Sailwinds Park / Dorchester County Visitor Center	2 Rosehill Place, Cambridge, 21613	Dorchester County	410-228-1000
Crapo Community Center	Crapo, 21626	Dorchester County Recreation & Parks	410-228-5578

FIGURES



KEY:

- County Government
- Muncipality
- County Facility for Citizens' Drop Off Only
- County Facility for Private Hauling and Citizens' Drop Off

MATERIAL FLOW:

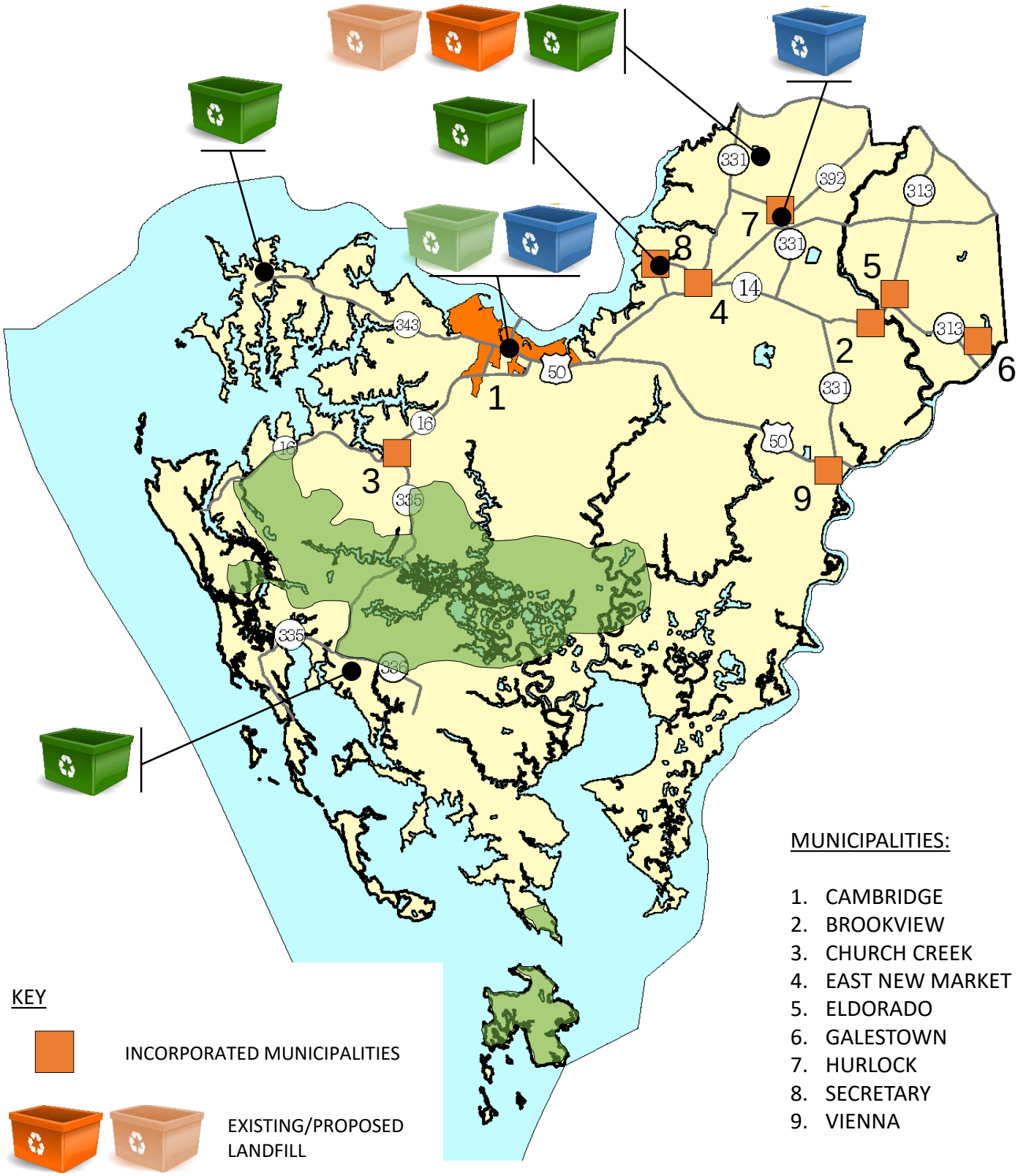
- Recyclable Material Diversion
- Solid Waste Disposal

NOTE:

* A new recycling convenience center is also being installed in Cambridge

Solid Waste Management and Recycling
Dorchester County, Maryland

Figure 1-1	20 Sept. 2017	Document Number: ME1384/MD16114



MUNICIPALITIES:

1. CAMBRIDGE
2. BROOKVIEW
3. CHURCH CREEK
4. EAST NEW MARKET
5. ELDORADO
6. GALESTOWN
7. HURLOCK
8. SECRETARY
9. VIENNA

KEY

- INCORPORATED MUNICIPALITIES
- EXISTING/PROPOSED LANDFILL
- EXISTING/PROPOSED CITIZEN CONVENIENCE CENTER
- EXISTING RECYCLING DROP-OFF CENTER
- FEDERAL FACILITY

SOLID WASTE AND RECYCLING FACILITIES IN DORCHESTER COUNTY, MARYLAND

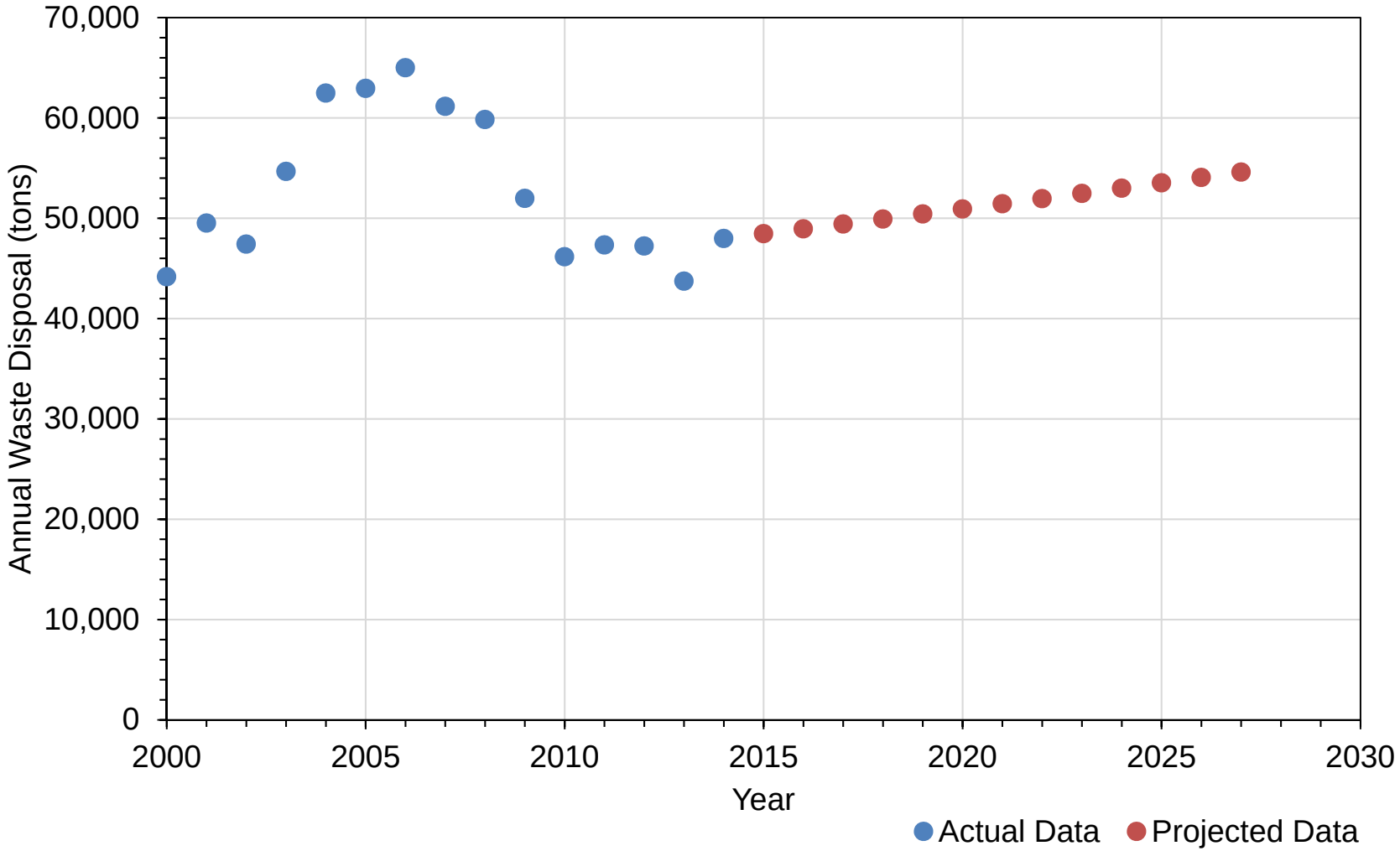
Geosyntec consultants

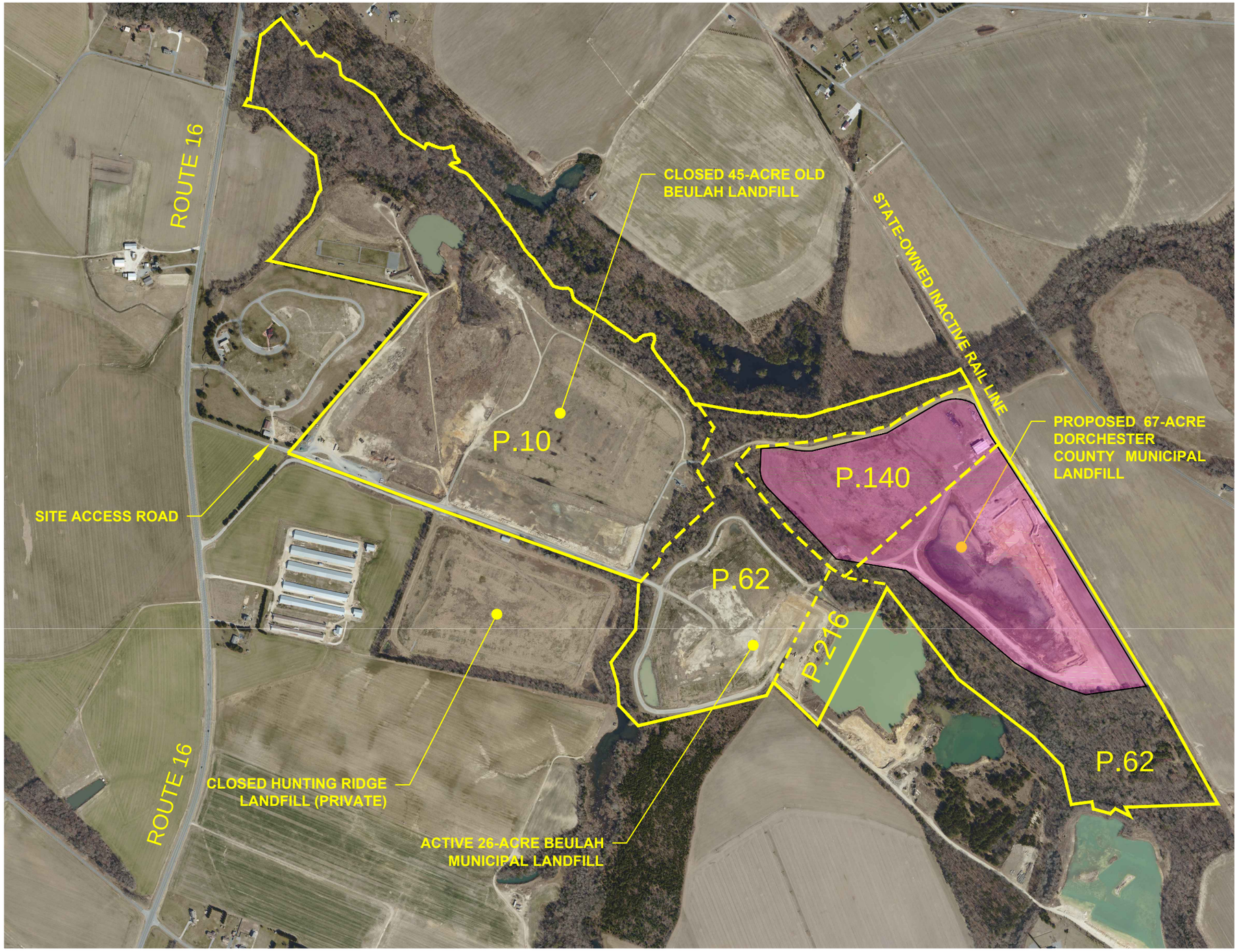
COLUMBIA, MARYLAND

DATE:	20 SEPT. 2017
PROJECT NO.	ME1384
FILE NO.	
FIGURE NO.	2-1

FIGURE 3-1
Historical and Projected Waste Disposal at Beulah Site, 2000 to 2026

2017-2026 Solid Waste Management Plan
Dorchester County, Maryland





NORTH

LEGEND

PROPERTY BOUNDARY

INTERNAL PROPERTY BOUNDARY BETWEEN COUNTY-OWNED PARCELS

800 400 0 800 1600

SCALE IN FEET

EXISTING CONDITIONS AND PROPOSED DEVELOPMENT AT THE BEULAH SITE

Geosyntec consultants

COLUMBIA, MARYLAND

DATE:	20 SEPT. 2017
PROJECT NO.	ME0925
DOCUMENT NO.	
FILE NO.	0925F301
FIGURE NO.	4-1

ATTACHMENT 1

Resolution from Dorchester County Council

RESOLUTION NO. 604

RESOLUTION OF THE COUNTY COUNCIL OF DORCHESTER COUNTY, MARYLAND PURSUANT TO SECTIONS 9-503, 9-505, AND 9-1703 OF THE ENVIRONMENT ARTICLE, ANNOTATED CODE OF MARYLAND AND CODE OF MARYLAND REGULATIONS (COMAR) 26.03.03 ADOPTING A REVISION TO THE TEN-YEAR SOLID WASTE MANAGEMENT PLAN (PLAN) THAT, COMPLIANT WITH THE REQUIREMENT FOR PERIODIC REVIEW AND UPDATE UNDER COMAR 26.03.03.02.A, COVERS THE PLANNING PERIOD JANUARY 2017 THROUGH DECEMBER 2026 AND OUTLINES THE COUNTY'S PROPOSED APPROACH TO PROVIDING COST-EFFECTIVE AND ENVIRONMENTALLY PROTECTIVE SOLID WASTE MANAGEMENT AND RECYCLING DURING THIS TEN-YEAR PERIOD, INCLUDING PROPOSED DEVELOPMENT OF A NEW LANDFILL UNIT AT THE EXISTING BEULAH MUNICIPAL LANDFILL SITE TO ALLOW FOR TIMELY CLOSURE OF THE EXISTING ACTIVE LANDFILL UNIT

WHEREAS, the County Council is responsible for assessment of needs and constraints regarding solid waste management and recycling, and identifying proposed facilities for continued acceptance of solid waste in the County, the County Council has determined that those needs would be best met, both environmentally and economically, though implementation of the revised Plan to include development of a new landfill unit at the Beulah site; and

WHEREAS, the County Council has submitted a draft Plan to the Maryland Department of the Environment for review in September 2016 that, having been tentatively approved by the Department on January 11, 2017 in accordance with Section 9-507(a) of the Environment Article, has been duly finalized for adoption after having made the changes specified by the Department; and

WHEREAS, the County Council has, in compliance with the public hearing requirements of Section 9-503(d) of the Environment Article and COMAR 26.03.03.05(c) prior to adoption of the Plan, given due notice of the revised Plan and the time and place of the public hearing, conducted the public hearing at 6:00 pm on August 15, 2017 in Room 110, County Office Building, 501 Court Lane, Cambridge, Maryland, and given the public due opportunity to testify and give comment on the revised Plan, which raised no substantive issues requiring resolution.

NOW, THEREFORE, BE IT RESOLVED, that the attached revised Ten-Year Solid Waste Management Plan for the planning period of January 2017 through December 2026, including proposed development of a new landfill unit at the existing

LIBER0007 FOLIO208

Beulah Municipal Landfill Site is hereby adopted by the County Council of Dorchester County this 3rd day of October 2017.

The County Council of
Dorchester County, Maryland

ATTEST:

Jeremy Goldman
County Manager

Ricky C. Travers, President

Tom C. Bradshaw, Vice President

William V. Nichols

Opposed
Rick M. Price

Don B. Satterfield

ATTACHMENT 2

Planning and Zoning Office Certification

DORCHESTER COUNTY PLANNING & ZONING OFFICE

County Office Building

501 Court Lane, Room 111

CAMBRIDGE, MARYLAND 21613

PHONE: 410-228-3234

FAX: 410-228-1563

September 20, 2017

Dorchester County Department of Public Works
c/o Ryan White, Director
5435 Handley Road
Cambridge, Maryland. 21613

Re: Solid Waste Management Plan – Zoning Consistency

Dear Mr. White,

The Dorchester County Department of Planning and Zoning has reviewed the updated County Solid Waste Management Plan (SWMP) (2017-2026). This letter serves to certify that the updated SWMP meets all applicable Dorchester County zoning and land use requirements and planning programs. In addition, the updated SWMP provides for an organized and efficient system of solid waste management to effectively serve existing and future land uses and development within the county.

Please contact me with any comments or questions regarding this letter.

Sincerely,

Rodney L. Banks
Deputy Director of Planning and Zoning

RLB/rb

cc: Greg A. LeBlanc, Engineer
file

ATTACHMENT 3

Approval Letter from
Maryland Department of the Environment

Maryland
Department of
the Environment

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor

Ben Grumbles, Secretary
Horacio Tablada, Deputy Secretary

COPY

MAILED
12/13

December 13, 2017

Mr. Ryan White, Director
Dorchester County Department of Public Works
5435 Handley Road
Cambridge, MD 21613

Dear Mr. White:

The Maryland Department of the Environment (the "Department") has completed its review of Dorchester County's (the "County") Resolution No. 604 for adopting the County's 2017-2026 Solid Waste Management Plan (the "Plan"). The County Council of Dorchester County adopted the Plan on October 3, 2017 and forwarded the Plan to the Department for its review and approval to ensure the County is in compliance with the requirements of Sections 9-503, 9-505, and 9-1703 of the Environment Article, Annotated Code of Maryland, and Code of Maryland Regulations (COMAR) 26.03.03. The Department received the adopted Plan on October 17, 2017.

Based on this review, the Department has determined that the adopted resolution satisfies the requirements of Sections 9-503(a), 9-505(a)(19), and 9-1703(b) of the Environment Article. The resolution also satisfies the requirements of COMAR 26.03.03. In accordance with Section 9-507(a) of the Environment Article, Annotated Code of Maryland, the Plan is approved.

Section 9-506(b)(2) of the Environment Article, Annotated Code of Maryland, requires the County to submit a progress report to the Department at least every two years including any revisions or amendments to the County Plan that have been adopted. Since the County's Plan was adopted on October 3, 2017, the County must submit to the Department its progress report on or before **October 3, 2019**.

Thank you for your continuing interest and cooperation in providing sound and long-term solid waste management planning for the County. If you have questions on these matters, please contact Mr. John Sullivan, Program Manager, Resource Management Program, at 410-537-3314, or john.sullivan1@maryland.gov, or you may contact me at 410-537-3304.

Sincerely,

Hilary Miller

Hilary Miller, Director
Land and Materials Administration

cc: The County Council of Dorchester County
John Sullivan